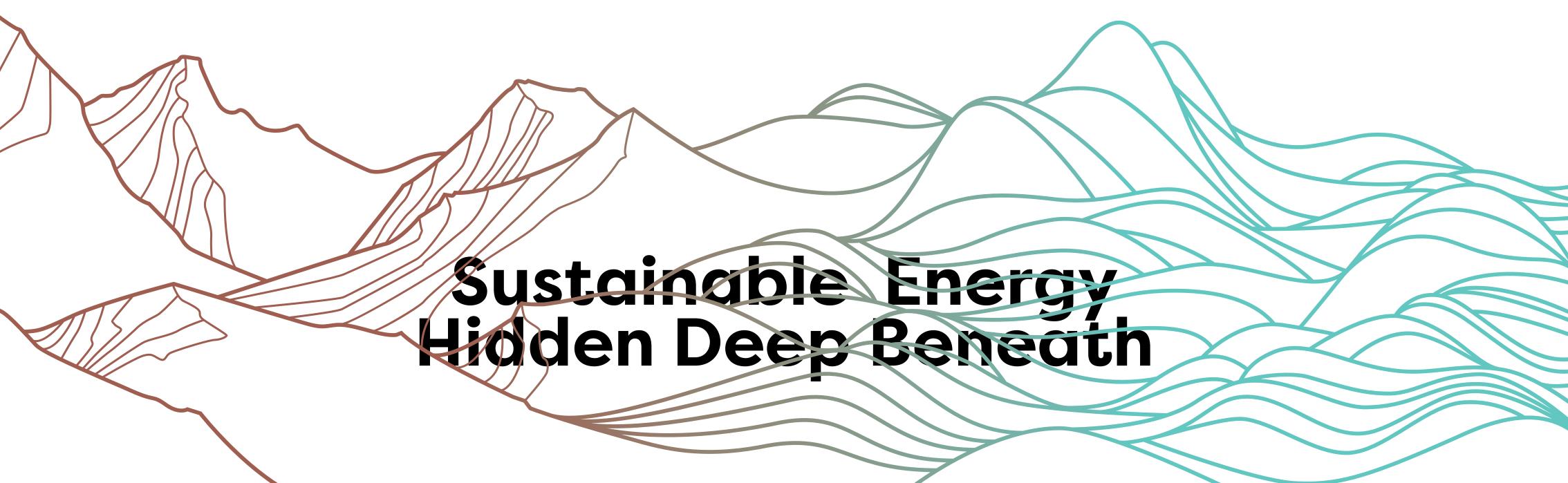


Sustainability Report 2022





We know no bounds to discover our energy resources, reaching deep beneath, both onshore and offshore. While we increase our national reserves by world-wide recognised oil&gas discoveries, we are also building a sustainable future because:

"Sustainable Energy is Hidden Deep Beneath"

Contents

Corporate Risk Management Our Sustainability Journey Our Sustainability Priorities 34 36 Our Sustainability Approach **About the Report** Our Sustainability Policy Our Sustainability Strategy 42 About TPAO -Our Sustainability Goals 44 Stakeholder Contact List **Corporate Governance** 52 **Excellent Action** TPAO and Sustainability — 54 R&D Center 62 Environmental Management **Excellent Action** Waste Management 64 66 Biodiversity **Brave Investment** Water Management 71 **Energy Management VII.** Determined Growth Brave Investment VIII. Respectful Development 79 Domestic Exploration Activities 80 Domestic Production Operations IX. Indicators 82 Overseas Operations Supporting Development 86 Promoting Use of Domestic Resources Supply Chain Management 94 Determined Growth Occupational Health, Safety and Environment 96 100 Human Resources Respectful Development Digital Transformation 110 111 Information Security

01

02

04

06

10

14

16

18

20

28

111

116

118

120

121

122

Ethical Principles

Social Indicators

GRI Content Index

Memberships

Financial Indicators

Accountability and Audit

Environmental Indicators

Preface

Contents

About the Report

TPAO at a Glance

Strategy and Goals

Corporate Governance

Integrated Management System

Our Management and Organizational Structure

COVID-19 Management

CEO's Message

About TPAO

History

About the Report

This report, prepared in accordance with the requirements of the GRI standards core option, is intended to provide all stakeholders with information about TPAO's work in the field of sustainability.

The report, published bilingually in Turkish and English, includes data for 2021 and 2022. It covers domestic and overseas onshore and offshore exploration and production operations and their environmental, social and economic performances as well as TPAO's sustainability approach and commitments.

In developing the company's sustainability approach, the 17 Sustainable Development Goals (UN SDGs) formulated by the United Nations were also taken into account.

You can access the report content at www.tpao.gov.tr and send your opinions and suggestions to stratejibilgi@tpao.gov.tr



CEO's Message

Dear Stakeholders,

2021 and 2022 saw raised awareness about the protection of the environment and heated discussions on the measures to be taken against the climate crisis, in addition to the efforts to fight the pandemic. The European Union's goal of becoming climate neutral in 2050, the European Green Deal and the setting of net zero carbon emission targets by more than 110 countries demonstrate that we have entered a new era in the fight against the climate crisis. This global agenda proves that sustainability should be at the center of our lives.

Energy demand is expected to be higher than ever in the coming period. While we maintain our efforts to meet the increasing energy demand, we also have to prepare for a world where carbon emissions must be reduced to much lower levels. In this regard, our main strategy is to do our job properly and efficiently and to make success sustainable, regardless of the conditions.



CEO's Message

We see sustainability as a journey that should be internalized by all levels of our organization. In this journey, we integrate sustainability with our business model and corporate culture.

Our major goal is to unlock the oil and natural gas potential in our country, thus achieving economic gains. On this path we set out with the aim of ensuring energy independence, we accelerated our operations in both onshore and offshore.

The liabilities paid by TPAO in 2022 made a direct contribution of TRY 12.2 billion to our state. In our exploration and production operations, we follow a fast, flexible, high-standard, low-cost and solution-oriented approach, taking into account domestic and national opportunities at an increasing rate.

As part of our offshore operations, we carry out both deepwater and shallow water drilling in the Mediterranean and Black Seas. With the discovery of the Sakarya Gas Field in 2020, we took a historic step to unlock the potential in our seas. We added new reserves with the discoveries of Amasra in 2021 and Çaycuma in 2022. While our drilling operations continue to develop the discovered field, we also commissioned the Sakarya Gas Field Land Facility to bring the gas to the land.

Our goal is to bring these natural gas resources to the land and make them available to our nation in 2023.

We made a total of 56 discoveries onshore in 2021 and 2022. The oil discovery we made on the border of Şırnak Province has provided a new initiative for our country.

We continue our oil and natural gas exploration activities onshore and offshore to further increase our production.

To ensure our energy supply security, we continue our operations abroad, in Azerbaijan, Iraq and Russia as well as in our country. Our overseas output amounted to an average of 97,197 boe/d in 2022.

We have adopted a "continuous cost improvement" culture within the company in order to effectively monitor costs and identify areas for improvement to bring the costs to more competitive levels. In this way, we have achieved a significant reduction in unit costs of exploration and production.

At TPAO, we believe that we will grow together and we support development through training. We continue to improve our safe working environment and train the qualified workforce of the future. We are aware that sustainable development depends on empowerment of women in business life and equal opportunities for everyone.

We are also taking important steps toward digitalization, an important component that shapes our business model in all our processes. We ensure that all technical and operational data used by our Corporation is structured on a single platform. This domestic and national transformation project developed by TPAO is intended to increase the sustainability of our processes and the productivity of our employees.

We maintain our R&D activities without slowing down. We have the first R&D Center established with 100% public capital in Turkey. We have invested approximately TRY 140 million in R&D in the last five years. We continue our analysis, evaluation and consultancy activities at our laboratories accredited by the Turkish Accreditation Agency (TÜRKAK).

We contribute to the circular economy by recycling waste according to an effective waste management policy. We invested TRY 33 million TL in waste recycling in 2022. We have a "Zero Waste Certificate" in our Head Office and all District Managements. In addition, within the framework of protecting biodiversity, we plan our work in such a manner as to minimize any potential harm to all living things that will be affected by our operations.

We continue to improve our occupational health and safety performance in line with our priority of creating safer and healthier workplaces for our employees and our goal of zero work accidents.

We endeavor to create a safe and healthy working environment by control measures, work instructions, health surveillance and job-specific training of employees determined through risk assessment studies, and by inspecting the practices at our offices and in the fields.

We are committed to operating in a responsible and sustainable manner to minimize environmental impacts and climate change risks.

We have developed a roadmap as part of the efforts to "calculate and reduce our carbon footprint" resulting from our onshore and offshore operations.

Regulations developed with an awareness of climate change are leading countries and companies to a transformation. In this process, we have been creating the infrastructure of this transformation for a long time by introducing practices based on a rational, pragmatic, responsive-to-change and environment-friendly approach on behalf of our Corporation. In the light of global developments, we undertake critical responsibilities in our industry by means of projects that focus on people and are responsive to changes in structural and individual terms.

We are working to further strengthen our country's leading position in energy independence with a corporate structure that quickly anticipates and responds to local needs and international expectations.

At TPAO, our main goal is to support the efforts to ensure our energy security, while also offering a more sustainable future to next generations, thanks to our environment-friendly approach. I would like to thank all my colleagues and all our stakeholders who have been with us on this journey and contributed to us achieving our goals.

Melih Han BİLGİN

Chairman of the Board and CEO of Turkish Petroleum Corporation



Covid-19 Management

Protecting the health and safety of all our stakeholders is always our priority.

During the COVID-19 pandemic, which started in 2020 and whose impacts still continue to be felt in 2022, exploration and production operations continued without interruption and according to the schedules.

To avoid interruption of activities in critical operations and workplaces at sea, testing and quarantine procedures were carried out before the entry of the personnel on duty to the workplaces, and only people with negative PCR test results were given approval to board the ships. Measures such as removing positive cases from drillships, isolating their contacts, testing in suspicious cases, and periodic PCR screening of all personnel were also continued.

The measures taken in 2021 include:



Remote work



Information and guidance



HES (Hayat Eve Sığar) code tracking



Antigen, PCR, IGG and IGM tests



Disinfection in work areas, service and corporate vehicles



"Covid-19 Outbreak Management Procedure" publication



"Rules to be followed during Covid-19" publication



"Covid-19 Contact Tracing Instructions" publication



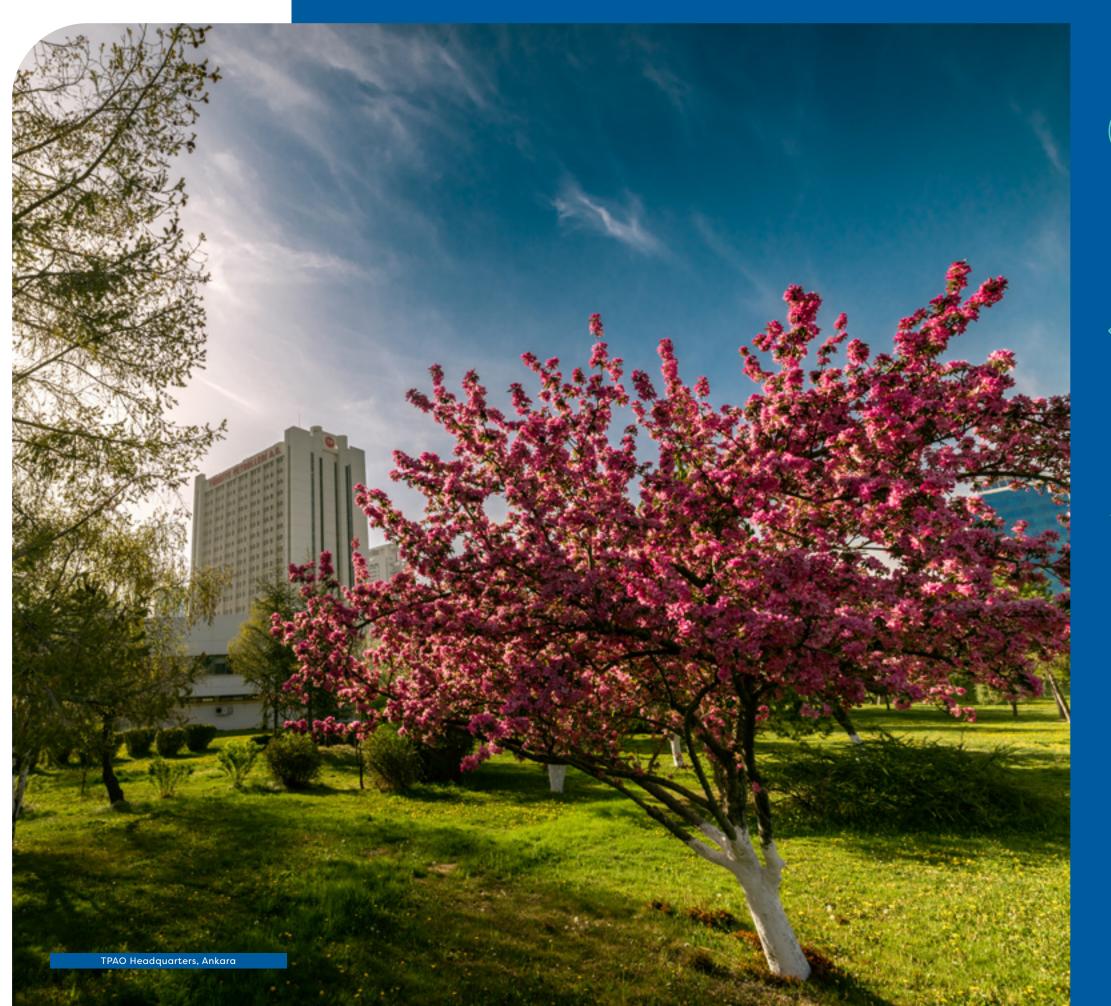
Mask use



About TPAO

Türkiye Petrolleri A.O. (TPAO), one of the major players of our country's economy, was established in 1954 to engage in hydrocarbon exploration, drilling, production, refining and marketing operations on behalf of the public, and has achieved manyfirsts in the oil industry over the course of its 68-year history.

TPAO was an integrated oil company until 1983, but currently operates as a national oil company engaged in hydrocarbon exploration and production. According to the current legislation, TPAO is a State Economic Enterprise included in the list attached to the Decree Law No. 233 on Public Economic Enterprises, and operates subject to that Decree Law. According to the decision of the Council of Ministers of 24 January 2017 and numbered 2017/9756, all the shares of the Ministry of Treasury and Finance in TPAO capital were transferred to the Wealth Fund of Turkey.





(C) Mission

To carry out exploration and production operations at home and abroad in order to increase our country's oil and natural gas production.



Vision

To be an effective, competitive and dynamic national exploration and production company in meeting our country's oil and natural gas demand.



Values

- Respect
- Courage
- Determination
- Perfectionism
- Egalitarianism



Exploration and Production 2022



Annual Average Output:

Domestic:

59,413 boe/d

Overseas:

97,197 boe/d

Total:

156,610 boe/d

Seismic Data Acquisition:

3D Onshore:

2,166 km²

3D Offshore:

24,393 km²

2D Onshore:

1,516 km

Overseas Production Fields: Azerbaijan, Iraq, Russia

Operation



Number of Drilled Wells:

Onshore:

150

Offshore:

9 (deep water) + 1 (shallow water)

Drillships:

Fatih, Yavuz, Kanuni, **Abdülhamid Han**

Financial ...

Capital:

TRY 22 billion

Legal Liabilities Paid:

TRY 12.2 billion

Net Profit for the Period:

TRY 7.76 billion

Investment:

USD 4,075 million

R&D Investment:

USD 2.8 million

FIRST DRILLING (Garzan-17) - 1956

History

Strategy and Goals

Basic strategies and roadmap have been developed according to the 5-year TPAO 2019-2023 Strategic Plan, created in line with the Presidential Executive Programs, the Eleventh Development Plan (2019-2023), the 2021-2023 New Economy Program (YEP), the National Energy and Mining Policy and the 2019-2023 Strategic Plan of the Ministry of Energy and Natural Resources.



Offshore Projects:

TPAO's inventory includes four drillships operating at global standards in hydrocarbon exploration (Fatih, Yavuz, Kanuni, Adülhamid Han). Within the framework of the offshore business plan, one of the primary objectives is to unlock the oil and natural gas potential of our country's marine areas through both deep-sea and shallow water drilling in the Mediterranean and the Black Sea.

New Exploration Axes:

Some of the steps taken by TPAO in exploration include introduction of new production areas by focusing on underexplored land and sea areas in our country, and overcoming geographical obstacles in seismic studies with innovative approaches such as aerial data collection.

Overseas Investments:

In addition to existing projects abroad, opportunities in the surrounding regions are also pursued.

Production Enhancement Technologies:

Efforts are underway to increase production in the existing fields by taking advantage of technological opportunities such as water and carbon dioxide injection, polymer gel applications as well as well bottom heaters. Fracking technologies are used effectively in order to increase the recovery factor of the discovered reservoirs and the existing production fields.

Unconventional Investments:

"Unconventional Projects Roadmap" was developed to unlock the unconventional hydrocarbon potential in the Thrace Basin and Southeastern Anatolia regions. In this context, we aim to increase the diversity of production methods, taking advantage of developing technologies.

National and Indigenous Technology:

The efforts to promote the use of indigenous resources within the framework of the National Energy and Mining Policy form the basis of the supply strategy. Prioritization of the national industry in the machinery, equipment and software used and the methodologies applied is among the main objectives.

Transparency and Traceability:

The improvement of the "Enterprise Resource Planning" is underway to make all business processes traceable and measurable. Corporate goals are set with a participatory approach, and monitored and reported periodically.

A Smart and Learning Organization:

"Cross Training" to increase interaction between units as well as "Manager Development" for current managers, "Manager Training Program" for potential manager candidates and the online training platform "TP Academy" for all our employees have been implemented. Training courses are continued and updated.



Corporate Governance TPAO 2022 Sustainability Report // 23

Corporate Governance

All activities are carried out within the framework of "Corporate Governance Principles".





TPAO carries out all its activities in accordance with the principle of integrity. It acts with integrity and honesty in its relations with its employees and all other stakeholders.

Transparency

TPAO is transparent and open in its relations with its employees and all other stakeholders.

Reliability

TPAO provides timely, complete and accurate information to its employees and all other stakeholders.

Impartiality

TPAO does not discriminate against its employees and all other stakeholders on the basis of gender, language, religion, race, behavior, opinion, age, physical disability and ethnic origin, and never allows any behavior and practices that hinder equal opportunities under any circumstances. TPAO treats all its employees fairly and equally.

Confidentiality

TPAO protects the private information of its employees and all other stakeholders. It does not allow sharing of this information with third parties.

Compliance

TPAO carries out all its activities in accordance with laws, regulations and standards. It follows the laws, regulations and standards closely and takes the necessary precautions and measures to ensure compliance with the laws.

Respect for Humans and the Environment

TPAO carries out all its activities in compliance with occupational health and safety regulations and in an environment-friendly manner.

Management and Organizational Structure

The structure, duties, powers and responsibilities of the TPAO Board of Directors are determined in accordance with the Decree Law No. 233 on Public Economic Enterprises.

The Board of Directors is the decision-making body of TPAO with the highest level of authority and responsibility. It consists of a chairman and five members. CEO is the Chairman of the Board of Directors and is appointed by a Presidential Decree upon the proposal of the relevant Minister.

Detailed information about the management and organizational structure can be accessed on TPAO's website (www.tpao.gov.tr).

Board of Directors

MELİH HAN BİLGİN	Chairman of the Board and CEO
MEHMET FERRUH AKALIN	Board Member and Vice Chairman
KUTLUHAN TAŞKIN	Board Member
митьи коç	Board Member
EDİP MÜYESSEROĞLU	Board Member

MELİH HAN BİLGİN Chairman of the Board and CEO

Security Management

Legal Advisor's Office

Human Resources Department

Corporate Communications Management

Private Secretariat

Inspection Board

Board of Directors Office Management

Black Sea Projects Management

Internal Audit Department

MEHMET FERRUH AKALIN Board Member and Vice Chairman

Exploration Department

Data Processing Management

ABDURRAHMAN TİRYAKİ Vice Chairman

Engineering Department

Production Department

Adıyaman District Management

Batman District Management

Trakya District Management

Şırnak District Management

Gabar Field Development Project Management

AHMET TÜRKSOY

Vice Chairman

Department of Financial Affairs and Financing

Strategy Development Department

Supply and Logistics Department

Carbon Management Department

ZÜHTÜ BATI

Vice Chairman

R&D Center Department

Information Technology Department

Support Services Department

Department of Occupational Safety and Environmental Protection

International Projects Department

Current Organizational Chart prepared in accordance with the Board of Directors Decision No. 2052/1 of 23.10.2023.

Integrated Management System

Sustainable development depends on carrying out activities in all areas with the same understanding. At TPAO, we act accordingly and carry out the necessary activities to create a business environment that will allow all units to work in coordination with each other.

As part of integrated management systems, internal audits are conducted every year by our relevant unit, and external audits are conducted by internationally accredited independent organizations.

TS EN ISO 50001 Energy Management Systems Certificate was obtained in November 2021.



TS EN ISO 9001:2015

Quality Management System



TS EN ISO 14001:2015

Environmental Management System



TS ISO 45001:2018

Occupational Health and Safety
Management System



TS EN ISO/IEC 27001:2013

Information Security Management System



TS EN ISO 17025:2017

Laboratory Accreditation Qualification Certificate



TS EN ISO 50001

Energy Management System Certificate



Corporate Risk Management

Corporate Risk Management includes identifying the risks that our Corporation faces or is likely to face, determining actions through appropriate resource planning, and monitoring them through practices that ensure continuity.

The activities carried out in this context contribute to strategic planning, setting of corporate goals, financial risk management, internal audit plan, management systems, scenario planning and determination of actions for important projects.

Basic Corporate Risk Management Processes:

Process-based Risk Management: improving the processes related to our operations and making them more efficient.

Target-based Risk Management: planning and implementing the necessary actions to eliminate the risks to the achievement of targets.

Global and Sectoral Risks: following the developments in the sector on a global scale and taking relevant measures when necessary.

Risks to Important Developments: being prepared for risks associated with current developments and mitigating their impact.

Critical and Priority Risks: assessing urgent and priority risks, identifying key areas for improvement and managing action plans.

Risk Factors:

- Strategic: risk factors that may affect the reputation, sustainable growth and brand value of the organization
- 2. Geopolitical: risk factors that may affect our operations, such as geopolitical developments (along with security/supply/sanction dimensions), variability of supply-demand equilibrium, etc.
- **3. Security:** risk factors that may affect physical and cyber security.
- **4. Digital/Technological:** risk factors regarding data processing, resource protection and archive management
- **5. Technical:** risk factors that may affect the reserves added by exploration and the continuity of production.
- **6. Operational:** risk factors for the sustainability of operational activities in land and sea fields.
- 7. Financial: Risk factors affecting financial sustainability
- **8. Human Resources:** risk factors regarding failure to meet the need for personnel with the required qualifications and experience.
- 9. Occupational Safety and Environmental Protection: risk factors for natural disasters, epidemics, and occupational accidents that result in death/damage or environmental disaster.
- 10. Climate Change: risk factors that may affect energy consumption habits according to the global warming agenda and the accompanying legal and financial developments.

TPAO and Sustainability

2021	2022	

• Establishment of the "Occupational Safety Unit" in Batman.	 Launch of the "United Nations Development Program Project" regarding the establishment of the Oil Research and Development Center. Establishment of the "Research Center Facility Management". 	• Establishment of the "Research Center Group Presidency".	• Establishment of the "Occupational Health and Safety Unit".	• Establishment of the "Well Control Training Center".	• Establishment of the "Occupational Health and Safety Coordination Office".	• Establishment of the "Department of
696	971	974	980	8000	066	7

Our Sustainability

013	• "ISO 14001 Environmental Management System" and "ISO 45001 Occupational Health and Safety Management System" certification.
710	• Registration of the R&D Center by the Ministry of Science, Industry and Technology.
	• "ISO 27001 Information Security and Management System" certification.
	• Establishment of the Digital Library.

2018	 Establishment of "TP Academy", the online training and development platform. Commissioning of the "Digital Archive Project".
2019	• "ISO 9001 Quality Management System" certification. • Conducting of the "Employee Satisfaction Survey".

 "ISO 9001 Quality Management System" certification. "Basic Level Zero Waste Certificate" "Bublication of the "Corporate Governance Principles" within the "Corporate Governance Policy". Publication of the "Sustainability Policy". Publication of the "Sustainability Policy". Establishment of the "Supplier Performance Evaluation System". Launch of the "Competency Management Project".

 "ISO 50001 Energy Management System" certification. Publication of the first Sustainability Report compatible with the Global Reporting Initiative (GRI) core option. Launch of efforts to reduce carbon footprint as part of the fight against climate change. Launch of mobile laboratory applications on ships. Implementation of a long-term internship program for senior university students under the project titled "Biz Bize Kariyer".

Our Sustainability Priorities



Our goal is to act towards a common goal that will add value to all our stakeholders with every step we take.



Our successes grow in an atmosphere of understanding created by the transparent and respectful relations we establish with our stakeholders.

2020: A working team was formed, workshops were held and internal and external stakeholder surveys were conducted to determine our sustainability priorities.

Taking global and sectoral developments into account, risks and opportunities were evaluated and a materiality matrix was created.

2021-2022: A total of 27 topics were determined, including reduction of dependence on foreign energy resources, compliance with international standards, equal opportunity and inclusion among employees, ensuring information and data security, contribution to the domestic economy, uncompromising, environment-friendly operating practices, promotion of indigenous value-added products and services, and monitoring and evaluation efforts were formulated accordingly.

BRAVE INVESTMENT

- 1 Reducing dependence on foreign energy resources
- 2 Contribution to the domestic economy
- 3 Development of and support to local suppliers

RESPECTFUL DEVELOPMENT

- 4 Compliance with international standards
- 5 Ensuring information and data security
- 6 Ethical and transparent management approach
- 7 Brand value
- 8 Strengthening corporate communication
- 9 Ensuring stakeholder collaboration
- 10 Digital transformation and digitalization
- 11 Dissemination of corporate culture
- 12 Stakeholder management

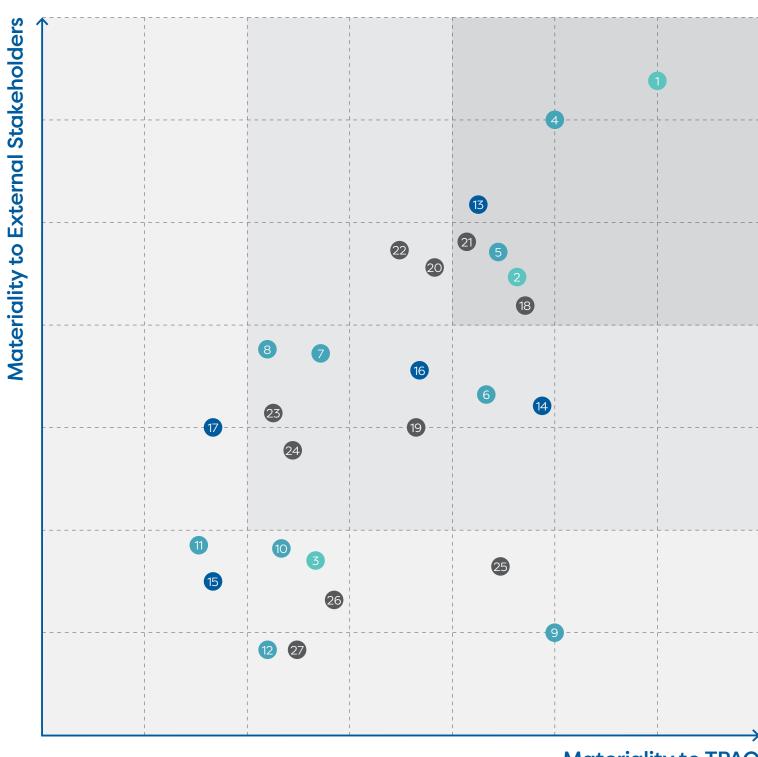
DETERMINED GROWTH

- 13 Equal opportunity and inclusion among employees
- Compliance with international quality standards with respect to OHS
- 15 Social Responsibility
- 16 Employee development
- 17 Work environment

EXCELLENT ACTION

- 18 Uncompromising, environment-friendly operations
- 19 Ensuring energy efficiency
- 20 Risk management
- 21 Promotion of indigenous value-added products and services
- 22 Employee satisfaction and engagement
- 23 Combating climate change
- 24 Waste management
- 25 Preservation of biodiversity
- 26 Use of technology R&D
- 27 Customer satisfaction

Material Topics



Materiality to TPAO

Our Sustainability Approach

In line with the vision of becoming an effective, competitive and dynamic national exploration and production company in meeting our country's oil and natural gas requirements, our Corporation addresses its strategies and targets with a focus on sustainability and in accordance with the "National Energy and Mining Policy" of our Ministry of Energy and Natural Resources. All processes were reviewed taking into account sectoral performance criteria to develop the "Turkish Petroleum's Sustainability Approach". At the same time, TPAO aims to contribute to the efforts required under the United Nations Sustainable Development Goals (SDGs).

TPAO's Journey in Four Directions

We are aware that in order to successfully achieve our sustainability goals, we need to achieve an equal extent of development in all areas and set our route correctly.

TPAO's Sustainability Compass

We are on a sustainable development journey together with all our stakeholders. On this journey, we have aligned our compass with our operations. In this context, the directions of the compass are as follows:

- East: Brave Investment
- South: Excellent Action
- West: Respectful Development
- North: Determined Growth

TPAO's core values of respect, courage, determination, perfectionism and egalitarianism also form the basis of our sustainability understanding and compass.

Our sustainability focuses, material topics and sub-targets for sustainability are included under four main strategic topics for sustainable growth. Utilization of new technologies to meet energy demand in transportation will gradually reduce the carbon emission impact of oil and natural gas products. On the other hand, petroleum products will continue to be used in our lives as a sustainable raw material that can be recycled.



Determined Growth











Brave Investment







Excellent Action













TPAO 2022 Sustainability Report // 37

Synesgy Environmental, Social and Corporate Governance (ESG) Score and Certificate

Fortune Turkey, which included Turkey's largest 500 companies, and CRIF Turkey Sustainability Research evaluated the sustainability performance of the companies. At the end of the project, analyses such as "Overall Performance of Fortune 500 Companies", "Sustainability Evaluation of Our Exporters" and "Sector-Specific Evaluations" were planned to be published in Fortune Turkey's Sustainability Special Issue.

In order to ascertain the Sustainability and ESG Performance of our Corporation by participating in the research, ESG survey questions were answered through CRIF's sustainability solution Synesgy platform, which is compatible with GRI (Global Reporting Initiative) and the United Nations Sustainable Development Goals. In the survey filled out based on 2022 data, TPAO got "B - Good Sustainability" score, and obtained the Synesgy Environmental, Social and Corporate Governance (ESG) Score and Certificate, valid until January 5, 2024.



Our Sustainability Policy

In order to achieve sustainable development and leave a thriving world for future generations, we undertake to:



adopt our basic corporate governance principles as corporate culture;



adopt a management approach that integrates the corporate sustainability approach into the corporate culture and raise awareness among all our stakeholders;



comply with all national and international legislation to which our Corporation is subject;



improve our Corporation's performance and increase production efficiency and profitability;



provide a suitable work environment for our employees, who are our primary stakeholder;



ensure the occupational health and safety of our employees while carrying out our operations;



encourage our employees' active engagement and provide a strong and open communication environment;





respect human rights and ethical values without allowing discrimination among our employees under any circumstances and grant equal rights to all our employees;



ensure equal opportunities for women in the workplace and to increase women's employment;



wse energy efficiently and protect environmental balance and natural resources in all our operations;



effectively manage risks with a proactive approach in our operations and continuously improve all our business processes;



prevent environmental pollution at source during our operations, continuously improve our environmental performance, and reduce, eliminate, recover or recycle our waste;



work in accordance with the principle of zero work accidents, adhering to occupational health and safety legislation;



increase stakeholders' knowledge and social awareness about climate change;



ensure the continuity and improvement of the integrated management system we have established;



ensure information security and business continuity in all operations;



aim to be a pioneer and innovative actor in the industry through R&D and innovation efforts;



manage relations with all stakeholders in an honest, transparent and open manner;

make a social contribution to the



domestic economy in which we operate;



ensure effective communication $\stackrel{\triangle}{\sim}$ with our stakeholders in line with our communication policy;



Our Sustainability Strategy Matrix

Sustainability Theme	Our Sustainability Focus	Material Topics	Relation with TPAO Goals and Targets
BRAVE INVESTMENT 8 DEGRIT WOOK AND PARTICES, MICHOLAR PARTICES, MICHO	Increase oil and natural gas production Unlock regional hydrocarbon potiental	Contribute to the domestic economy Reduce dependence on energy imports and become a net exporter country	 Operations aimed at unlocking the hydrocarbon potential in our deepwaters will be increased. Other goals of us: Support development Support sub-industries Promote development Maintain equal participation Increase production Scale up eploration activities
The oil and natural gas industry is important for the continuity of both the domestic and global economy. The main goal is to carry out all operations with an understanding that focuses primarily on employees and stakeholders who work with the industry and are directly related to the production in the industry. Beyond the classical understanding, our Corporation aims to ensure a determined growth for the industry that will benefit the common future of humanity.	Create a sustainable economy People-oriented investment and business approach	Occupational health and safety Employee satisfaction and engagement Equal opportunity and inclusion among employees Improve the work environment	 A culture of continuous cost improvement will be adopted. A smart and learning organizational structure will be created. Other goals of us: Support human development Occupational health and safety Protection of future generations Financial efficiency Support to the regional economy

Sustainability Theme	Our Sustainability Focus	Material Topics	Relation with TPAO Goals and Targets
The oil and natural gas industry is a field that relies on scientific knowledge and requires advanced engineering competency. Both the performance of activities and the review of the global impact of the products resulting from them need to be addressed with an understanding of perfection. As a player in the oil and natural gas industry gas industry, our Corporation aims to carry out its operations in full compliance with science-based targets for improving global climate conditions.	Generate outcomes relying on scientific approach Create a sustainable environment	Uncompromising, environment-friendly operating practices Ensure energy efficiency Waste management Preserve biodiversity	 The rate of use of domestically manufactured products will be increased. Other goals of us: Energy efficiency Increase R&D competency Contribute to science-based goals Reduce emissions to air Reduce emissions to soil Preserve biodiversity Develop new technologies
RESPECTFUL DEVELOPMENT 8 DECENT WORK AND PARTICULAR STRUCTURE 16 PRACE, JUSTICE AND STRONGE STRUCTURE The oil and natural gas industry carries out all its operations with an understanding of full transparency, starting from the purpose of the operations. Ensuring that all operations are accountable and all products are traceable is the priority focus of the industry, which is monitored without compromise. At the same time, the primary goal is that the economic and social system resulting from the operations will benefit all people and organizations in an equitable manner.	Ensure transparent development Ensure equitable development	Compliance with international standards Ethical and transparent management approach Ensure information and data security	 Accountability Traceability

Our Sustainability Goals

UN-SDG	Sustainability Theme	Targeted for 2022	Current Status
9 INDUSTRY, INNOVATION AND INTERSTRUCTISE	Brave Investment	Increase reserves through exploration	⊘
9 INDUSTRY, INFORMIDA AND INFRASTRICTISE	Brave Investment	Increase the daily average total output by 10%	⊘
9 INDUSTRY INFORMION AND INFORMATION	Brave Investment	Complete drilling operations according to the schedule	⊘
9 INDUSTRY, INDUSTRIAL AND INFRASTRACTION	Determined Growth	Increase the ratio of generated electric power to consumed electric power to 17%	⊘
8 DECENT WORK AND ECONOMIC CONSTRI	Determined Growth	Increase service revenues by 10% (Analysis, Consultancy, Field and Training Services)	⊘
12 MODICIDA MO CONSTITUTOR CON	Determined Growth	Reduce the per capita electricity consumption in the Headquarters by 1%	⊘
12 PROCESSES	Determined Growth	Reduce the per capita natural gas consumption in the Headquarters by 1%	⊘
3 GOOD HEALTH AND WILL SERVE	Determined Growth	Conduct COVID-19 screening tests at TPAO Headquarters	⊘
8 DECOMPOSE AND ECONOMIC CONSTRI	Determined Growth	Reduce the Lost Time Injury Frequency Rate (LTIFR) throughout TPAO	⊘
13 CUMATE ACTION	Determined Growth	Maintain the validity of the ISO 50001 Energy Management System Certificate	⊘
12 PROPOSITE OF PROCESSION OF CONSIDERATION	Excellent Action	Increase waste recycling by 3%	⊘
12 PROPOSIBLE OF CONCENTRAL OF	Excellent Action	Carry out all risk management activities via the system	⊘
8 DECOMPOSE AND ECONOMIC CONSTRI	Excellent Action	Keep the rate of use of domestic manufacture at no less than 25%	⊘

UN-SDG	Sustainability Theme	Targeted for 2022	Current Status
8 DECENT WORK AND ECONOMIC GROWTH	Excellent Action	Establish the "Supplier Management System"	②
8 DECENT WORK AND ECONOMIC GROWTH	Excellent Action	Use domestic substitutes of no less than five value-added products	②
4 CHAITY EDUCATION	Excellent Action	Increase the training time per person to 12 hours	②
4 CHAITY EDUCATION	Excellent Action	Complete the online orientation and manager preparation system	②
4 quarri recensi	Excellent Action	Increase the number of individual training plans with a minimum duration of 600 hours, prepared after the competency evaluation, every year	②
9 INDUSTRY INMOVATION AND INFRASTRUCTURE	Excellent Action	Complete the Digital TPAO Project	②
9 INDUSTRY, INMOVATION AND INFRASTRUCTURE	Excellent Action	Establish a cyber risk management system in TPAO's offshore systems	②
9 INDUSTRY, INMOVATION AND INFRASTRUCTURE	Excellent Action	Enrich the analysis portfolio within ARGEM (four new analyses)	②
4 OUAUTY ENUCINEM	Respectful Development	Increase the implementation rate of individual training plans (75%)	②
16 PACE HISTORY INSTITUTIONS	Respectful Development	Monitor and report corporate performance quarterly	②
8 OCCHINACE GROWN	Respectful Development	Publish the second Sustainability Report	②
8 DECENTIANTS AND ECONOMIC GROWTH	Respectful Development	Expand ISO 27001 activities to include the Headquarters' central units and activities	②

TPAO Stakeholder Contact List

STAKEHOLDER TYPE	STAKEHOLDER	COMMUNICATION PLATFORM	COMMUNICATION FREQUENCY
	Corporation's Employees	Corporate communication platform (Intranet)	Continuous
		Briefing emails	Weekly
		Social events	At least twice a year (except during the pandemic)
		Employee engagement survey	Once a year
		Performance evaluation and feedback interviews	Once a year
, ш 2		Social media platforms	Continuous
INTERNAL		Online corporate magazine	Monthly
18 HO		Guides	Regular, whenever update is necessary
Ž		Public relations, press & publishing	When deemed necessary
4		Website	Regular, whenever update is necessary
S	Trade Union	Collective bargaining negotiations	Biannually
	Senior Management	Quarterly evaluation meetings	Four times a year
		Year-end evaluation meetings	Once a year
		Unit supervisors' meetings	Weekly
		Other digital media	Continuous
	Public / Society	Social media platforms	Continuous
<u>ح</u>		Conventional media platforms	Through ETKB, when deemed necessary
AL DI		Website	Upon update
N O		EIA report process	During the project
EXTER	Presidency	Events	Via ETKB upon request
AA		Meetings	Via ETKB upon request
S		Presentations	Via ETKB upon request
		Information notes	Via ETKB upon request

Our Stakeholder Groups

In order to better manage our stakeholder relations and communicate with them more effectively, we prepare a detailed list of communication frequencies and dialogue platforms with business stakeholders. In this way, we aim to create a more effective communication environment. By communicating with our stakeholders at different times and on different platforms, we both enable them to obtain detailed information about the company and manage stakeholder expectations effectively.

TPAO Stakeholder Contact List

STAKEHOLDER TYPE	STAKEHOLDER	COMMUNICATION PLATFORM	COMMUNICATION FREQUENCY
2	Ministry of Foreign Affairs	Project presentations	Via ETKB upon request
	Grand National Assembly of Turkey	State Economic Enterprise commission meetings	Once a year
		Budget negotiations	Once a year
	Court of Accounts	Audit reports	Once a year
	Ministry of Energy and Natural Resources	Annual reports	Once a year
		Project briefing presentations and/or reports	Project-based
		Information notes	Upon request
		Speech notes	Upon request
L DE		Digital posts	Upon request
RNAHOL	Affiliated and Related Organizations of the Ministry of Energy and Natural Resources	Project-based; telephone, e-mail, fax or official letter	During the project
T Z	Wealth Fund of Turkey	Upon request, telephone, e-mail, fax or official letter	Upon request
EXT	Ministries and State Central Organizational Units	Social Security Institution transactions, in writing	Regular
S		Public Institutions	During the project
	Public Institutions	When deemed necessary; telephone, e-mail, fax or official letter	When deemed necessary
	Force Commands, Gendarmerie General Command	Project-based; with the air, land and sea commands and the gendarmerie, in writing	During the project
	Administrative Courts	Within the current litigation processes, in writing	Regular
	Banks	Within the framework of business and transaction requirements; telephone, e-mail, fax or official letter	Regular
	Governor's Offices, District Governor's Offices and Provincial/	Project visits	During the project
		Field visits	Upon request
	District Municipalities	Information requests; phone, e-mail, fax or official letter	

STAKEHOLDER TYPE	STAKEHOLDER	COMMUNICATION PLATFORM	COMMUNICATION FREQUENCY
	Subsidiaries and Contractors	Meetings with respect to any area where services are provided	Regular
	All Suppliers	Regularly, if necessary; telephone, e-mail, fax or official letter	Regular
	Associations and Non- Governmental Organizations of which TPAO is a member	Traditional meetings	At least once a year
		Congresses and meetings	Once a year or once every three years, depending on the organization frequency
	Business Partners	Regular follow-up meetings	At least twice a year
		Project-based regular meetings, telephone, e-mail, fax or official letter	Regular
	Universities	Project-based partnerships, phone, e-mail, fax or official letter	Project-based
ER		Training and trainer-based collaborations; telephone, e-mail, fax or official letter	Upon request
NAL		Intern relations; phone, e-mail, fax or official letter	At least twice a year
TAKEHO	ТÜВİТАК	Project-based partnerships, phone, e-mail, fax or official letter	Project-based
AK	Turkish Employment Agency	When needed; telephone, e-mail, fax or official letter	When needed
S	TURKSTAT	Upon request, telephone, e-mail, fax or official letter	Upon request
	Customers	Monthly sales; phone, e-mail, fax or official letter	Monthly
	Press	When deemed necessary; phone, e-mail, fax or official letter	When deemed necessary by the senior management
	Consulting Organizations, Calibration Organizations, TÜRKAK	Project-based; telephone, e-mail, fax or official letter	During the project
	Chambers of Commerce and Industry, Professional Organizations	Project-based; telephone, e-mail, fax or official letter	During the project
	Oil Regulatory Authorities	Project-based; telephone, e-mail, fax or official letter	During the project
	State Personnel Directorate	When needed; telephone, e-mail, fax or official letter	When needed
	Waste Collection Companies	Project-based; telephone, e-mail, fax or official letter	During the project

Excellent Action 50 TPAO 2022 Sustainability Report // 51

Excellent Action

The oil and natural gas industry is a field that requires advanced engineering and operational competency based on scientific data. Both the performance of activities and the review of the global impact of the products resulting from them need to be addressed with an understanding of perfection.













Sustainability Focus

- Generate outcomes relying on scientific approach
- Create a sustainable environment

Material Topics

- Uncompromising, environment-friendly operating practices
- Ensure energy efficiency
- Waste management
- Preserve biodiversity

Sustainability Goals

- Technology use
- Energy efficiency
- Increase R&D competency
- Contribute to science-based goals
- Reduce emissions to air
- Reduce emissions to soil
- Preserve biodiversity



TPAO R&D Center

"TPAO R&D Center", the first R&D institution with public capital, has been operating focused on science and technology for 47 years. In this context, it operates effectively and efficiently to increase oil and natural gas production, unlocking the potential in our onshore and offshore fields and using, developing and producing advanced technologies within this framework, and remains to be a solution center in technical, operational and scientific terms.



Analysis, Testing, Evaluation







Consultancy



Vocational/Technical Training Services



Scientific and Academic Activities

The R&D Center has 363 analytical devices in 27 laboratories equipped with advanced technology and constantly increases its technical capacity with new equipment and more than 500 analysis and test methods in line with the objectives of supporting inclusive and sustainable industrialization and strengthening innovation by establishing durable infrastructure as part of the "United Nations Development Program (UNDP) Sustainable Development Goals 2030". In 2021, eight analysis devices and systems were included in the inventory. In 2022, nine new analyses were added to the portfolio.

In addition, our stakeholders' needs for analysis, testing and evaluation were met, and strategic R&D projects were jointly developed. TPAO continued to transform its development-oriented approach into innovative services. Its scientific and technical knowledge was shared through consultancy and vocational/technical training services, scientific and academic activities and publications.

In this context, the writing of the book titled "Stratigraphy, Sedimentology, Paleogeographic Distributions and Reservoir Characteristics of Oil Producing Reservoir Units in the Southeastern Anatolia Region" was completed and the book was presented to our internal and external stakeholders.

- Horiba la-950 V2 laser particle size distribution analyzer
- Infrastructure for H2S measurement in water by Automatic Titrator
- Measurement of mercury in natural gas (Sir Galahad)
- Mercury measurement in wastewater (Millenium Merlin)
- Radon measurement in gas, water and solid (Durridge RAD7)
- Bulk density measurement by 3D volume scanning
- Plug sampling using liquid nitrogen
- Freeze drying

National/International Certificates, Standards, Scopes, Services

The "Well Control Training Center" within the R&D Center has been providing services for 24 years. It is the first accredited center in Turkey to have its training program, trainer and training center individually accredited by the "International Well Control Forum (IWCF)". Practical training courses were delivered in simulators to a total of 230 participants in 12 nationally/internationally recognized certified courses in 2021 and to a total of 265 participants in 19 courses in 2022.

R&D Laboratory services have been accredited for 16 years. In 2021, laboratory services were provided in 36 types of analysis accredited by the Turkish Accreditation Agency (TÜRKAK) in accordance with the "TS EN ISO / IEC 17025-December-2017 General Conditions Standard for the Competency of Experiment and Calibration Laboratories". In 2022, 16 new analysis methods were accredited and the scope was expanded, providing laboratory services in a total of 52 accredited analyses. Project activities with R&D and design content have been registered by the Ministry of Industry and Technology for seven years.

Customer Satisfaction

TPAO R&D Center, which has been accredited by TÜRKAK since 2006, provides analysis services to both internal and external customers in the scope defined in the TPAO Service Catalogue, which is updated annually. A "Customer Satisfaction Survey" is conducted once a year to identify the quality of analysis services provided to customers after the provision of services, and the results are shared at the "ISO/IEC 17025 Management Review" meeting.







TPAO 2022 Sustainability Report // 55

R&D Center 2021 Activities

Ongoing R&D Projects 34	Completed R&D Projects 14
Planned R&D Projects 12	Implemented R&D Projects 10
Accredited Analyses 36	Laboratory 27
Accredited Laboratories 5	Scientific/Technical/Applied Training Programs 17
Well Control Training Center Courses Opened in accordance with International Well Control Forum Standards 12	Participants of Well Control Training 230
Total Courses Delivered / Number of Participants 13-36	Scientific Academic Publication 4

Another indicator of the importance and priority given to R&D activities is R&D investments.

A total of TRY 140 million has been invested in R&D in the last five years.

All activities related to the acceptance, execution, monitoring, evaluation, finalization, reporting, closure, awarding, regulation and protection of financial, commercial, intellectual, industrial and other legal rights of R&D and design projects are carried out in accordance with the "Turkish Petroleum R&D and Design Activities Implementation Procedure".

R&D Center 2022 Activities

Ongoing R&D Projects 34	Completed R&D Projects 17
Planned R&D Projects 10	Implemented R&D Projects 6
Accredited Analyses 52	Laboratory 27
Accredited Laboratories 5	Scientific/Technical/Applied Training Programs 17
Well Control Training Center Courses Opened in accordance with International Well Control Forum Standards 19	Participants of Well Control Training 265
Total Courses Delivered / Number of Participants 249-464	Scientific Academic Publications 11

R&D Center 2021 Performance

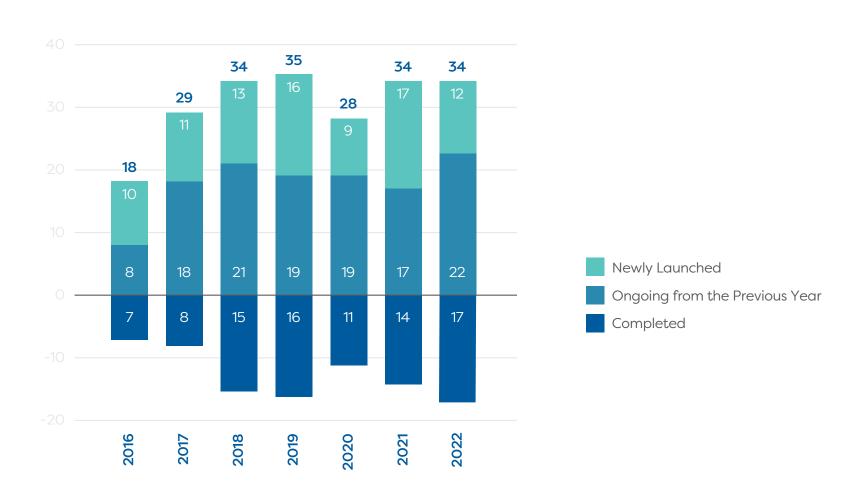
Prepared Drilling Programs/Wells 235	Quality Control Tests 181	Sedimentological, Biostratigraphic, Geochemical Analyses in Current Wells 50,922
Cement Designs 330	Wells with Drilling Fluid Monitoring 115	Wells with Cement Design 123
Sample/PVT Analyses 158/349	Drilling Fluid Tracking Time in the Field (Field/Day) 1,345	Number of Acid Designs 239
Plugs/Plug Analyses 428/2,841	PVT Core Corrosion and Acidizing Treatments in the Field 229	Total Analyses Conducted 64,475
Analyses Conducted for Wells Drilled in Previous Years 3,614	Wellhead Chemical Analyses at Sea/Onboard 336	Reported Current Exploration/ Detection/Production Wells Monitored by Sedimentological, Biostratigraphic and Geochemical Analyses 86

R&D Center 2022 Performance

Prepared Drilling Programs/Wells 202	Quality Control Tests 208	Sedimentological, Biostratigraphic, Geochemical Analyses in Current Wells 36,823
Cement Designs 342	Wells with Drilling Fluid Monitoring 46	Wells with Cement Design 195
Sample/PVT Analyses 170/270	Drilling Fluid Tracking Time in the Field (Field/Day) 1,500	Number of Acid Designs 242
Plugs/Plug Analyses 800/3,363	PVT Core Corrosion and Acidizing Treatments in the Field 223	Total Analyses Conducted 71,033
Analyses Conducted for Wells Drilled in Previous Years 6,295	Wellhead Chemical Analyses at Sea/Onboard 680	Reported Current Exploration/ Detection/Production Wells Monitored by Sedimentological, Biostratigraphic and Geochemical Analyses 141

R&D Center Projects

The R&D Center's project portfolio consists of projects aimed at scientific/technical innovation, invention, product development, process improvement, renewal and expansion of existing business, development of technologies that have the potential to create new jobs, and promotion of domestically manufactured products.



In 2021 and 2022, 34 R&D projects in the R&D Project Portfolio were carried out, the details of which are given below.

Significant gains were made through knowledge and technology transfer from R&D projects and other technical field, laboratory and mobile laboratory studies completed in 2021.

Sample Activities (2021)

- Gamma-Ray Log: Synthetic Gamma-Ray log was created by XRF analysis of the clasts from Türkali wells. This data provided guidance to the studies carried out under the Sakarya Gas Field Development Project.
- Acid Designs: Acid designs were made for acid operation applications with coiled tubing in open oil wells, and efficiency was increased through this application.
- Ice Drying Method: Ice drying method was employed for wet samples from seabed sediments and wells.
 Non-productive time caused by drying of the clasts/ cuttings/core samples exposing them to the atmosphere was prevented, and heat drying processes that could affect geochemical analyses were abandoned.
- New Sampling Method: For special purpose tests, plugs began to be taken from cores using liquid nitrogen and diesel fuel. While plugs had not been able to be taken from unconsolidated and shale samples in previous studies, this problem was resolved with the new method. Thus, a new sampling method was obtained.
- taken using ROV from the Sakarya Gas Field seabed (Seabed Sampling), and oceanographic data was produced by analysis of the samples in the WSC Lab Cabin on the Kanuni Drillship. By maintaining the pressure on the seabed, samples were taken from the seabed and sent to analysis as soon as possible. Thanks to the workshop established on the Kanuni Drillship, the relevant tests were carried out on-site.

- Collaboration with CoreLab: The R&D Center's core
 experts participated full-time in the on-site analyses of
 the cores taken from the Sakarya Gas Field, carried out by
 the CORELAB Company (U.S.). Expertise development was
 achieved.
- 3D Density Measurements: Mercury Immersion method used for Bulk Density measurements was ceased. Instead, the "3D Volume Scanner" device started to be used. The device was used for the first time in the oil and natural gas industry. A safer method was adopted in terms of occupational health, the test period was shortened, and 10 times more precise measurements were made.

Sample Activities (2022)

- In-Situ Polymerization and Gelation Method: "Pilot Field Study Aimed at Reducing Water Inflow and Increasing Sweeping Efficiency" was completed using this method and the field application of a new, indigenous and different polymer gel with a different gelling mechanism was carried out.
- Palynostratigraphic Characteristics and Biostratigraphic Modeling of the Dadaş Formation Project: As part of this project, the Photo Fossil Identification Software "FossilVision" was developed and a patent application was filed. Research and review requests regarding the application were filed with TURKPATENT on 29.11.2022 and were processed by the institution with the application number 2022/018112.
- "Kapıkaya Field Garzan Formation Facies Characteristics and Reservoir Characterization" Project: Under this project, the sedimentological and reservoir properties of the Garzan Formation were studied in detail, the quality of the reservoir levels of the Garzan Formation was determined by detailed lithological, petrographic analyses and log evaluations of the field, and reservoir relations were revealed based on diagenesis.

Environmental Management



Our main goal is to carry out our operations in a way that respects people and the environment.

Environmental measures taken include:

- Reduce the amount of hazardous waste generated
- Increase the amount of recycled waste
- Ensure the reuse of fluids released/ generated in the drilling/production operations
- Prevent/reduce environmental accidents
- Clean stones and soil contaminated as a result of accidents, thus preventing them from becoming idle
- Calculate greenhouse gas emissions and carbon footprint resulting from onshore and offshore operations, and develop a reduction road map

At TPAO workplaces, the environmental aspects of our work are evaluated with a life cycle approach, taking into account the parties that are or may be affected by our operations, and their environmental impacts are identified. Necessary processes are followed to mitigate such environmental impacts to acceptable levels and ensure the continuity of control measures.

As per the "Environmental Impact Assessment (EIA) Regulation", "Project Presentation Files" are prepared for our exploration and production operations as well as obtaining necessary documents from the Provincial Directorates of Environment, Urbanization and Climate Change regarding whether EIA is required, and the relevant processes are followed.

Regarding the evaluation of the compliance of our Corporation's operations with environmental legislation, efforts are underway to:

- take all necessary precautions;
- assess environmental risks before operations;
- implement pollution prevention and reduction activities:
- present and report environmental performances.

As part of sustainability goals, the relevant personnel are delivered the following training courses at regular intervals:

- General waste management training,
- Medical waste management training,
- Management of waste electrical and electronic equipment
- Non-hazardous waste management training,
- Environmental protection consumables training,
- Material safety data sheet training, etc.

Efforts to raise environmental awareness among TPAO staff and stakeholders constitute an important dimension of environmental management. In this context, "Zero Waste Training" was developed in 2021 and published as a mandatory training course via TP Academy. Necessary efforts to raise awareness are underway, providing the staff with information about waste management via intranet and e-mail.

To raise awareness about environmental management, a total of TRY 46.7 million was invested in 2021 and 2022.

the validation of the report was done by the Turkish Standards Institute in accordance with the ISO 14064-3:2019 Standard. In the report, efforts to reduce greenhouse gas emissions were presented and a "Mitigation Road Map" was created.

Summary Table Showing Distribution of TPAO's Main Category and Sub-Category Emissions		
Sub-Category	Category 1	Category 2
CO2 (tCO2e)	560,864.8707	151,262.1863
CH4 (tCO2e)	524.0306	0.0000
N2O (tCO2e)	1,064.0748	0.0000
Gases (tCO2e)	1,313,545.8290	0.0000
Total (tCO2e)	1,875,998.8051	151,262.1863

Carbon Footprint and Climate Change

Following the adoption of the Paris Agreement by the Grand National Assembly of Turkey and the setting of the goal of reducing greenhouse gas emissions in 2021, a new era began in the climate policy of our country, and the necessary work was launched to fulfill the responsibilities of the Corporation in this regard.

First of all, TPAO aims to determine the carbon footprint resulting from its operations and then to formulate and implement measures to gradually reduce carbon emissions.

Efforts were launched in 2021 to calculate the greenhouse gas emissions and carbon footprint of the Turkish Petroleum resulting from its onshore and offshore operations and to develop a reduction road map. In this regard, "2021 CORPORATE CARBON FOOTPRINT REPORT" was prepared for all our onshore and offshore operations in 2022, meeting all the requirements of the ISO 14064-1:2019 standard, and

During the "World Environment Day and Environment Week", an "Exhibition of Clothes Designed from Recycled Materials" was held, various nature sounds and noises were played in the elevators, and informative posters were hung at various points on campus in order to raise environmental awareness.



Waste Management

Our waste management practices are based on the utilization of the residues generated in production. Such practices cover both the waste from our main operations and the areas of activity used in carrying out those operations.

- Wastes generated in campus areas are sorted and collected separately. In 2021, "Hazardous and Non-Hazardous Waste Temporary Storage Areas" were reconstructed to ensure that wastes are collected under more suitable conditions.
- A new "Scrap" Area was built in 2022, allowing the scrap materials resulting from the operations to be collected under better conditions.
- Hazardous wastes (waste chemicals, oil spills, etc.) resulting from laboratory operations in the R&D Center are collected separately in containers that are suitable for the type of waste and then taken to the "Waste Temporary Storage Area".
- FORCE P PRINCIPAL OF THE PRINCIPAL OF TH

- Waste cooking oils generated by the central cafeteria and the lounge are collected separately and recycled. In addition, "Waste Cooking Oil Collection Points" were made available at the entrances of the buildings to collect the waste cooking oils in the homes of the staff.
- In addition, specially designed collection areas for waste batteries are available in the corridors of buildings.
- In the onshore and offshore exploration activities of our Corporation, it is ensured that contractors work in a way that creates a minimum amount of waste, prioritize recycling for waste reduction and reuse, and operate in accordance with the TPAO waste management plan and instructions.
- In line with the waste management plan, all solid waste generated both on land areas where operations are carried out and on ships is effectively sorted and disposed of by means of municipal/licensed companies.
- Precautions are also taken to ensure the necessary sealing on the floors of the equipment, including fuel tanks, engines, barrels, pumps, etc. Waste oils accumulated in oil traps are disposed of by taking them into waste oil collection containers at regular intervals.
- In an effort to minimize the damage that geophysical operations carried out in marine areas may cause to the environment, TPAO ensures that contractors work in accordance with the "Environmental Manual for Worldwide Geophysical Operations", published by IAGC and IOGP.



Zero Waste Project

As per of the "Zero Waste Certificate" obtained in 2020 for the Headquarters campus area, the "Zero Waste Tracking Table" is filled out regularly every month and sent to the Ministry of Energy and Natural Resources.

Environmental operation data is regularly entered for both our Headquarters and District Managements through the "Integrated Environmental Information System (ECBS)" of the Ministry of Environment, Urbanization and Climate Change.

In the Headquarters campus, materials such as waste bins, garbage bags, and signs placed at appropriate points to sort waste at source are checked at regular intervals. In this context, additional containers were provided for use in the storage of packaging waste, and new information signs were procured for Zero Waste Boxes.

Recycling of Waste Oils

Work is underway to mix the waste oils generated in TPAO fields and workshops with the produced crude oil at a rate of 0.01%. In 2021, 146,434 kg of suitable waste oil was mixed with crude oil, thereby providing economic gains. In 2022, 167,791 kg of suitable waste oil was mixed with crude oil, thereby providing economic gains.

Drilling Waste Management

Work is underway to dewater drilling cuttings and treat wastewater in order to minimize or completely eliminate the negative environmental effects of waste generated during drilling operations. Similarly, universities and private organizations are cooperated with to develop environmental protection studies in hydrocarbon exploration and production operations.

By recycling waste, the following environmental benefits are provided:

2021

2022

6,180 kg greenhouse gas emissions prevented 8,175 kg greenhouse gas emissions prevented

179,750 kWh energy savings achieved

371,791 kWh energy savings achieved

13 kg of raw material saved 15 kg of raw material saved

1,380 barrels of oil saved

2,055 barrels of oil sayed

498
trees prevented
from being cut

564
trees prevented
from being cut

4,565 kg of biodiesel produced

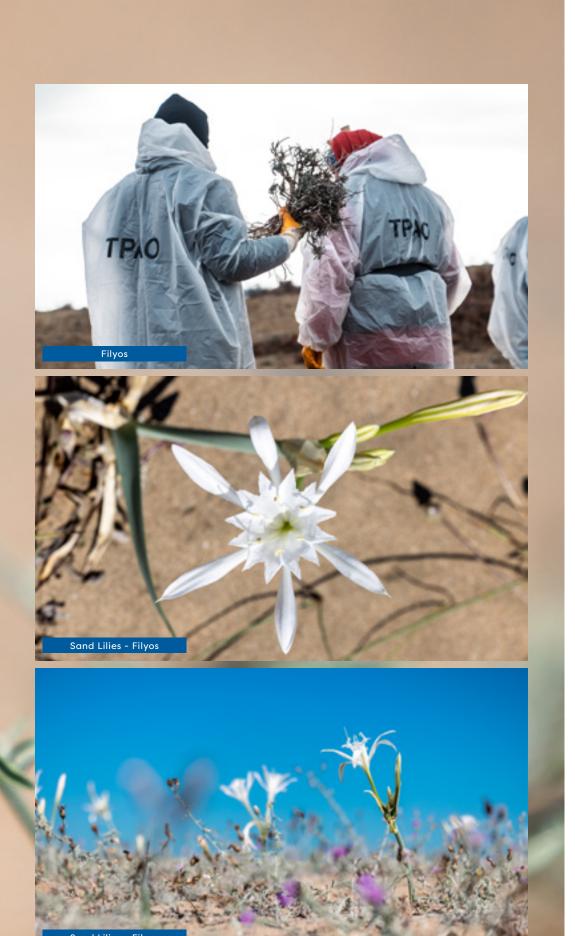
6,117 kg of biodiesel produced

Biodiversity

We are aware of the diversity and importance of all kinds of living organisms, including species on land, in sea and other ecosystems.

Ecosystem diversity and characteristics are identified in the regions where we operate, along with the species living in those ecosystems and their rarity and conservation status so that potential impacts on the ecosystems and related habitats can be assessed with great precision. Many studies are underway to prevent or minimize potential negative effects arising from our operations:

- In geophysical studies carried out onshore and offshore, the use of "AdBlue", an emission liquid developed to reduce harmful gas emissions within the framework of zero waste and clean environment concepts, prevents harmful nitrogen gases from mixing into the atmosphere, thereby supporting the reduction of the amount of harmful gases in the atmosphere.
- JNCC (Joint Nature Conservation Committee) guidelines are implemented to minimize the risk of injury to marine mammals during geophysical operations carried out in marine areas. Marine mammal imaging procedures are followed during the operations.
- As part of the Sakarya Natural Gas Field Development Project, environmental DNA (eDNA) studies are carried out to protect the ecosystem in Filyos Port and its surrounding areas. Environmental DNA originates from cellular material shed by organisms (via skin, feces, etc.) into aquatic or terrestrial environments and such spills can be sampled and monitored using new molecular methods. This type of methodology plays an important role for the early detection of target species as well as the detection and conservation of rare and endemic species. "Sand Lilies" (Pancratium Maritimum), one of the endemic plant species in the region, are meticulously protected. It is also planned to conduct analyses on eight fish species, one amphibian and three bird species from among endemic and endangered species.



Bioremediation

Oil pollution, which is very common in the sea, groundwaters and soil environment, and the harmful compounds that emerge as a result affect all living things in the ecosystem.

Bioremediation is defined as the process of breaking down long hydrocarbon chains and turning them into the end products carbon dioxide and water, and is the most economical, easiest to apply natural and soil recycling method known among soil, sludge and tank cleaning methods.

In our Corporation, the bioremediation method is employed to:

- recover contaminated soils;
- prevent pollution on oil pipelines and around fuel tanks;
- restrain dispersal of petroleum, oil, bilge, acid, etc.
 on land, sea, lake or any water surface and collect waste quickly and effectively, preventing it from spreading to the environment;
- rapidly absorb and biodegrade any organic pollutant spilled on hard surfaces, especially petroleum-based hydrocarbons (oil, grease, crude oil).

These methods were used to eliminate a total of 272,962 m² of soil pollution in 2021–2022.



Cultural Heritage Management

While carrying out our operations, we take the necessary precautions to preserve our cultural heritage for current and future generations.

"Cultural Heritage" is cultural memories containing concrete and abstract works that are based on local and universal values passed on from the past to the present and are observed by national/international laws.

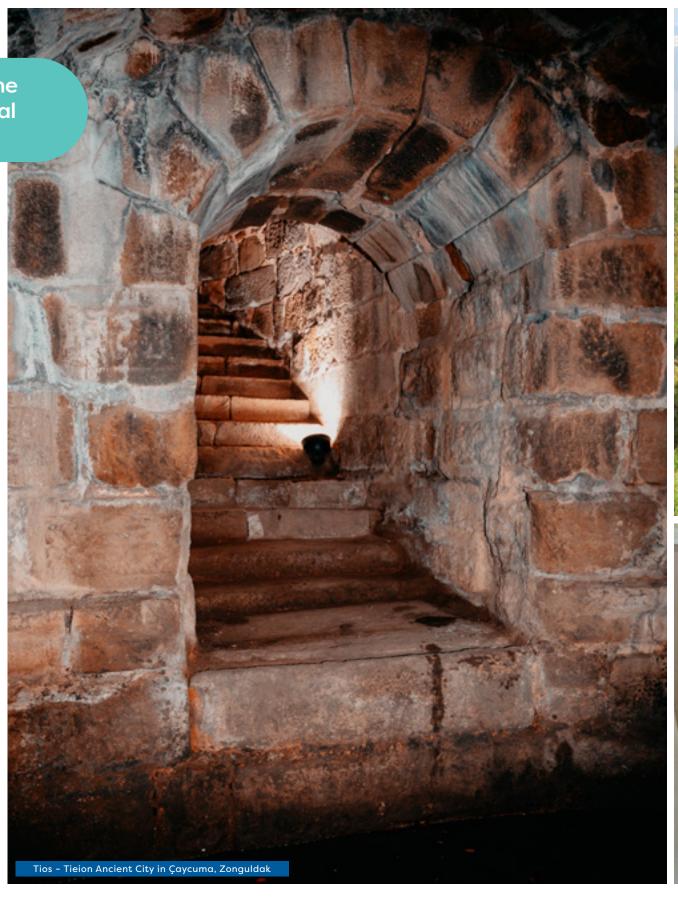
Priority areas that are considered Cultural Heritage must be protected, and necessary precautions must be taken to prevent loss of random finds. If operations are being carried out close to a cultural interaction area, the work stages should be monitored sensitively on a daily basis and reporting procedures should not be disrupted.

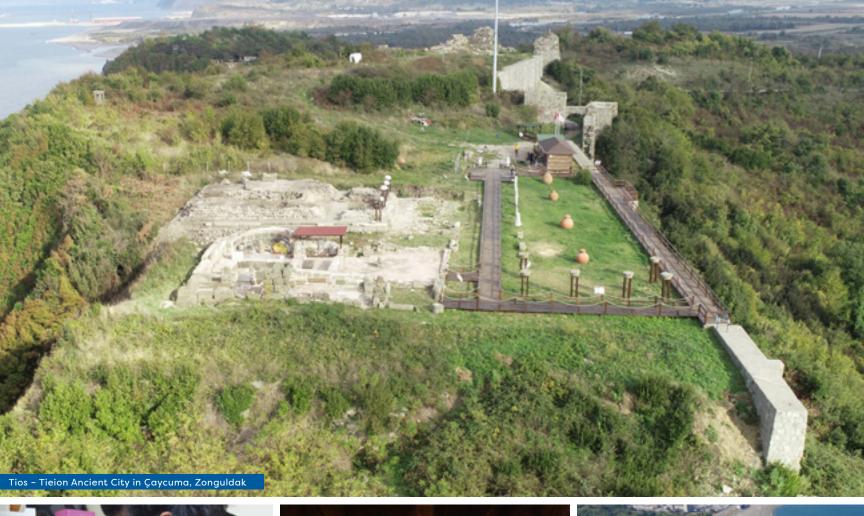
In our Corporation, compliance with the "Cultural Heritage Management Plan" is monitored daily by "Social Impact Experts" and relevant managerial staff.

In this context, the Cultural Heritage Management Plan and Random Finding Procedure are implemented in the Sakarya Natural Gas Field Project. Training is delivered to the construction, OHS and environmental teams of the contractor and subcontractors, and periodic monitoring and reporting is done.

Cultural Heritage Training brings together project managers, local residents and experts. Participants are informed about how to act in accordance with national and international laws and agreements and the targeted objectives.

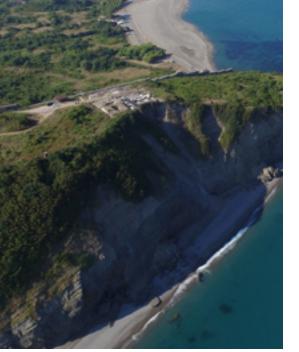
"Tios Ancient City", located within the borders of Zonguldak province, where our Corporation operates, is one of the examples for which this interactive training is provided.











TPAO 2022 Sustainability Report // 69

Water Management

A water management approach that considers the responsible, effective and efficient use of water is adopted in all locations where we operate, with the awareness that water resources must be protected.

All necessary precautions regarding water use are taken to prevent unnecessary water consumption. As a result of the studies and improvements made to save water, water consumption in our TPAO Headquarters campus in Ankara was reduced by 10.1%, due to the wooded area was increased and the drip irrigation method was introduced.

Application examples from our District Managements:

- The "Domestic Wastewater Treatment Plant", which was put into operation in the Trakya District Management on May 15, 2010, was designed as a package type plant to treat domestic wastewater from lodgings, social facilities and administrative buildings. The capacity of the plant is 120 m³/day and it operates at 100% efficiency.
- As a result of the main water lines improvement works carried out within the Batman District Management site campus, losses were prevented, reducing the average monthly water consumption of 53,400 m³ to an average of 25,600 m³, and thereby providing 52% savings.

 Approximately 333,600 m³ of leakage was prevented on an annual basis. In addition, as a result of the improvements made in 2021 in the two swimming pools on the campus, an average of 1,000 m³ of water per day was prevented from leaking.
- Water consumption in the Adıyaman District Management campus in 2021 was reduced by 9% compared to 2020.

Energy Management

Today, as the importance of energy conservation and sustainable development is increasingly understood, the value of efforts towards energy management is increasing at the same rate. In this context, TPAO acts with the principle of managing energy and improving its efficiency at every stage of our production operations, preventing mindless use and waste, and reducing energy intensity, which is one of the primary components of our national energy policy.

The work to establish the ISO 50001 Energy Management System to use energy effectively and efficiently started in 2020, and the ISO 50001 certificate was obtained in 2021.

As of the last quarter of 2022, market research was started to receive consultancy services within the scope of ISO 50001 Energy Management System in order to monitor and analyze the energy consumed in all buildings and energy consumption points in the TPAO Headquarters campus and to carry out surveys and determine areas for improvement, and it is planned to be implemented in 2023.

Awareness activities and training on Energy Management and efficiency continue to be delivered through TP-Academy.

Energy Efficiency in Production Operations

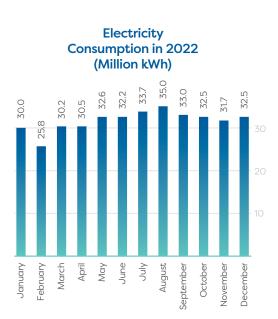
All types of energy used during production operations are reported and analyzed on a monthly basis. A total of 390 million kWh of electrical energy was consumed for oil and natural gas production in 2021. 56.5 million kWh of the consumed electrical energy was met from the natural gas we produced through our energy generation systems in our fields.

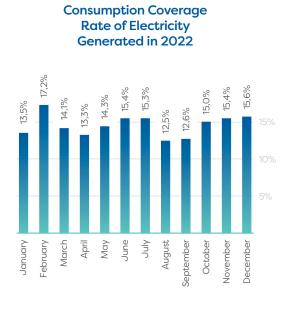
Our performance target for 2021, which was to meet 19% of the energy we consume with the energy we generate ourselves, was achieved at a rate of 99%.

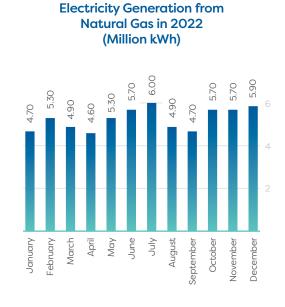
In 2021, 14.47% of total electricity consumption was covered by our own generation, and this rate reached 14.6% in the first quarter of 2022. In addition, the 46kW solar power plant used in the Headquarters Campus meets 1.5% of the campus's electricity consumption.

The implementation of the 230 kW solar power plant project, whose project design started at the end of 2022, is planned to be completed in 2023. TPAO aims to ensure that solar panels with a total power of 276 kW will meet 5% of the electricity consumption in the campus.

Electrical energy generation and consumption data are given in the tables below:







Energy Management

Energy Efficiency Actions by Locations

HEADQUARTERS

The 46 kW solar power plant used in the Headquarters Campus meets 1.5% of the campus's electricity consumption.

By replacing environmental lighting fixtures with efficient LED lighting fixtures, annual electricity savings amounted to approximately 231,593 kWh.

The lamps in the garage and other locations such as heat exchanger chamber, the existing fixtures in the laboratories and offices of the R&D center A, B, C and D Blocks, the fire escapes and sinks of the Bureau Block, and some of the offices were replaced with efficient LED fixtures.

Six 8 kVA inverters in the solar power plant that reached the end of their economic life were replaced with 50 kVA inverters.

ADIYAMAN DISTRICT MANAGEMENT

H	Application:	Added Value:
	LED Lighting	As a result of the partial replacement of old-type lighting fixtures with LED fixtures, annual electricity savings amounted to 30,240 kWh.
	Low-Loss Electric Motors	In wastewater and oil pumping systems, 10 IE1 efficiency class electric motors were replaced with IE3 class electric motors, resulting in annual energy savings of 350,040 kWh.
	Use of Low-Loss Power Transformers	By revising 15 power transformers, the electrical losses of the transformers were reduced, resulting in annual energy savings of 76,000 kWh.
-	Preventive Maintenance Work on Power Transmission Lines	The preventive maintenance work carried out on the power transmission lines in the production sites prevented energy outages as well as reducing energy losses and production losses.
	Fault Current Indicator System and Energy Monitoring Automation	Thanks to early response to electrical faults, an annual crude oil production loss of approximately 1,550.00 barrels was prevented.
	Well Monitoring System (SCADA)	As of the end of 2021, a SCADA system was installed in the 27 wells with the highest production, enabling on-site and timely intervention in the wells and reducing production losses.

	BATMAN DISTRICT MANAGEMENT	
Application:	Added Value:	
Solar Panels	Solar panels generated 643,481 MWh of energy in 2021.	
Relocation of Boiler Rooms	50,000 m³ of natural gas was saved annually.	
Variable Speed Drive (VSD)	Faster, safer and more efficient working conditions are provided in oil production wells and wastewater pumping engines by using VSD (Variable Speed Drive), without causing energy loss. There are a total of 299 VSDs in our fields, 31 of which were integrated into the systems in 2021.	
High Efficiency Motors	Approximately 6,580,000 kWh of energy was saved in 2021.	
New Class A Efficient Transformers	Energy savings were achieved by using high-efficiency engines in the oil wells and stations in our fields.	
Power Transmission Lines	By selecting new high-efficiency transformers in the oil wells and stations in production areas, energy savings were achieved in each transformer.	
Additional Energy Generation	With new energy transmission lines in production sites, energy outages were prevented and energy loss and production losses were reduced. With the capacity increase at Katin station in 2021, 48 million kWh of electricity was generated annually, contributing 11 million kWh to the current electricity generation. With the capacity increase at Katin station (Phase 5) in 2022, 159 million kWh of electricity was generated annually, contributing 11 million kWh to the current electricity generation.	
Well Monitoring System (SCADA)	Within the scope of Well Monitoring System Phase 1, a well automation system was installed in 81 wells and wellhead pressure, temperature and electrical information was monitored via SCADA to intervene in the wells on-site and in a timely manner.	
Energy Monitoring System (SCADA) (Batı Raman- Raman)	With the Energy Monitoring System, field energy flows can be monitored and outages can be responded to remotely. In this way, the duration of temporary faults is shortened.	

	TRAKYA DISTRICT MANAGEMENT
Application:	Added Value:
LED Lighting	Work is underway to partially replace old type lighting fixtures with LED fixtures.
Energy Analyzer Systems	Energy analyzers were installed in the fields and instantaneous voltage, current and power data are monitored in the SCADA environment. In this way, losses can be prevented through early and correct intervention.
Variable Speed Drive (VSD)	Faster, safer and more efficient working conditions are provided in oil production wells and wastewater pumping engines by using VSD (Variable Speed Drive), without causing energy loss. There are a total of 45 VSDs in our fields, 4 of which were integrated into the systems in 2022.
Automation System – Well Monitoring System	Within the scope of Well Monitoring System Phase 1, a well automation system was installed in 96 wells and wellhead pressure, temperature and electrical information was monitored via SCADA to intervene in the wells on-site and in a timely manner.
Low-Loss Electric Motors	In wastewater and oil pumping systems, 10 IE1 efficiency class electric motors were replaced with IE3 class electric motors, resulting in annual energy savings of 350,040 kWh.
Use of Low- Loss Power Transformers	By revising 15 power transformers, the electrical losses of the transformers were reduced, resulting in annual energy savings of 76,000 kWh.
New Class A Efficient Transformers with Proper Maintenance	By selecting new high-efficiency transformers in the oil wells and stations in production areas, energy savings were achieved in each transformer.
Power Transmission Lines	With new energy transmission lines in production sites, energy outages were prevented and energy loss and production losses were reduced.
Standby Generators	Oil production fields were backed up with stand- by generators, and disruption in oil production due to power outages was prevented.
Well Monitoring System (SCADA)	A SCADA system was installed in all wells, enabling on-site and timely intervention in the wells and reducing production losses.

72

Brave Investment

Brave Investment

The oil and natural gas industry directly contributes to economic growth and plays a strategic role in ensuring security of energy supply. It is of great importance that investments are planned and made courageously and urgently in this industry, which also enables the development of many sub-industries.







Sustainability Focus

- Increase oil and natural gas production
- Unlock regional hydrocarbon potential

Material Topics

- Contribution to the domestic economy
- Reduce dependence on foreign energy resources

Sustainability Goals

- Increase production
- Support development
- Support sub-industries
- Exploration activities
- Maintain equal participation



Domestic Exploration Activities

TPAO has taken important steps in exploration, focusing on underexplored onshore and offshore areas in our country to acquire new production fields, overcoming geographical obstacles in exploration activities through innovative approaches such as aerial data collection, and putting discovered reservoirs into operation using fracking technologies.

The main goal of our oil exploration strategy is to meet our demand for oil and natural gas from domestic and overseas resources, but primarily from domestic resources.

In 2022, our exploration investments continued uninterruptedly in both onshore and offshore areas, including for seismic data acquisition operations as well as gravity and magnetic surveys, remote sensing and geological studies.

In 2022, 416 exploration, exploitation and survey licenses were obtained.

36° API gravity oil was discovered in the Şehit Esma Çevik-1 exploration well drilled on May 10, 2021 on Gabar Mountain in Şırnak province. Following the oil discovery in the Şehit Esma Çevik-1 well, drilling operations were completed in a total of six wells as of the end of December 2022, producing 7,698 barrels/day of oil. This discovery is a new opportunity for our country with prospects of significant contribution to its In addition to its intensive operations in onshore areas, TPAO continues its deep water exploration operations using national and indigenous resources.

In 2022, TPAO maintained its exploration activities without slowing down and completed the drilling of nine deepwater wells and one shallow water well. The Çaycuma Discovery in 2022 was a great success.

In line with the goal of reducing our country's dependence on foreign energy sources, exploration activities are developed with different perspectives. In addition to conventional methods, unconventional methods are applied to unveil the oil and natural gas potential in Thrace Basin and Southeastern Anatolia.

Domestic Production Operations

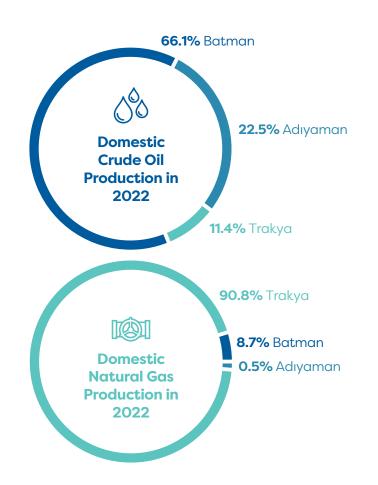
In 2022, domestic production increased by 6.8% compared to the previous year.

TPAO's total domestic and overseas daily average hydrocarbon output in 2022 was 156,610 barrels of oil equivalent. Daily average domestic output reached 59,413 barrels of oil equivalent with a growth of 6.8% in 2022.

In 2022, 3 regions dominated domestic crude oil production. The largest contribution came from Batman Region with %66.1 while Adiyaman Region followed it with %22.5. Last but not least, Trakya Region's share in oil production was %11.4.

Efforts are underway to increase production in the existing fields by taking advantage of technological opportunities such as water and carbon dioxide injection, polymer gel applications as well as well bottom heaters. Fracking technologies are used effectively in order to increase the recovery factor of the discovered reservoirs and the existing production fields.

The total daily output of the six wells put into production in the Şehit Esma Çevik Field was 7,698 barrels/day. In the process of development of the Şehit Esma Çevik field, new detection and production wells continue to be drilled.





Overseas Operations

To ensure our country's security of energy supply, investments and associated exploration and production operations are underway both domestically and in three countries.

Overseas average daily production in 2022:

97,197 boe/d
Total overseas production in 2022:

35.4 million boe

Our Overseas Projects:

Azerbaijan Iraq Russia

Azerbaijan

- Shahdeniz
- Azeri-Chirag-Gunashli
- Baku-Tbilisi-Ceyhan
 Oil Pipeline
- South Caucasus
 Natural Gas Pipeline
- Alo

Iraq

• Badra

Russia

Baytugan

- Missan
- Siba

Supporting Development

TPAO considers contributing to social development a fundamental responsibility. In this context, while contributing to the strengthening of the domestic economy with the support it provides to the country's economy, TPAO also undertakes social responsibility projects that will create value for the society.

Contribution to the Domestic Economy

TPAO directly contributed to the country's economy by paying **TRY 12.2 billion** in legal liabilities in 2022.

TPAO's primary goal is to ensure that the oil and natural gas requirement of the country is met with national resources and to reduce dependence on foreign resources by contributing to the security of energy supply in the country. Our Corporation takes this goal one step further and provides direct and indirect contributions to the country's economy with local procurement practices, tax payments, support to education and sports, employment, and social responsibility projects in the fields of environment, culture, arts and health, with impact on a broad economic and social area.

Using the wastewater (production formation water) from the production wells, some greenhouses close to the wells are heated. The wastewater is pumped back into the injection wells, and greenhouse farmers are supported by preventing consumption of new resources. In this context, 65–70% savings were achieved in the greenhouses in Kahta, Adıyaman. So, more farmers entered the greenhouse cultivation business and related investments increased. Thus, a contribution was made to both the farmers of the region and employment.

Contribution to Society

In addition to carrying out the activities for which it is responsible, TPAO takes care to lead social investments with a sense of responsibility in order to leave a positive and permanent impact on the demographic structure in the regions where it operates and to create values in various fields. Our District Managements located in Adıyaman, Batman and Trakya play an important role in the development of the economic and social life of the regions.

Training

Schools affiliated with the Ministry of National Education (MNE) are supported, and various initiatives in the field of professional development contribute to the talent development of the young population in education.

Sports

Batman Petrol Amateur Sports Club, which was established in 1960 in order to train successful athletes and ensure that they are brought to our country's sports community, encourage our youth to participate in sports, and contribute to the level of socio/cultural and sports development in the Southeastern Anatolia region, was given the status of an association in 2010 and has been supported since its establishment. It is currently active in different amateur branches.

Athletes:

Football 240	Wrestling 250	Athletics 300
Basketball 168	Volleyball 120	Tennis 82

Environment and Health

In addition to organizing regular blood donation campaigns every year, staff are also provided with opportunities to have health checks when necessary.

With an environmental awareness, necessary precautions are taken in waste areas, and afforestation activities are carried out regularly both at the Headquarters and in the operating regions.

Social Investments

Batman District Management provides opportunities to build and repair schools and police stations, support Batman Petrol Sports Club, provide support to athletes and use infrastructure facilities. In 2021-2022, social investments were supplemented with asphalt grants to provinces, districts and towns.

Social Investments by TPAO Batman District Management (2021-2022)		
Contribution to the Domestic Economy TRY 3.136 billion contributed to the domestic economy		
Economic Benefit for Suppliers TRY 256.6 million of benefit provided to Batman companies by the Batman District Management		
Amount Spent on Infrastructure and Surface Facilities TRY 6.5 billion invested in system improvements, occupational safety, strengthening of production capacity and discovery of new production sites		
Support for TRY 4 million Amateur Sports		
Support to Provincial And District Municipalities TRY 103 million		
Social Events TRY 647 thousand		

TPAO 2022 Sustainability Report // 85

Promoting Use of Domestic Resources

In 2021 and 2022, the efforts launched in previous years to promote the use of domestic manufactures were continued, and many services, products and equipment became available to the domestic industry.

A total of 110 domestic manufacturing projects were completed in the period from 2020 to the end of 2022.

Amounts related to domestic manufacturing projects, foreign procurement costs and the amount of savings from use of domestic manufactures are listed in the table below:

Year	Domestic Manufacturing Project (Number)	Amount of Domestic Manufactures (Million TRY)	Foreign Procurement Cost (Million TRY)	Amount Saved (Million TRY)
2020	42	87	112	25
2021	39	204	267	63
2022	29	306	381	75
Total	110	597	760	163

Gains

- In addition to the savings made, contribution to increasing employment and tax revenues in our country, obtaining of international certificates by domestic companies so that they can operate in the oil and natural gas industry, and reduction of imports;
- Reduction of our inventory costs by shortening foreign procurement processes through efforts to promote the use of domestic manufactures.
- Among the 110 domestic manufacturing projects, the major ones that provide added value are listed below:

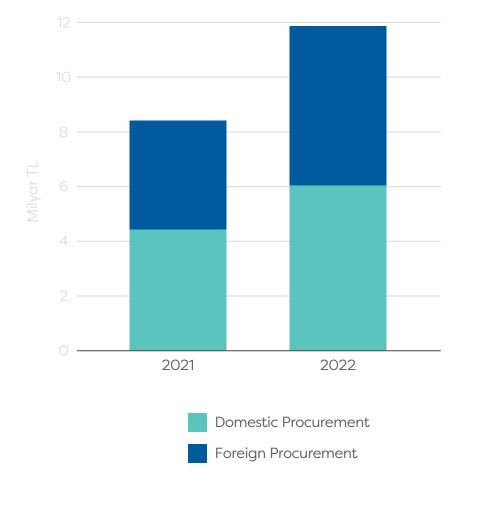
Total procurement of goods and services in 2021:

TRY 8.4 billion.

Total procurement of goods and services in 2022:

TRY 11.9 billion

Distribution of Goods and Services Procurement by Domestic and Foreign Sources



Domestic Manufactures

National Technologies in the Oil Industry

In 2021 and 2022, "NATIONAL TECHNOLOGIES IN THE OIL INDUSTRY" meetings were held with the theme "We Are Self-Sufficient." In these meetings, contacts were developed and cooperation opportunities were evaluated in order to contribute to the production of high value-added goods/services/technologies by the domestic industry.



Mud-Mat Manufacture

Efforts to promote domestically manufactured Mud-Mat are underway.



Well Site Chemistry Analyses

They are well site chemical analysis conducted during flow tests in offshore operations.

The analyses are carried out by R&D Center personnel.



TP1500 - Domestically Manufactured Drilling Rig: Koca Yusuf

The tests of the "domestic modular 350 ton capacity drilling rig design and manufacturing", a project launched in 2016, were completed in 2021. The rig has a drilling capacity of 5,000 m and carried out its first drilling operation in 2022.



Ball Valve

It is one of the wellhead equipment.

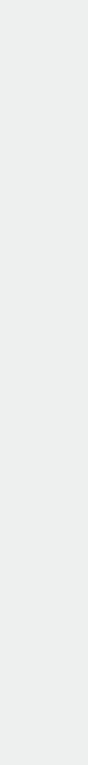


Conductor and Surface Protection Pipes

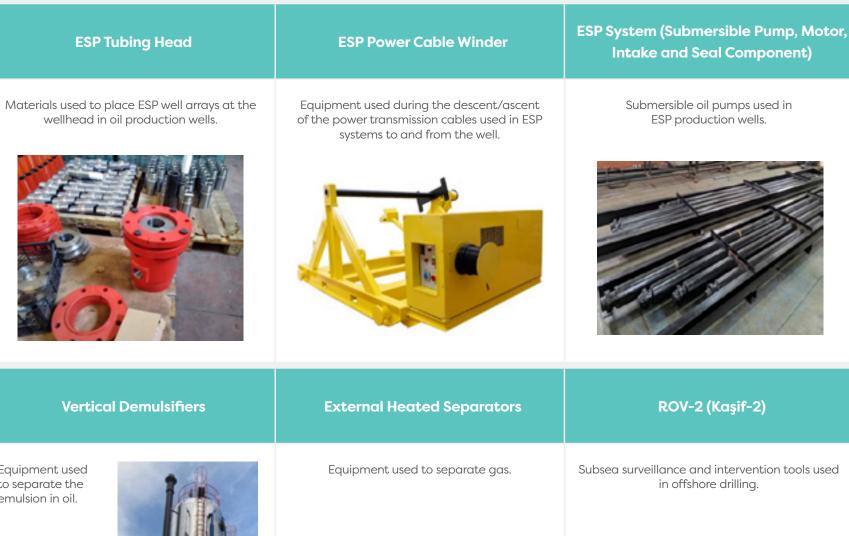
Conductor Pipes are pipes (36" and 22") used between the seabed and the water surface in offshore wells. Surface Casing Tubes are pipes (13 3/8" J-55 quality) consisting of high-strength tubular materials, used to stabilize the well during drilling.



Domestic and Indigenous **PRS Equipment Gravity Magnetic Offshore Processes TEAS System (TDGS)** Domestic manufacture of TEAS equipment was Domestic manufacturing and assembly of initiated, and the domestic and indigenous Gravity magnetic offshore processes were the damaged parts of the PRS equipment TEAS SYSTEM (TDGS) was made available for carried out for the first time by TPAO personnel. damaged on the Fatih Drillship was completed. use on the Fatih Drillship. **Gas Separators Offshore Containers** Matrix Body PDC Drill - 8 1/2" Containers used for the transfer of materials Main element that Equipment used and equipment during offshore drilling. enables drilling in to separate the Manufacturing was done after obtaining the exploration wells. produced gas. internationally recognized DNV certificate. **Hydrocarbon Dew Point Control Unit Slug Catcher** Control units used to separate heavy hydrocarbons from the gas content Equipment used to ensure regularity of flow by eliminating the high amount of gas and liquid mass formed in pipelines. and make the gas in conformity with sales specifications.



Equipment used to separate the emulsion in oil.





Kanuni Drillship - IT Services

Kanuni drillship IT services were restructured and started to be managed by TPAO.

88 // TPAO 2022 Sustainability Report // 89

Supply Chain Management

In 2022, 89% of our suppliers consisted of domestic suppliers.

In our Corporation, the information of the supplier companies is stored in the Supplier Registration System. The evaluation procedure for suppliers is carried out by the relevant stakeholders within the organization and is recorded on the Supplier Performance system.

In 2022, 29 different products were replaced with domestic manufactures, achieving 20% cost reduction.

Supplier Statistics	2022
Total Number of Suppliers	1,004
Total Number of Domestic Suppliers	890
Total Payments to Suppliers (Billion TRY)	50.18
Total Payments to Domestic Suppliers (Billion TRY)	45.3
Percentage of Domestic Suppliers (%)	89%
Percentage of Payments to Domestic Suppliers (%)	90%



Determined Growth

Determined Growth

The oil and natural gas industry is of great importance for the continuity of economy. The main goal is to carry out operations with an understanding that focuses on all other stakeholders, especially employees.

The industry in which we carry out our operations requires continued work with high courage in the face of all adverse conditions. Our brave investments continue with high safety standards and a people-oriented approach. Such investments also revitalize the economy and serve as a supportive force.









Sustainability Focus

- Create a sustainable economy
- People-oriented investment and business approach

Material Topics

- Occupational health and safety
- Employee satisfaction and engagement
- Equal opportunity and inclusion among employees
- Improve the work environment

Sustainability Goals

- Financial efficiency
- Promote development
- A smart and learning organization
- Support human development
- Occupational health and safety
- Protect future generations
- Support to the regional economy



Occupational Health, Safety and Environment (OHSE)

Health and Safety of Our Employees as a Priority

At TPAO, our aim is to provide an environment-friendly "Occupational Health and Safety (OHS)" culture and a safe working environment in all areas of activity in line with the "Integrated Management Systems Policy".

Provision of a sustainable, healthy and safe work environment is among our primary responsibilities, and zero work accidents are targeted.

Occupational Safety

To increase the occupational health and safety knowledge and awareness of our Corporation personnel, 'OHSE Awareness Training' was delivered in addition to 'Basic Occupational Health and Safety Training'.

		2021	2022
	Total Training Time (hours)	39,348	38,088
OHSE Training	Number of Trained Employees	3,097	3,174
	Training Time per Employee (hours)	13	12

A proactive approach is implemented within TPAO to control occupational health and safety risks and improve performance.

Risk assessment, emergency preparedness and training are the basic elements of the preventive approach. These aspects are inspected, deficiencies are addressed and action is taken quickly.

In addition to the on-the-job training delivered to new personnel in our organization, the personnel who switch to other units or are assigned to work for a short time are informed about occupational health and safety issues, including job-specific hazards and risks.

OHSE audits, internal audits, external audits, field tours and workplace inspections are conducted at the Headquarters and District Managements as per the 'Occupational Health and Safety Legislation'.

Occupational Health

Taking care of the health and safety of our personnel is among our priorities. Risk assessment studies are carried out against occupational diseases and necessary precautions are taken.

Periodic health checks are performed for all employees, starting from their employment, according to their workplace hazard classes. In addition, polyclinic services and analysis and imaging activities are carried out in the health units of the Headquarters and the District Managements.

The drinking and utility water used in workplaces and the food served in the cafeteria are also subjected to microbiological and bacteriological analyses regularly.

As part of health screenings, lung radiography, audiometry and blood screening were performed for 1367 employees at the Headquarters in 2021. When deemed necessary after the screening, the patients were transported to the hospital and a follow-up procedure was carried out.

In addition, prostate screening was performed for 327 male employees and mammography and HPV cancer screening was performed for 144 female employees, including subcontractor personnel, in 2022.

Incident Management

Classification of incidents is made based on IADC (International Association of Drilling Contractors) criteria. By reviewing the root causes of the incidents, root cause investigations are carried out to prevent other accidents from occurring due to similar reasons.

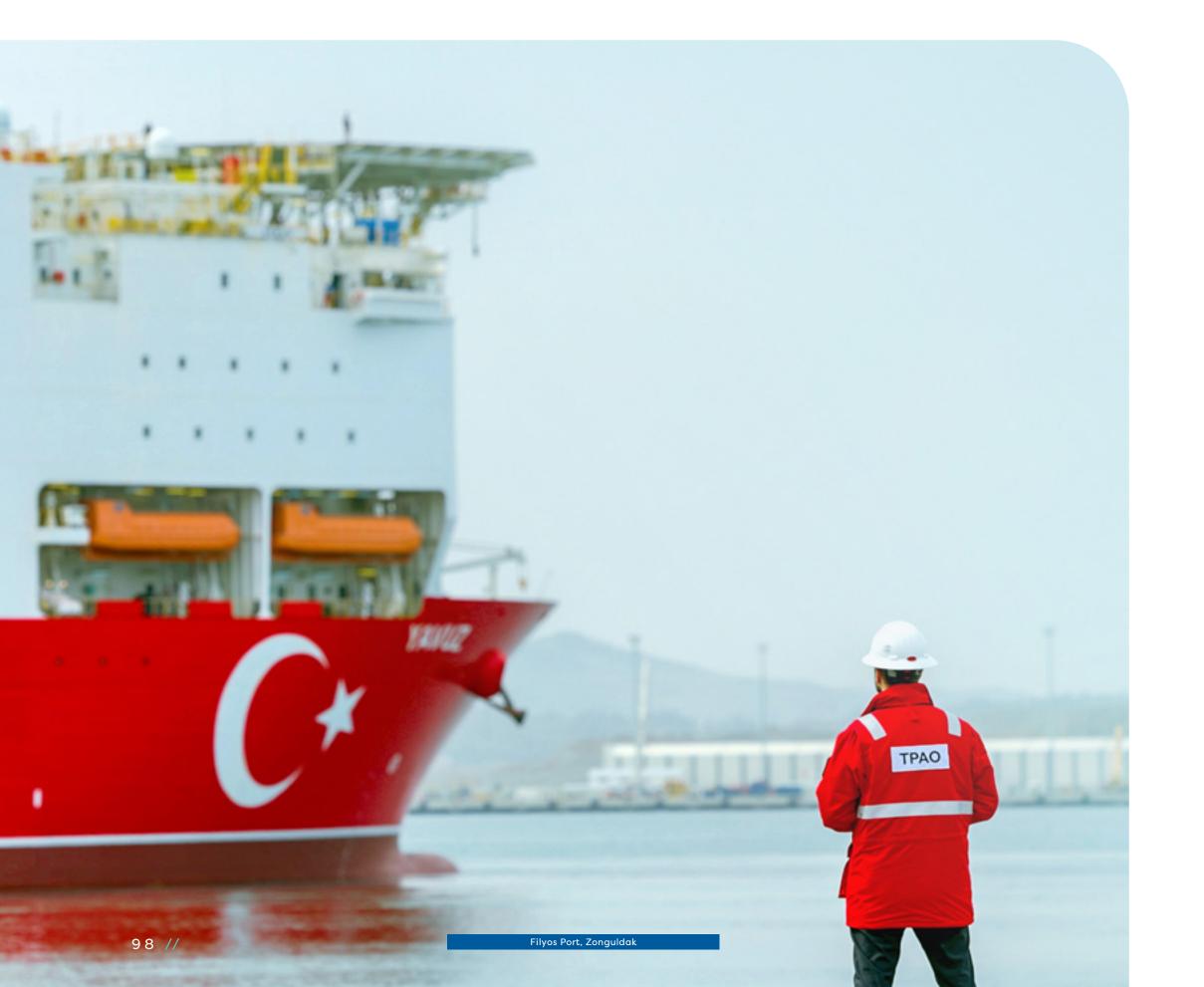
Performance Indicators

To prevent any work accident that may occur in our Corporation and minimize potential labor losses,

occupational health and safety performance indicators (Accident Frequency Rate / Accident Severity Rate), which are closely followed under the corporate goals of our Corporation, are used to monitor the effectiveness of corrective action taken to increase work efficiency and reduce costs.

In 2022, the lost workday accident frequency rate was 0.84, and the accident severity rate was 0.058.





Occupational Health and Safety in Offshore Operations

Work is underway to develop and update the TPAO HSE Offshore Management System, established for the safe conduct of seismic and drilling operations of our Corporation in 2021. To create a strong occupational health and safety culture, all policies, procedures and instructions are updated and/or new documents are created in line with new needs and experiences gained.

In 2021, drilling and seismic ships were audited in line with the TPAO HSE Offshore Management System. 23 HSE audits were carried out on drilling and seismic ships throughout the year, and 30 HSE audits were carried out in 2022, including in the coastal logistics center and Sakarya natural gas field production facility.

In 2022, the scope of offshore occupational health and environmental protection activities included drilling and seismic operations, as well as the construction inspections in the Coastal Logistics Centers and Sakarya natural gas field production facility.

The audits covers all parties related to offshore operations (subcontractors, suppliers, visitors, etc.) within the scope of HSE Management System and field/site audits. During the audits, non-conformities are shared with the parties and they are requested to determine what action to take, and the actions are checked, monitored and evaluated over the course of the determined schedule.

In addition to regular audits, incident investigations are carried out for incidents that have great potential consequences as a result of accidents and near-misses in Offshore Operations.

Daily work permit inspections, weekly emergency drills and health compliance (hygiene) inspections continued to be conducted on drillships. Approximately 48 emergency drills and 48 weekly hygiene inspections were carried out in 2021.

In 2021, an independent health compliance (hygiene) inspection was conducted on the Fatih and Yavuz drillships, and a "Safety Culture" survey was also carried out by an international independent consultant on the Fatih drillship.

In 2021, 12 monthly "Safety Call" meetings were held with broad participation of personnel, including the personnel of all drillships, in order to increase their knowledge and provide them with the opportunity to exchange their experiences.

To compare our Corporation's conditions in terms of occupational safety and environmental protection in offshore operations on an international platform, monthly recordable incident rate statistics of drillships started to be shared with IADC (International Association of Drilling Contractors). The data recorded since our accident statistics started to be shared with IADC in July 2021 has been considered by IADC an indicator of success in the field of HSE, and a plaque of appreciation was given to each of our drillships.

Disaster and Crisis Management

Training is delivered with the aim of improving emergency and crisis management systems and increasing the competency of the personnel.

In this regard, various training courses were delivered to our personnel tasked with responding to emergency situations, including on first aid and search and rescue, evacuation and fire fighting (by AFAD) during the year. In addition, emergency training was provided through the TP Academy platform in order to raise awareness among our staff about what to do in emergency situations.

In 2021, consultancy services on fire safety were received in all campuses and production stations within our Corporation. In this context, on-site inspections, measurements and evaluations were done in all buildings in the Ankara Headquarters campus and Adıyaman, Batman and Trakya District Management campuses as well as in 64 production stations in these regions.

To minimize the risks that may arise in emergency situations, to test existing emergency systems and methods, and to increase the preparedness of our employees for emergency situations, drills are conducted based on prepared scenarios as well as carrying out post-drill performance evaluation and corrective and preventive action planning. To evaluate our Corporation's preparedness and action capabilities against emergencies and disasters at advanced levels, a Level 3 drill was conducted in 2022 at a production station affiliated with our Adıyaman District Management, where earthquake, oil fire and oil spill scenarios were planned simultaneously.

Human Resources

Our human resources are our most valuable asset in ensuring the sustainability of our Corporation's operations.

Number of Employees Included in Collective Bargaining Agreement

2,063

Percentage of Employees Included in Collective Bargaining Agreement

61.5%



Number of Female Employees

508



Number of Male Employees

2,846



Percentage of Female Managers

19.4%



Number of Employees Aged 20-30

179



Number of Disabled Employees

140

Our Incorporation's "Human Resources Policy" is published in QDMS (Quality Document Management System), an Integrated Management System Software Program, and employees are divided into two as in-scope and out-of-scope according to their status/legal status.

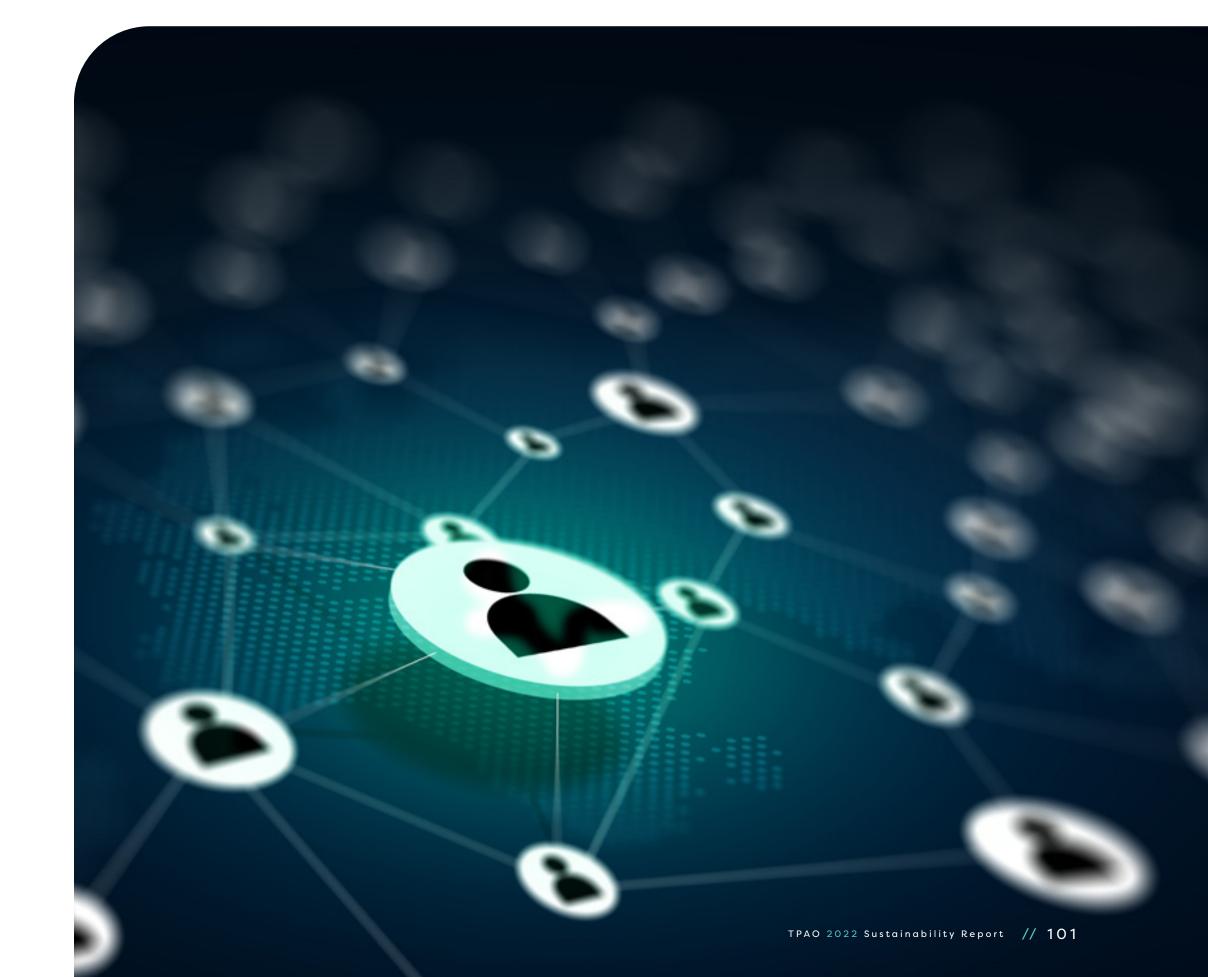
White Collar	White-collar and non-unionized employees, mostly engineers and specialists.
Blue Collar	Blue collar and unionized employees.

Number of Employees by Region in 2022	White Collar	Blue Collar	Total
Headquarters	937	403	1,340
Batman	177	996	1,173
Adıyaman	104	412	516
Trakya	73	252	325
Grand Total	1,291	2,063	3,354

Financial Rights and Social Benefits Provided to Our Employees

Our priority is to develop, and ensure the continuity of, our human resources with a sustainable human resource management approach. To increase the sense of belonging of our colleagues, their economic, social and physical welfare levels are supported with social benefits.

White Collar Employees	Blue Collar Employees
Executive and Professional Liability Indemnity Professional Indemnity Batman-Adıyaman Region Compensation Audit Compensation Food Benefit Social Benefit Birth/Death and Marriage Benefit Disability Benefit Treatment Benefit Work Accident Compensation	 Collection Compensation Food Benefit Clothing Benefit Birth/Death and Marriage Benefit Personal Accident Insurance Nursery and Day Care, and Special Education and Rehabilitation Benefit Child/Family and Education Benefit Medical Device Benefit



Employee Development and Training

To maintain their growth dynamics, companies need to make investments that meet the needs of their labor. In this regard, training is considered crucial and necessary investments are made to ensure that all our employees work according to the principles of maximum efficiency and superior performance.

A total of 815,261 hours of training were delivered in 2021–2022.

Training Programs

TP Academy Online Training and Development Platform

TP Academy Online Training and Development Platform supports our employees with need-based training to enable them to fulfill their duties with high motivation and performance.

With varying training contents in 2021 and 2022, various vocational and technical training courses were assigned to personnel according to their titles. Training courses whose contents were prepared and developed by our Corporation employees were included under the corporate training category. Our Corporation aims ensure the personal development of our staff by sharing articles and short books in the category of audio files and reading materials.

In 2022, 103 different training contents were made available to our employees. 4,411 of our employees benefited from TP Academy content.

Occupational Health and Safety Training

The utmost care is taken in the Occupational Health and Safety training, and all personnel attended occupational health and safety training online in 2021.

In accordance with the legislation, first aid, fire protection, personal data protection law (KVKK) and information security training was also delivered.

In 2022, all employees of our Corporation completed their occupational health and safety refreshing training through the TP Academy system.

Corporation and Units Familiarization Training

In our Corporation, 'Corporation Familiarization Training' is delivered to new employees, and 'Unit Familiarization Training' is delivered to employees who have had a major change in their duties.

Such training is intended to help our employees quickly adapt to our Corporation, its units, occupational health and safety rules, the business processes they will perform and the jobs that require practical experience.

Competency Management Training and Development Program

As part of the 'Competency Management Program', the competency levels of 898 employees were identified. The competency coverage rate for the units was measured to be 70%. To raise this level even higher, training program plans were created for 115 job profiles.

For its efforts in 2021, TPAO was awarded with a plaque and certificate as the winner in the "Best Project" category with its "Competency Management Project" and as a finalist in the "Best Project Team" category at the Çetin Ceviz Awards given in the field of project management.

As part of the Competency Management Program, 560 online/on-site training courses were delivered to a total of 8,963 people for 4,034 hours, thereby closing the competency gaps. Our Corporation aims to have an 80% coverage rate in the competency assessments, which are planned to be repeated in 2024.

'Biz Bize Kariyer' Internship Program

The 'Biz Bize Kariyer' long-term Internship Program was launched in 2021. The purpose of the program is to provide paid internship to prospective graduate university students throughout the academic year and subsequently to ensure that competent candidates are employed in our Company.

Negotiations were held with 10 universities for infrastructure work, and relevant protocols were drawn up. As part of the program, oral interviews were held to measure technical and personal skills, according to which planning was made for 46 candidate employees to complete an internship program of at least 3,500 working days. 85 candidates were employed in 2022.

University/High School Internship Programs

In accordance with the Vocational Education Law No. 3308, a total of 185 vocational high school students from 20 different schools completed their internship in our Corporation in 2021. During the summer period, a total of 138 students from 15 different schools and 153 universities were provided with internship opportunities. In our Corporation, more than 18,000 working days of internship were provided for both high school and university students in 2021.

A total of 180 vocational high school students from 20 different schools completed their internship in our Corporation in 2022. During the summer period, a total of 150 students from 37 different universities were provided with internship opportunities. In 2022, internship programs were offered to both high school and university students (87 working days for high school students and 21 working days for university students).

Scholarship Program

Since 1961, our Corporation has sent nearly a thousand students to graduate education abroad in accordance with Law No. 1416, and employed those students when they returned. In line with the goals of our Corporation, meetings were held with the units and a quota of 25 scholarship students was determined in 2022. While determining these quotas, the needs of the units were identified on a subject basis. It is anticipated that the students to be sent abroad will be employed in our Corporation in 2025–2026.

TPAO Headquarters Library and Digital Subscriptions

Our physical library, opened in 2019, continues to serve our employees with approximately 5,000 books, magazines and periodicals. Our library resources are expanded to meet the demands of our employees.

In addition, access to online scientific and technological publications is provided through digital subscriptions.

While the membership to the world-renowned database Science Direct was renewed in 2021 and 2022, providing our employees with free access to more than 20,000 books. In addition, online access to science and social science resources, literary publications and exam books was provided by becoming a member of Turcademy, a local database.

Apart from the databases mentioned above, a total of 60 memberships that people in the hydrocarbon industry usually have, such as Springer, AAPG Explorer and The Economist,

were offered to our employees.

To ensure sustainability in all subscriptions, online memberships were given priority so that paper consumption could be reduced.

BOSIET-FOET-HUET Certification

In 2021, the efforts to ensure issuance of internationally recognized BOSIET and FOET certificates, required to continue offshore hydrocarbon operations, by domestic institutions were completed. Pursuant to the protocol entered into with Istanbul Technical University, these certificates are issued after training delivered at the Tuzla campus of the university. A total of 231 of our employees received BOSIET certification in 2021. Employees whose BOSIET validity period will expire in 2022 are being monitored, and the Corporation aims to prevent duplicate training by ensuring that they participate in FOET training before the certificate expires. In this context, 113 employees completed BOSIET and FOET training in 2022.

Training of Internal Trainers

Internal Trainers delivered 2,359 hours of training to 987 personnel in 2020, and 10,825 hours of training to 1,710 personnel in 2021.

In the first quarter of 2022, 10,724 hours of training were delivered to 766 personnel.

Çaycuma Offshore Technologies Vocational School Associate Degree Programs

For this purpose of training the local and qualified labor needed in the oil and natural gas industry, this program was opened in the 2022–2023 academic year in cooperation with the Council of Higher Education (YÖK), TPAO, its subsidiary Turkish Petroleum Offshore Technology Center (TP-OTC) and Zonguldak Bülent Ecevit University (ZBEÜ).

All students are supported with a 12-month uninterrupted scholarship.

For students attending compulsory preparatory education in the 2022-2023 academic year, an additional 12 hours of English speaking courses are provided by our Corporation with support from two native English speaking instructors.

During the preparatory education, students are offered various events such as swimming, field trips, etc. to support them socially and familiarize them with the industry.

Performance and Career

Performance Management

The "High Performance Management System", which was established to measure and continuously improve the individual performances of our Corporation's personnel on a target basis, has completed its third year in operation. As part of such efforts:

- For the first time in 2021, an "Internal Stakeholder Satisfaction Survey" was conducted for all units to measure the units' level of satisfaction with each other in terms of the work done and the services provided. In 2022, 697 Internal Stakeholder Satisfaction Surveys were completed by 63 managers. More than 1200 of our staff shared their comments in the surveys.
- Efforts were made to increase the attainment rates of 'Personal Development' goals, and the rate of participation in training increased significantly in 2021 and 2022 compared to previous years.
- Efforts were also made to ensure adoption of the 'Feedback' culture in our Corporation, and this culture has become more prevalent throughout our Corporation compared to previous years.
- 65% of the golden goals set in 2021 were achieved. Staff who achieved the golden goals were rewarded.

Employee Engagement and Satisfaction

In our Corporation, an employee engagement survey is conducted every year to ensure employees' commitment to the workplace and increase their motivation and productivity.

In 2021, 51.8% of the total employees participated in the survey and the engagement score was measured to be 75. In 2022, 47.1% of the total employees participated in the survey and the engagement score was measured to be 77.



Manager Training Program (Management Trainee)

The Manager Training Program aims to discover potential leaders among the employees in order to support the meeting of the Corporation's managerial needs and to prepare them for the future of our Corporation as well-equipped, visionary and innovative leaders and managers. The program continues with three groups selected in 2018, 2021 and 2022.

- Nine trainees graduated from the first group. Six cost improvement and/or efficiency projects developed by these trainees have been implemented.
- There are nine management trainees in the second group and the completion rate of the training is 64%.
- There are 12 management trainees in the third group and the completion rate of the training is 41%.

Equal Opportunity and Diversity

We consider prevention of any discrimination in our entire value chain one of our highest priorities in accordance with the "Equality Policy" that we have formulated to create an egalitarian, fair and transparent workplace for our employees within our Corporation.

Our understanding of equal opportunity and prevention of discrimination requires that there be no discrimination based on language, religion, race or gender in the employment, personal development and careers of employees. As of the end of 2022, a total of 3,354 personnel were employed.

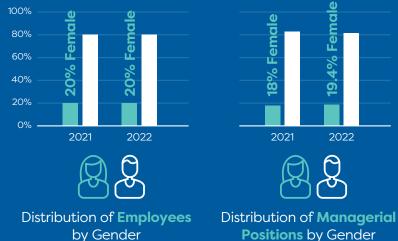
The percentage of female employees in our Corporation reached 20% in 2021-2022.

In our Corporation, maternity leave and subsequent processes are managed in the most effective way. In 2021, 22 female staff members benefited from maternity leave and optional leave periods thereafter, while this figure was 21 in 2022.

While providing an equal and fair work environment for everyone, avoiding categorization of people by their physical disabilities is also a priority issue for our Corporation.

As of the end of 2022, 140 disabled individuals were employed in the Corporation.





Respectful Development

Respectful Development

The oil and gas industry requires complete transparency. Ensuring that all operations are accountable and all products are traceable is the priority focus of the industry, which is monitored without compromise. In this framework, our Corporation aims that the economic and social system resulting from the operations will benefit all people and organizations in an equitable manner.

At TPAO, we form our understanding of development on the basis of respect. We share our work and processes openly and transparently with all our stakeholders.







Sustainability Focus

- Ensure transparent development
- Ensure equitable development

Material Topics

- Compliance with the laws
- Ethical and transparent management approach
- Ensure information and data security

Sustainability Goals

- Accountability
- Traceability

Digital Transformation

"Digital TPAO Project" is a domestic and national digital transformation project launched to collect all technical and operational data used by TPAO on a single platform and developed entirely by TPAO employees.

In the process of digital transformation, the main module, including seismic and log modules, which is one of the most important steps of the project, was put into use.

Following the completion of the Digital TPAO Project, the sustainability of processes and employee efficiency will be increased, contributing to faster and more accurate decision-making by managers. In addition, our Corporation will save significantly on licensing costs with the development of domestic and national software technologies. By increasing the overall efficiency of operational processes, our Corporation aims to achieve major improvements in the economic, social and environmental impacts of the processes.



Analysis

Planning, strategy, scope, business analysis



Data Standardization and Migration

Identification of standards, development of easily transferable data models and data migration



Data Cleansing

"Garbage in garbage out": data should be made meaningful. It should be cleansed and deduplicated.



Common Data Layer and Services

Common data layer for different services, data verification methods to minimize user errors



Digital Platform

A secure and accessible platform with user-friendly and modern interfaces, offering high performance







Information Security

Progress in the field of digitalization brings with it the necessity of high information security standards. Our Corporation aims to ensure information security at the highest level by closely monitoring new technologies Corporate data and information of all internal and external stakeholders are secured. Potential security vulnerabilities are detected and resolved. Uninterrupted and consistent access to data is an indispensable part of information security. Hence, infrastructure work is carried out with projects implemented in different areas to eliminate external attacks, prevent the leakage of information assets and ensure easy/uninterrupted access to information.

Our Headquarters has "ISO 27001 Information Security Management System" in place. Under the "Information Security Management System Policy", information security has become an indispensable part of our corporate culture. Regular training is provided to our Corporation's personnel in order to increase information security awareness. Furthermore, information security awareness notifications are sent through different channels (posters, e-mail, announcements, etc.) within the organization.

Ethical Principles

In accordance with article 29 of the Regulation on the Principles of Ethical Conduct for Public Officials and Application Procedures and Principles, which was prepared based on articles 3 and 7 of the Law No. 5176 on the Establishment of the Ethics Board for Public Officials and Amendments to Certain Laws:

With a view to firmly adopting and developing the ethical culture in our Corporation, providing advice and guidance on the problems faced by the personnel regarding the principles of ethical behavior, and evaluating ethical practices, an Ethics Commission was set up. The Ethics Commission reviews and evaluates the ethical suitability of the practices annually.

All employees at TPAO are obliged to comply with the principles of ethical behavior contained in the relevant legislation while performing their duties. All new recruits are provided with detailed information, both verbally and in writing, on ethical principles, matters required to support compliance with ethical rules within the organization, the functioning of the Ethics Commission and application forms, and the procedures followed in case of violation of ethical rules. New recruits are asked to sign the "Declaration of Ethical Conduct" and are provided with information about the relevant legislation and practices.

In addition, it is mandatory to declare assets at certain intervals pursuant to the Anti-Bribery and Corruption Law No. 3628.

the organization. TPAO 2022 Sustainability Report // 111

Accountability and Audit

Internal Audit

The purpose of Internal Audit is to evaluate and improve the effectiveness of corporate governance, risk management and control processes of our Corporation with a systematic and disciplined approach and to provide suggestions for improvement and thus to add value by contributing to achievement of corporate goals.

Internal audits are conducted in accordance with the Headquarters' Duties, Authority and Responsibility Directive, Internal Audit Directive, International Professional Practice Framework, Code of Ethics and International Institute of Internal Auditing (IIA) Standards.

By increasing the overall efficiency of such processes, our Corporation aims to achieve major improvements in the economic, social and environmental impacts of the processes.

Inspections

In our Corporation, inspections are conducted in accordance with "TPAO Inspection Board Regulation". In the Inspection Program, which included the issues deemed appropriate to be reviewed/investigated by the General Management in 2021, the inspection of all project companies within TPOC and TPAO was included, in addition to the inspection of the Corporation's central and provincial organizations and foreign offices, and the Inspectors tasked with inspecting the project companies also conducted the inspection of the accounts of the relevant project operator.

In 2021, as in previous years, the audit of the accounts of project operators regarding domestic and overseas joint operations was conducted within the framework of "TPAO Joint Operations Audit Procedures and Principles".

Court of Accounts Audit and Grand National Assembly of Turkey SEE Commission

Our Corporation is audited every year by the Court of Accounts on behalf of the Grand National Assembly of Turkey. The suggestions and recommendations given in the report prepared by the Court of Accounts are strictly followed. The report prepared by the Court of Accounts forms the basis of the investigations by State Economic Enterprise Commission of the Grand National Assembly of Turkey.

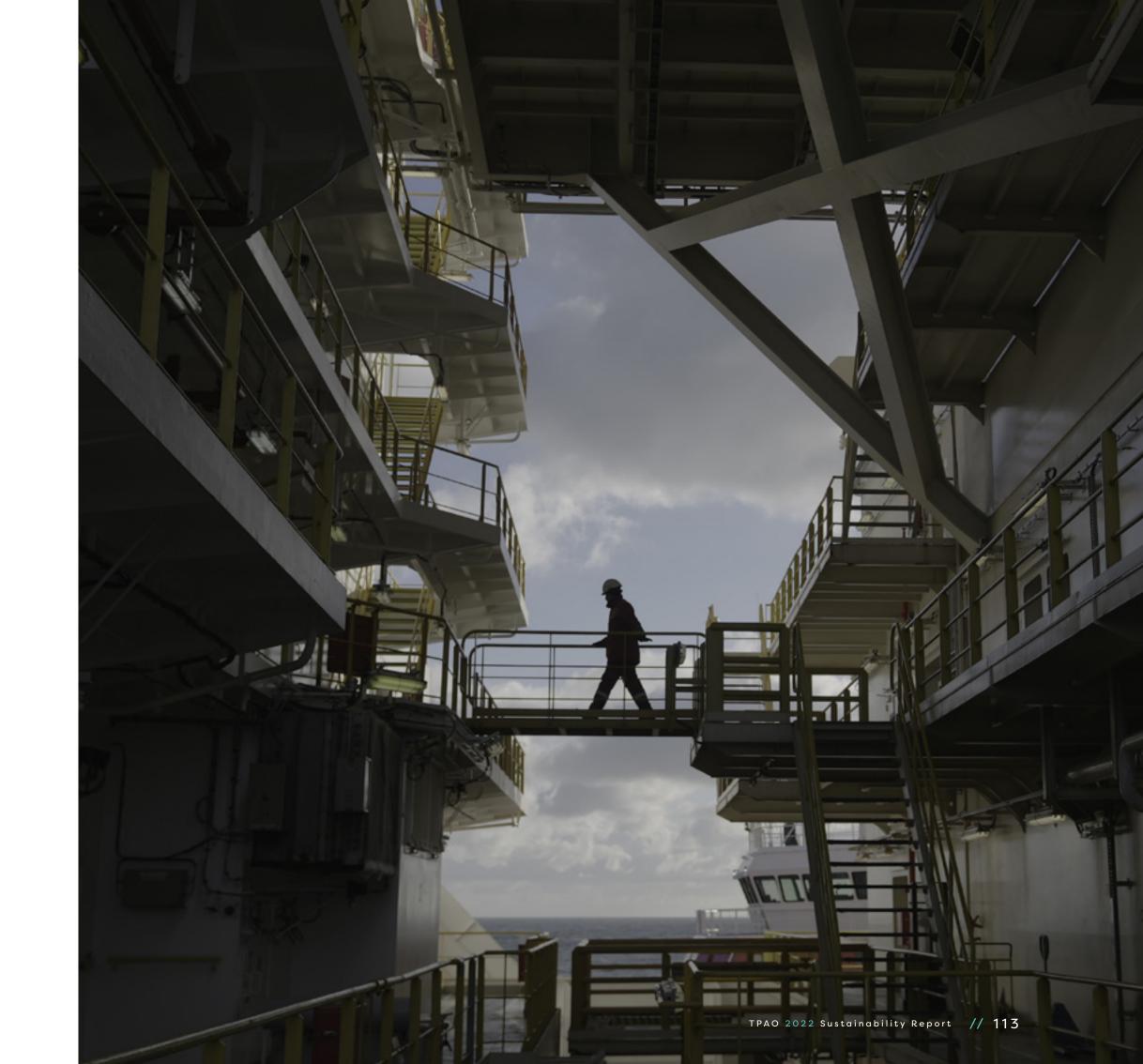
Independent Audit of Financial Statements

Our financial statements are subject to independent audit within the framework of the criteria specified in Article 3/1-b-2 of the Decision No. 2018/11597 of 26.03.2018, published in the Official Gazette No. 30432 on 26.05.2018, and are audited by an independent audit company at the end of each year.

Integrated Management System (IMS) Internal and External Audits

Internal audits are carried out to ensure continuous improvement, which is a requirement of IMS. Internal audits were carried out by 188 internal auditors of our Corporation in 2021, and 216 internal auditors and internal auditor candidates in 2022. External audits are carried out by an independent and accredited certification body. The scope of this audit consists of TS EN ISO 9001:2015 Quality,

TS EN 27001 Information Security, TS EN ISO 14001:2015 Environment, TS EN ISO 45001:2018 Occupational Health and Safety and TS EN ISO 50001:2018 Energy Management System standards.



Indicators

Financial Indicators

Operating Income (Thousand TRY)	2021	2022
Crude Oil Sales Revenues	11,099,592	33,346,701
Natural Gas Sales Revenues	622,752	3,638,459
Service Revenues	118,775	275,011
Other Income	85,850	99,213
Total	11,925,969	37,359,384
Non-Operating Income (Thousand TRY)	2021	2022
Ordinary Income and Profits from Other Operations	15,941,952	17,177,610
Extraordinary Income and Profits	118,694	146,034
Total	16,060,646	17,323,645

Expenses (Thousand TRY)	2021	2022
Sales Discounts	-	-
Cost of Sales	3,093,780	7,973,995
Operating Expenses	6,729,601	19,334,034
Ordinary Expenses and Losses from Other Operations	14,733,474	15,896,513
Financing Expenses	916,790	1,807,030
Extraordinary Expenses and Losses	910,135	1,905,456
Taxes and Other Legal Liabilities	37,192	0
Total	26,420,972	46,917,028

Taxes and Legal Liabilities Paid in 2021–2022 (Thousand TRY)								
	Corporate Tax	Other*	VAT	State Shares	Revenues 10%**	Total		
2021	37,192	407,327	1,374,317	1,502,344	0	3,321,180		
2022	0	1,910,311	5,548,586	4,723,007	0	12,181,904		
Total	37,192	2,317,638	6,922,903	6,225,351	0	15,503,084		

Other*: it includes Withholding Tax, Stamp Duty, Dues, Special Consumption Tax, Motor Vehicles Tax and Real Estate Tax.

Revenues 10%**: The Presidential decision published in the Official Gazette No. 31358 on January 8, 2021, the 10% share of revenues was abolished, effective as of 1.4.2020.



Social Indicators

Number of Employees by Employment Type	2021			2022		
	Female	Male	Total	Female	Male	Total
Number of White-Collar Employees	321	948	1,269	326	965	1,291
Number of Blue-Collar Employees	187	1,858	2,045	182	1,881	2,063
Total Number of Personnel	508	2,806	3,314	508	2,846	3,354

Number of Employees by Location	2021			2022		
	White Collar	Blue Collar	Total	White Collar	Blue Collar	Total
Headquarters	935	415	1,350	937	403	1,340
Batman	160	966	1,126	177	996	1,173
Adıyaman	103	412	515	104	412	516
Trakya	71	252	323	73	252	325

Number of Employees by Age	2021			2022		
	White Collar	Blue Collar	Total	White Collar	Blue Collar	Total
20-30 years of age	9	131	140	35	144	179
30-40 years of age	752	539	1,291	687	499	1,186
40-50 years of age	381	947	1,328	406	926	13,32
50-60 years of age	118	428	546	151	494	645
60 years and above	9	-	9	12	-	12

Distribution of Managerial Positions by Age and Gender	20)21	2022		
Distribution of Managerial Positions by Age and Gender	Female	Male	Female	Male	
Under 30 years of age	-	-	-	-	
30-50 years of age	59	248	58	226	
Over 50 years of age	5	39	6	40	

New Recruits	20	21	2022	
	Female	Male	Female	Male
Under 30 years of age	-	3	8	75
30-50 years of age	-	5	8	37
Over 50 years of age	-	-	-	-
Total	-	8	16	112

Employee Turnover	20)21	2022	
	Female	Male	Female	Male
Employees Under 30 Years of Age Who Quit Their Jobs	-	3	8	75
Employees at 30-50 Years of Age Who Quit Their Jobs	7	44	8	37
Employees Above 50 Years of Age Who Quit Their Jobs	16	116	-	-
Total	23	163	16	112

Employees Included in the Collective Labor Agreement (CLA)	2021			2022		
	Female	Male	Total	Female	Male	Total
Employees Included in the CLA	187	1,858	2,045	182	1,881	2,063

Number of Disabled Employees	2021	2022
Female	23	23
Male	119	117
Total	142	140

Seniority Years of Employees	2021			2022		
	White Collar	Blue Collar	Total	White Collar	Blue Collar	Total
0-5	52	4	56	73	70	143
5-10	400	498	898	332	447	779
10-15	452	538	990	433	488	921
15-20	133	237	370	210	296	506
20-25	152	416	568	163	439	602
>25	80	352	432	80	323	403
Grand Total	1,269	2,045	3,314	1,291	2,063	3,354

Note: Since the employment contracts of the personnel employed as temporary workers were suspended on 31.12.2022, 26 temporary workers are not included in the data used.

Environmental Indicators

Environmental Investments (TRY)	2021	2022
Headquarters	3,853,449.24	11,559,107.46
Adıyaman	3,276,114.00	6,460,811.94
Batman	5,849,400.90	11,114,134.20
Trakya	740,403.74	3,930,708.88
Total	13,719,367.88	33,064,762.48

Internal Energy Consumption	Energy Type	Unit	2021	2022
Adularaga	Natural gas	MwH	4,987	5,054
Adıyaman	Electricity	MwH	101,737	111,395
	Natural gas	MwH	114,644	98,890
Batman	Electricity	MwH	229,579	257,289
	Diesel	Lt	6,708,867	7,816,910
Trakya	Natural gas	MwH	129,618	118,742
пакуа	Electricity	MwH	2,275	4,296
Lloadquarters	Natural gas	MwH	10,021	11,292
Headquarters	Electricity	MwH	6,160	6,937
Total			7,307,888	8,430,805

Water Use (m³)		2021	2022
Adıyaman	Mains Water	53,583	35,078
Trakya	Groundwater	15,399	32,900
Batman	Mains Water	656,557	640,000
Headquarters	Mains Water	168,071	112,964
Total		893,610	820,942

Generated Wastewater (m³)	2021	2022
Adıyaman	23,630.50	17,539.00
Trakya	43,200.00	43,200.00
Batman	701,800.00	379,600.00
Headquarters	28,966.00	138,277.00
Total	95,796.50	578,616.00

Wastes 2022	Headquarters	Adıyaman	Trakya	Batman
Hazardous Waste (tons)				
Total Hazardous Waste	23.987	2,682.213	190.925	8,797.530
Recovered for Energy Purposes		1,281.180	49,900	1,187.660
Electronic Waste	15.680		0.860	2.240
Other	8.307	1,401.033	59.165	7,607.630
Non-Hazardous Waste (tons)				
Total Non-Hazardous Waste	430.280	4.820	330.845	11.835
Sanitary Landfill / Solid Waste Site			114.750	
Recycled	423.310		216.095	11.635
Recovered for Energy Purposes	6.970			0.200
Reused				
Other		4.820		

Memberships

- Organizations and Associations of which we are a member
- World Energy Council (WEC)
- World Petroleum Council (WPC)
- International Well Control Forum (IWCF)
- Riglogix-Westwood Global Energy Group
- Mediterranean Oil Industry Group (MOIG)
- ENVERDER (Energy Efficiency Association)
- Turkish Heavy Industry and Services Sector Public Employers' Union (TÜHIS)
- Turkish Public Enterprises Association

GRI Content Index

TURKISH PETROLEUM CORPORATION (TPAO) Sustainability Report 2022 GRI Standards Content Index - Core

GRI Standa	rd	Description/Section Name	Page
GRI 101: CC	PRE 2016		
GRI 102: GI	ENERAL DISCLOSURES 2016		
Corporate	Profile		
102-1	Organization name	Turkish Petroleum Corporation	
102-2	Primary brands, products and services	About TPAO	14
102-3	Location of the organization's headquarters	Operating Centers	128
102-4	The number of countries in which the organization operates and the names of countries where the organization has significant operations or that are relevant to the sustainability topics discussed in the report	About TPAO	14, 17
102-5	Nature of ownership and legal structure	About TPAO	14
102-6	Markets served	About TPAO	14
102-7	Scale of the Organization	About TPAO	14
102-8	Information about employees	Human Resources	100
102-9	Supply Chain	Supply Chain Management	90
102-10	Changes to the organization and supply chain	No significant changes occurred during the reporting period.	
102-11	Precautionary approach or precautionary principle	Corporate Risk Management, Ethical Principles	29, 111
102-12	Supported Initiatives	Memberships	121
102-13	Memberships	Memberships	121
Strategy			
102-14	Statement from the highest decision-making body	CEO's Message	6

Ethics and I	ntegrity		
102-16	Values, principles, standards and norms of behavior	Ethical Principles	111
Governance			
102-18	Governance Structure	Corporate Governance	24, 25
Stakeholde	r Engagement		
102-40	List of stakeholder groups	TPAO Stakeholders Contact List	46-49
102-41	Percentage of employees subject to collective bargaining agreement	Human Resources	100
102-42	Identification and selection of stakeholders	TPAO Stakeholders Contact List	46-49
102-43	Stakeholder engagement approach	TPAO Stakeholders Contact List	46-49
102-44	Key issues and concerns	Our Sustainability Priorities	34-35
Reporting			
102-45	All entities included in consolidated balance sheets or equivalent documents	About TPAO	14-17
102-46	Defining report content and subject limits	About the Report, Our Sustainability Strategy Matrix	4, 42
102-47	List of material topics	Our Sustainability Priorities, Our Sustainability Strategy Matrix	34, 35, 42
102-48	Information rearranged based on previous reports	Our Sustainability Journey, Cultural Heritage Management, Equal Opportunity and Diversity	32, 33, 68, 105
102-49	Changes in reporting	Our Sustainability Journey, Cultural Heritage Management, Equal Opportunity and Diversity	32, 33, 68, 105
102-50	Reporting period	About the Report	4
102-51	Date of previous report	The previous report was published in 2020.	-
102-52	Reporting frequency	Reporting will be done on an annual basis.	-
102-53	Contact information for questions about the report and its contents	About the Report	4
102-54	Compliance option selected according to GRI Standards	About the Report	4
102-55	GRI content directory	GRI Content Index	122
102-56	External assurance	No external audit was conducted.	_

GRI Content Index

MATERIAL TOPICS

(GRI Standa	rd	Description/Section Name	Page
GRI 201 Econo	mic Perfor	mance 2016		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Strategy and Goals	20
	201-1	Economic value produced and distributed	Financial Indicators	116
GRI 202 Mark	et Presence	e 2016		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
Management Approach 2016	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
	103-3	Evaluation of management approach	Promoting Development	84
	202-2	Percentage of senior managers hired from among local community	Contribution to the Domestic Economy	84
GRI 203 Indire	ct Econom	ic Impacts 2016		·
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Promoting Development	84, 85
	203-1	Infrastructure investments and supported services	TPAO at a Glance	17
	203-2	Significant indirect economic impacts	Promoting Development	84
GRI 204 Proc	urement Pr	actices 2016		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Supply Chain Management	90
	204-1	Percentage of spending on local suppliers	Supply Chain Management	90

GRI 300 ENVIRONMENTAL STANDARD SERIES 2016

	GRI Standa	rd	Description/Section Name	Page
GRI 302 Energ	gy 2016			
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Environmental Management, Energy Management	62, 72
	302-1	Internal energy consumption	Environmental Indicators	120, 12
	302-4	Reducing energy consumption	Energy Efficiency Actions by Locations	72, 73
	302-5	Reducing the energy required for products and services	Energy Efficiency Actions by Locations	72, 73
GRI 303 Wate	er and Efflu	ents 2018		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Environmental Management, Water Management	62, 70
	303-1	Organization's Water Policy and Management Approach (Water Management)	Water Management	7C
	303-3	Water use by source	Environmental Indicators	120, 12
GRI 304 Biodi	iversity 201	6		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Environmental Management, Biodiversity	62, 66
	304-2	Significant impacts of operations, products and services on biodiversity	Biodiversity	66
	304-3	Protected or restored habitats	Biodiversity	66

	GRI Standa	rd	Description/Section Name	Page		
GRI 306 Waste 2020						
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35		
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43		
2016	103-3	Evaluation of management approach	Environmental Management, Waste Management	62, 64		
	306-1	Waste generation and significant waste-related impacts	Waste Management	64		
	306-2	Management of significant waste-related impacts	Waste Management	64		
	306-3	Waste by type and disposal method	Waste Management, Environmental Indicators	64, 120, 121		
	306-5	Waste directed to disposal	Waste Management, Environmental Indicators	64, 120, 121		

GRI Content Index

GRI 400 SOCIAL STANDARD SERIES 2016

GRI Standard			Description/Section Name	Page
GRI 401 Emp	loyment 201	16		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
Management Approach	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Human Resources	100
	401-1	New staff recruitment and staff turnover rate	Social Indicators	118, 119
	401-2	Benefits provided to full-time employees, but not to temporary or part-time employees	Financial Rights and Social Benefits Provided to Our Employees	100
	401-3	Maternity leave	Equal Opportunity and Diversity	105
GRI 403 Occ	upational H	ealth and Safety 2018		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Occupational Health, Safety and Environment (OHSE)	96-99
	403-2	Injury types and injury rates, occupational diseases, lost days	Occupational Health, Safety and Environment (OHSE)	96-99
GRI 404 Trai	ning and Ed	ucation 2016		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Development and Training of Employees	102, 103
	404-1	Average training hours per person	Development and Training of Employees	102, 103
	404-2	Career, talent management and lifelong learning programs	Development and Training of Employees	102, 103
	404-2	Career, talent management and lifelong learning programs	Performance and Career	104
GRI 405 Dive	rsity and Eq	ual Opportunity 2016		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Equal Opportunity and Diversity	105
	405-1	Diversity of governance bodies and employees	Social Indicators	118, 119
	405-2	Base Salary and Wage Gap Between Women and Men	Equal pay for equal work is applied.	

	GRI Standa	ırd	Description/Section Name	
GRI 406 Non	-Discrimina	tion 2016		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Human Resources	100
	406-1	Equal Opportunity and Diversity	Equal Opportunity and Diversity	105
GRI 407 Free	dom of Ass	ociation and Collective Bargaining 2016		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Human Resources	100
	407-1	Right to collective bargaining agreement	Employees Included In The Collective Labor Agreement (CLA)	119
GRI 413 Loca	Communit	ies 2016		
GRI 103	103-1	Explanation of material topics and their limits	Our Sustainability Priorities	34, 35
MANAGEMENT APPROACH	103-2	Management approach and its components	Our Sustainability Strategy Matrix	42, 43
2016	103-3	Evaluation of management approach	Promoting Development	84, 85
	413-2	Operations that have significant actual and potential negative impacts on local communities	Promoting Development	84, 85

Headquarters

Söğütözü Mahallesi, Nizami Gencevi No: 10

06530, Çankaya-Ankara/Türkiye Phone : +90 (312) 207 20 00

Fax : +90 (312) 286 90 00 / 01

District Managements

Adıyaman District Management Türkiye Petrolleri Mahallesi

Karapınar Caddesi No: 256 02040, Adıyaman

Phone : +90 (416) 212 50 00

Fax : +90 (416) 227 28 18

Batman District Management

Site Mahallesi 72100, Batman

Phone : +90 (488) 217 60 00

Fax : +90 (488) 213 41 49

Trakya District Management

Dere Mahallesi Edirne Bayırı Mevkii No: 19 39750, Lüleburgaz/Kırklareli

Phone : +90 (288) 417 38 90

Fax : +90 (288) 417 22 03

Şırnak District Management

Gündoğdu Mahallesi Uludere Caddesi No:104

International Offices

Azerbaijan

TPAO, TPOC, TPBTC, TPSCP

Azerbaijan Representative Office St-5, No-6, Baghdad-IRAQ

South Tower,

12th Floor 153, Neftchilar Avenue,

AZ 1010, Baku/Azerbaijan

Phone: +994 (12) 64 0150-51 E-Mail: info@tpao-az.com

Al Waziriyah, District 301

Port Baku Towers Business Centre, Phone: +90 (312) 207 20 00/1858-1859

Report on your device, please scan the QR code on your phone.



To view the Sustainability

Legal Notice:

The information and analyses contained in the TPAO Sustainability Report are written for informational purposes only, using sources and information believed to be accurate and reliable at the time the report was prepared, and are not intended to form the basis for any investment decision.

TPAO executives, employees and all other persons and entities contributing to the production of this report cannot be held liable for any damages that may arise from the use of the information contained in this report.

All rights of the report belong to TPAO.

Reporting by:

TPAO Strategy Development Department

Design and Application:

Serkan Ersan serkanersann@gmail.com





