



# **SUSTAINABILITY REPORT**

Explore, Produce, Proceed

Brave, Determined, Excellent, Respectful



# **About the Report**

Together with the economic value we produce as TPAO, we are delighted to publish our first sustainability report, which includes the management approach and corporate performance data related to governance, environmental and social issues that we put forward with the pioneering practices we carry out.

With this report, that is going to be prepared regulary, we aim to inform our stakeholders about our business processes and how we manage outcomes of these processes as a result of these processes.

Under the leadership of the Sustainability Management Organization, the sustainability structure of TPAO, this report, which includes the priority issues determined with a wide internal and external stakeholder participation and our management approach to these issues, covers the fiscal year between 1 January and 31 December 2020.

TPAO Sustainability Report, which is published in Turkish and English, has been prepared in accordance with the GRI Standards "basic" option. The scope of the report is onshore-offshore exploration and production activities of TPAO in Turkey and abroad.

You can access our report at www.tpao.gov.tr and convey your ideas, questions, and suggestions about our report to us at stratejibilgi@tpao.gov.tr.

You can switch to the previous and next pages by using the "arrows".

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# MESSAGE FROM THE CEO

As TPAO, we are pleased to publish the first Sustainability Report for 2020 among Public Economic Enterprises while successfully continuing our activities in line with the principles of transparency, accountability, and sustainability.

The fundamental mission of TPAO, Turkey's national oil company, is to fulfill our country's rapidly growing demand of oil and natural gas from domestic resources.

Acting with the vision of being an effective, competitive, and dynamic national exploration and production company to meet our country's oil and natural gas needs, our Company has taken its business goals and strategies into the axis of sustainability in line with the "National Energy and Mining Policy" of our Ministry of Energy and Natural Resources. All business processes have been reviewed by considering national and international performance criteria



and "Sustainability Approach of Turkish Petroleum Corporation" has been determined. At the same time, we aim to make contributions to the studies related to the issues specified in the United Nations Sustainable Development Goals (SDGs).

2020 was an unprecedented and challenging year in many respects. Different business patterns, productivity models and more flexible structures have entered into our lives and the concept of "new normal" has emerged. There were simultaneous and sudden fluctuations in the supply and demand of oil and natural gas, and with the spread of the COVID-19 pandemic, risks such as deep economic recession, falling prices, and sharp contraction in demand occurred simultaneously. In the midst of all these challenges, TPAO achieved extraordinary operating results in an unusual year by taking advantage of opportunities and taking right countermeasures on time.

In 2020, our domestic oil and natural gas production exceeded 55,000 barrels per day. The highest domestic production since 1999. As of 2021, it is aimed to increase daily production above 60,000 barrels. In 2020, a historical record was broken with 53.6 million barrels of oil equivalent in annual domestic hydrocarbon production.

Along our journey, with the goal of independency in energy, we succeeded in 2020. In Tuna-1 deep water well, 405 billion cubic meter natural gas was discovered with our first national drillship Fatih in Western Black Sea Sakarya Block. This discovery was the second largest discovery offshore in 2020. With the 135 billion m³ additional discovery made in K.Amasra-1 well in 2021, the total reserve of Sakarya Gas Field reached 540 billion m³. In addition to the newly discovered wells



Brave Investment



Determined Growth



Excellent Action



Respectful Development

in onshore, maximum efficiency has been obtained with the new production techniques used in the existing fields and production has increased. In 2020, the historical daily total production record was broken with ave. 185,000 barrels oil eq. per day.

As TPAO, we contributed 1.8 billion TL to our national economy. By adhering to the budget discipline, an investment of \$670 million was made domestically and \$803 million internationally in 2020. Fast, flexible, high standards, low cost and solution-oriented, field services- especially deep water- continue to be provided with domestic and national facilities.

In order to effectively monitor costs and to identify improvement areas and reduce them to more competitive levels, it is ensured that the culture of "continuous cost improvement" is adopted within the company. By this way, the downward trend in unit exploration and unit production costs continued in 2020.

"Zero Waste Certificate" was obtained by participating in the zero-waste mobilization carried out under the coordination of the Ministry of Environment, Urbanization and Climate Change in all District Managements and Headquarters.

While our score in employee engagement score was 67% in 2019, this rate was increased to 73% in 2020. Necessary studies continue to be carried out in order to maintain the increase in employee engagement.

Our Code of Ethics and Business Conduct reflects the company's commitment to respect human rights, equal opportunities, protection of the environment and transparency of information while ensuring that everything is done responsibly and honestly throughout Our domestic oil and natural gas production exceeded **55,000 barrels** per day in 2020. This quantity is the highest domestic production since 1999.

the entire value chain.

The time period covering the reporting period has been a process in which the uncertainty and economic fluctuations in the markets are felt and in which the concepts of efficiency and performance come into prominence.

TPAO modelled four fundamental approaches of sustainability in harmony with our activities,

- Respectful Development
- Excellent Action
- Determined Growth
- Brave Investment.

We believe that sustainability practices add value to all our stakeholders, and we endeavour to the development and adoption of such practices at all levels of our organization.

We contributed

**1.8 billion TL** to the national economy.

By 2020, we have to prepare for a world where energy needs will be higher than ever, but carbon emissions must be reduced to much lower levels. Our main strategy is to make the best of what we do and to make it sustainable regardless of the circumstances. Despite the challenging conditions of the current period, we are taking firm steps towards our goals in the long term.

Being aware of the responsibility and expectation arising from our activities in a wider geography on onshore & offshore, we focus on contributing to the sustainable growth wherever we operate, conducting our business responsibly, and further increasing the added value we generate for all our stakeholders.

The COVID-19 pandemic has changed the world and people's lives rapidly. Leaving behind a challenging year, the lessons learned and the achievements in 2020 have made us a better company and strengthened our ongoing commitment to move our country to a better future

TPAO is committed to conduct its activities responsibly and sustainably, minimize environmental impacts and climate change risks. This sustainability report sets out the numerical indicators of how we have achieved development and the basic approaches to how we will continue.

I would like to thank all our stakeholders who have made great efforts in our success, especially our employees.

#### Melih Han BİLGİN

Turkish Petroleum Corporation President and CEO



# 3 GOOD HEALTH AND WELL-BEING

### **COVID-19 MANAGEMENT IN TPAO**

Within the scope of COVID-19, which started to spread in our country as of March 2020, disinfection procedures were carried out in TPAO, working hours, and working environment were rearranged, protective equipment (masks and gloves) were supplied, and personnel were informed about the rules to be followed and necessary measures were taken

Risk assessments have been updated in TPAO workplaces for COVID-19 risk. Within the scope of the risk assessments, the sub-employer works were continuously audited. In addition, PCR and antibody test, case follow-up and filiation studies were performed periodically by our Health Unit.

In 2020, a total of 6,800 COVID-19 PCR tests and 2,555 COVID-19 antibody tests were applied to TPAO personnel and sub-employers in the workplaces of the General Directorate and District Managements of our Company.

- Turkish Petroleum Corporation Coronavirus Emergency Action Plan has been published.
- The COVID-19 Pandemic was managed proactively, effectively, and successfully.
- 7 days of quarantine were applied to the entries of the drillships.
- Continuous Antigen, PCR, IGG and IGM tests were applied to the personnel.
- Quarantine and filiation applications were performed in active cases.
- Antigen test was applied to the drillships personnel in the ship hospital.
- In the initial phase of the normalization process,

the OHS Board held a meeting with the Coronavirus agenda and made recommendations on the measures to be taken within the scope of the Coronavirus in the Head Office.

- Monitoring and control of the implementation of the decisions taken is carried out in coordination with all units and subcontractors.
- Awareness of TPAO employees and stakeholders on protection from the COVID-19 outbreak has been increased.
- Unlimited time HES code application has been initiated for TPAO General Directorate personnel, subcontractor personnel and external visitors.
- With this application, the risk of transmission of the disease has been significantly reduced by providing controlled entry and exit in the workplace of the Head Office
- A comprehensive plan has been created to cover all TPAO workplaces, employees and sub-employers, and the measures to be taken by all units in risky situations have been defined.

# Epidemic Management in Offshore Operations

A three-stage system has been established for the uninterrupted continuation of Offshore activities despite the COVID-19 pandemic.

• First of all, test and quarantine applications have been commissioned before the acceptance of the personnel assigned for the activities to the workplaces in order to prevent the contamination of the epidemic to the offshore workplaces. In this context, all personnel to be admitted to the ships were required to undergo PCR

the OHS Board held a meeting with the Coronavirus agenda and made recommendations on the measures given approval to enter the ships.

Persons were quarantined for seven days in the facilities determined to guard against the risk of not being detected by PCR tests in the early period of COVID-19, and Covid-19 tests were applied to everyone at the beginning and end of the quarantine period. It was considered risky for people to use hospitals for tests, and all tests were applied in a mobile manner by taking swabs and samples at the place where the people were located.

Mask, distance, disinfection applications have been carried out by activating anti-spreading measures in offshore workplaces and the works have been continued with minimum number of personnel in a way that the activities will not be disrupted. Necessary distance measures have been applied in social areas (dining hall, gym, meeting areas, etc.) in offshore workplaces. COVID-19 screening tests were performed periodically and immediate action was taken in case of suspicious situations. Health personnel working on drilling vessels organized information training courses about COVID-19 to the personnel at regular intervals, and the sensitivity of the personnel regarding the issue and precautions was increased.

If an epidemic is detected on board, emergency plans are established for the continuation of activities without interruption and the management of cases.

Created regarding the practices, measures, and emergency plans before entering the workplaces, the COVID-19 Management Plan was published, and its applications were checked. In this context, all costs incurred for the test and quarantine processes applied before admission to the workplaces have been covered by our company.





### TPAO AT A GLANCE

Establishment 1954

Capital **12.018 Billion TL** 

In 5 Countries Abroad

Azerbaijan, Iraq, Afghanistan, Russia, TRNC

The World's Most Advanced Offshore Drilling Technologies

Fatih, Yavuz and Kanuni

Legal Duties Paid in 2020

1.8 Billion TL

Number of Employees in 2020

3,490

Total Domestic and International Production Record in 2020

**185,000 barrels/day** 

Highest Monthly Average Production of the Last 20 Years

54.029 boe/day

Onshore Added Reserves with New Discoveries in

37 million boe

Crude Oil Sales in 2020

16.769.057 barrels

Natural Gas Sales in 2020 360 million m<sup>3</sup>

Number of Wells Drilled in 2020

As of the end of 2020:

\$670 million

**Domestic Investment** International Investment

\$803 million

**Net Sales** 

5,2 billion TL **Profit for the Period** 

1,705
billion TL



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# **History of TPAO: Milestones**

1953

Batman Refinery was established.

1954

Turkish Petroleum Corporation The first oil TPAO was established on December 12, 1954, with a capital of TL 150 million.

1958

GERMİK1.

discovery in Turkey was established.

1958

Batman Petrol Spor

The first district management was established in Batman.

1959

1960

**İPRAŞ** was established. 1961

BATI RAMAN field, Turkey's biggest reserve, was discovered. 1963

The fuel stations of Türkiye Petrolleri were established.

1965

PETKİM was established.

1966 ISILİT

ISILİT Ltd. Ltd. was established. established.

1967

Opening of the first pipeline (Batman-Dörtyol, İskenderun). Aliağa Refinery (İzmir) was established. Research and Survey Project (Gölbaşı) was established.

Golden Microphone.

1969

TÜMAŞ was established.

Annual Production

exceeded 1 million

barrels. TPAO Batman

Orchestra received the

TPAO ranks sixtv-third among the world's largest companies outside the US.

The Trakya District Management the second company, was established. in Turkey.

Status change and dissolution in integration in TPAO. The title of "The district management of our organization that produces the most" 1975

Kıbrıs Türk Petrolleri Ltd.Şti. was established. ISILİTAŞ was established.

1974

Facilities was opened.

DİTAS was established. The Research Center was established. BOTAS was established. ADAS was established.

1973

Data processing center was established.

1972

Adıyaman-Sarıl oil pipeline was put into operation.

1971

1965

First oil discovery in Adıyaman, Adıyaman 2. IGSAŞ was established. İPRAŞ was completely transferred to our Company.

1970

Our company was entitled to receive an

First production from the sea -Northern

international well control certificate.

First offshore (shallow waters) drilling was carried at Payas-1 First natural gas was discovered. (Hamitabat)

The First Oil Discovery in Western Anatolia. ALASEHİR-1

1986

2010

Kırıkkale Refinery was established. Drilling record: 224.392 m in 123 wells (with 31 drilling rigs).

1987

Our company expanded overseas.

Seismic Ship Barbaros Hayreddin Pasha was

purchased. Our company in Afghanistan.

1988

was drilled.

A.S. was established.

Turkish Petroleum International Company (TPIC) was established. 1991

Modernization in interpretation systems three-dimensional interpretation. Gold year - Record of 50 years in production -Discovery of KARAKUS oil field.

1992

our company Adiyaman District Management was established.

First Shallow Offshore

Discovery in Black Sea.

1993

2001

Project

South Caucasus

Natural Gas

Pipeline (SCP)

The third regional management of Our company in Kazakhstan. Partner Company, KTM Ltd., was established. Our company in the gateway to Eurasia in Azerbaijan.

N.Marmara ve Değirmenköy Underground Natural Gas Storage Project, the first oil discovery in Western Anatolia, was started. Baku-Tbilisi-Ceyhan Main Export Crude Oil Pipeline (BTC) Project

2017

Drillship, Fatih, was purchased.

2018

Türkiye Petrolleri Petrol Dağıtım (TPPD)

The first deep sea drilling, Alanya-1, was carried out with our national drillship. The second Drillship, Yavuz, joined TPAO's inventory.

Turkey's deepest well Yuvaköy1 (7.216 m) Silivri Natural Gas Storage



Avazlı-1

2004

Offshore Service Company TP-OTC was established.



The third Drillship, Kanuni joined TPAO's Natural gas was discovered in the Tuna-1 well in

the Western Black Sea Sakarya Gas Field.

1997

Marmara Field



2014

Our company in the Turkey's first Russian Federation.

Oil discovery in Libya.

Our company in Iraq.



# Highlights in 2020

**The Greatest Offshore Discovery** in the world in 2020.

The Biggest Gas Discovery of our history.
SAKARYA GAS FIELD

405 billion m<sup>3</sup>

2021 Together with K.Amasra-1

540 billion m<sup>3</sup>

Total Production

53.6 million boe

#### **Zero Waste Certificate**

was obtained at the 3 District Managements and Head Office Campus.

The sea floor sediment and water samples taken for the first time for geochemical analysis were analyzed and interpreted.

The 3<sup>rd</sup> Drillship,

Kanuni, joined our inventory.

Seismic Data Acquisition

3D: 14.7 thousand km<sup>2</sup> 2D: 10.9 thousand km

We started to perform **3D seismic data processing** in offshore with our own resources.

With the development of cost improvement projects

and continuous cost improvement culture,

54 million TL was saved from 38 projects
approved for 2020.

In 2020, when the oil price decreased historically,

1.6 billion TL profit

Total average daily domestic and international production.

185 thousand boe/day

Total International Production

34.8 million boe

With the theme of **"We Are Enough for Each Other" "National Technologies in the Oil Industry"** The summit was held, and the search and production sector and domestic suppliers were brought together.

Concurrent geological monitoring of all exploration wells drilled in the Black Sea and Mediterranean including the Tuna-1 well resulting in discovery was carried out in mobile laboratories on our **Fatih** and **Yavuz** drillships.

Number of wells drilled in onshore & offshore

Well Drilling



# **Our Strategies and Goals**

As TPAO, the principle of having a common and healthy sustainable future for all our stakeholders is at the center of determining our strategic goals and targets.

Our roadmap, strategies and goals were determined in coherence with the Presidency Implementation Programs, Eleventh Development Plan (2019-2023), 2021-2023 New Economic Program (YEP), National Energy and Mining Policy and 2019-2023 Strategic Plan of the Ministry of Energy and Natural Resources..

#### Offshore Projects

Together with our first drillship FATİH. which will raise the TPAO to global standards in hydrocarbon exploration at offshore, our second drillship YAVUZ and our third drillship KANUNI have also been added to our inventory. Within the framework of our offshore business plan, our primary goal is to reveal the oil and natural gas potential of our country's offshore areas with both deep waters and shallow sea drilling in the Mediterranean and Black Sea.

#### **New Exploration Axles**

The main steps taken by TPAO are to explore our country's onshore and offshore areas, to produce from new fields, to overcome geographical obstacles with modern seismic approaches such as aerial data collection and to increase production through new reservoir fracturing technologies.

#### International Investments

In 2023, in line with our production target of 300 thousand barrels/day, we continue to monitor the opportunities in nearby geographies in addition to our existing projects abroad.

#### **Production Enhancement Technologies**

In addition to water and carbon dioxide injection, polymer gel applications, we continue to increase production in our existing fields by taking advantage of technological opportunities such as well bottom heaters. We continue to use fracturing technologies to improve the recovery factor of existing production

#### Unconventional Investments

In order to reveal our unconventional potential in Thrace and South-Eastern Anatolia, we have created our "Roadmap for Unconventional Projects". By this way, we aim to increase our production by benefiting from the developing technology.

#### **National and Domestic Technology**

Localization, which constitutes an important pillar of the National Energy and Mining Policy, will continue to be the basis of our procurement strategy. One of our main goals is to prioritize the existing national industry in the machines, equipment and software

#### Transparency and Traceability

We continue to improve the "Corporate Resource Planning" program in order to make all business processes traceable and measurable. Our corporate goals are determined with a participatory understanding, followed, and reported periodically.

#### A Smart and Learning Organization

In order to be a smart and learning organization, we have developed different programs: "Cross Training between units". "Manager Development for existing managers", "Manager Training for potential manager candidates" and online platfrom "TP Academy for all of our employees".

#### The goals and targets of our company 2019-2023 Strategic Plan are presented below:

#### 1. Increasing Oil and Natural Gas Production

TARGET - 1.1 Daily 100,000 barrels oil equivalent domestic production will be reached in 2023.

TARGET - 1.2 Daily 200,000 barrels oil equivalent international production will be reached in 2023.

#### 2. Revealing Our offshore potential



TARGET - 2.1 Activities to reveal the potential of hydrocarbons in our deep waters will be increased.

TARGET - 2.2 Activities to reveal hydrocarbon potential in our shallow and medium deep waters will be increased.

#### 3. Ensuring Sustainable Financial Balance



TARGET - 3.1 By 2023, the equipment will be maintained with smart system and energy efficiency will be ensured.

TARGET - 3.2 A culture of continuous cost improvement will be put in place.

#### 4. Being a technology user and producer corporate company



TARGET - 4.1 Information technology projects planned until 2023 will be

TARGET - 4.2 Domestic manufacturing usage rate will be increased to 50%.

#### 5. Having a Transparent and Traceable Corporate Structure



**TARGET - 5.1** A smart and learning organizational structure will be established.

Organizational development projects will be completed to ensure traceability.





Our company conducts all its operations within the following corporate governance principles:

#### Honesty

TPAO conducts all its activities in accordance with the principle of honesty. Acts with integrity and honesty in its relationships with its employees and all other stakeholders.

#### Transparency

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

#### Reliability

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

#### Objectivity

TPAO does not discriminate its employees and other stakeholders in terms of gender, language, religion, race, behavior, opinion, age, physical disability and ethnicity and it does not allow any action which violates equality in opportunity. TPAO acts equally to all its employees.

#### Confidentiality

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

#### Compliance

TPAO conducts all its activities in compliance with the laws, regulations, and standards. It closely follows the laws, regulations and standards and takes the necessary measures and precautions within the framework of compliance with the laws.

#### Respect for Human and Environment

TPAO carries out all its activities primarily with respect to occupational health, safety and environment.



# **Our Management and Organization Structure**

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

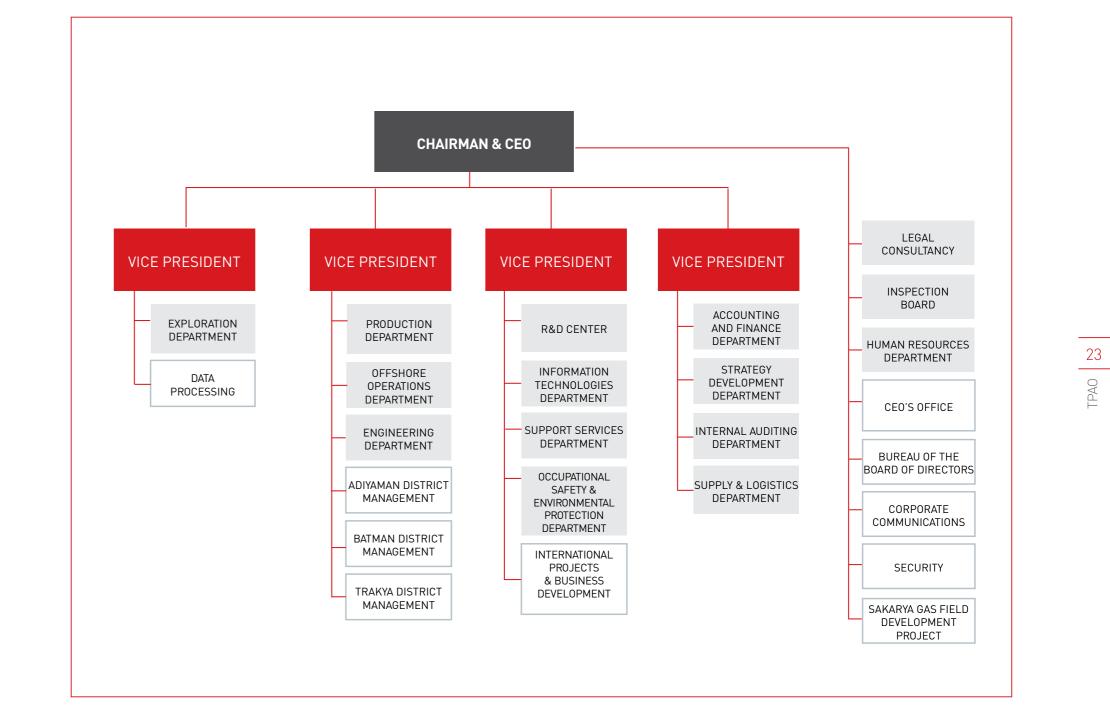
The Board of Directors is the highest authorized and responsible decision-making body of TPAO.

The Board of Directors consists of one chairman and five members.

The General Manager is the Chairman of the Board of Directors and is appointed by the Presidential Decision upon the proposal of the relevant Minister.

The members of the Board of Directors are listed below. The detailed information could be reached at https://www.tpao.gov.tr

Melih Han BİLGİN	Chairman and CEO	TPAO General Manager
Dr. Alparslan BAYRAKTAR	Board Member	Deputy Minister of the Ministry of Energy and Natural Resources (MENR)
Edip MÜYESSEROĞLU	Board Member	TPIC Board Member and CEO
Dr. M. Ferruh AKALIN	Board Member	TPAO Vice President
Kutluhan TAŞKIN	Board Member	Vice President of the Presidency of Strategy and Budget



## **Integrated Management System**

A sustainable development depends only on the execution of activities in all areas with a common understanding. As TPAO, we operate with this understanding and try to create a business environment that will enable all our units to work in coordination.

It will be possible for all our units to fulfil the situations they encounter with the same determination and harmony by preparing an environment that will facilitate the execution of the activities with this understanding. The creation of a structure that can use a common language depends on the precise implementation of the standards system that is most suitable for the activities.

This understanding forms the basis of our integrated management system that will enable our stakeholders who participate and contribute to our value chain at all levels to carry out their activities in a healthy and sustainable way.

ISO 9001:2015 Quality Management System for quality management practices in accordance with international standards and ISO 14001 Environment and ISO 45001 Occupational Health and Safety Management Systems for occupational health and safety and environmental protection activities are implemented as integrated in all business processes of our company and Integrated Management System (IMS) Policy has been determined.

Within the scope of integrated management systems, both internal audits and external audits are carried out continuously by accredited independent organizations.\*

\*TS EN ISO 50001 Energy Management Systems Certificate was gained in November 2021.



#### TS EN ISO 9001: 2015 Quality Management



TS EN ISO 14001: 2015 Environmental Management System



TS ISO ISO 45001: 2018 Occupational Health and Safety Management



TS EN ISO/IEC 27001:2013 Information Security



ISO

ISO 17025



TS EN ISO 50001: **Energy Management** System Certificate

# **Our Integrated Management System Policy**

With the aim to reach human and environment respectful quality targets in oil and natural gas exploration and production operations, we committed ourselves:



To prioritize internal and external customer satisfaction.



To continuously improve our product and service quality in all our activities.



To identify, evaluate, monitor the risk factors and opportunities that may affect the achievement of the quality objectives according to the impact and possibility within the scope of the corporate risk management approach and to take actions when necessary.



To use energy and natural resources efficiently.



To comply with the requirements of the legislation related to Quality, Occupational Health, Safety and Environmental Protection



To protect the health of all our employees including subcontractor personnel, trainees, and visitors within our field of activity and to ensure occupational safety,



To carry out waste management work to protect natural resources and reduce, dispose of, recycle, or recycle wastes generated during our activities.



To ensure continuous improvement and allocate resources in order to increase "Sustainable Quality, Environment, Occupational Health and Safety Awareness and Performance".



To make the working environments safe, healthy, and environmentally sensitive with the participation of employees for "Accident-free Production"



To be prepared for emergencies.

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# **Corporate Risk Management**

The Corporate Risk Management process created to protect the existing values of TPAO and to form new values is shaped in line with the existing workflows and the objectives of the company. Corporate Risk Management activities of the company are implemented under two headings. These are called Goal-Based and Process-Based Risk Management Studies.

Process-based risk management studies are carried out through workflows organized by our company. Risks and opportunities in each flow are studied through Risk Evaluation Forms prepared by our company and approved by the General Manager.

In the Objective-Based Risk Management studies, the risks for the realization of the objectives are determined in the studies carried out over the objectives of our Company for the relevant year.

The risks identified throughout the company were evaluated to be grouped under certain groups and the risks were grouped under appropriate classes in order to ensure that the study was carried out more efficiently. Classes are also considered as the most general risk areas.

#### **Risk Classes**

As a result of all these evaluations, 10 risk classes were determined. These are as follows;

**Compliance risk class** covers the risks encountered during the approval processes within and outside the company, the compliance processes with the law or contract conditions in the jointly worked projects, and the internal and external audit activities of the units.

**Data-Communication risk class** covers the risks encountered in cases such as creating, storing, and

sharing data. These risks are the easiest to take action and manage. Thanks to the various studies carried out in our company in this regard, it is expected that the degree and number of risks in this class will decrease in the coming periods.

**Operational-Activity Area risk class** fully symbolizes the main area where our company operates. For this reason, it comes to the fore mainly in technical units.

**Operational-Application risk class** covers the risks for the applications that are obligatory for the continuity of the works, not only covering the field of activity in which our company is only related.

**External Factors risk class** is the class with the most difficult risks to manage. In this class, where risks such as oil prices, security problems, political reasons are beyond our control, it is necessary to determine the risks in a healthy way and to select methods to reduce their possible effects in case of realization of risks by determining various scenarios.

**Service Company and the Contractor Companies risk class** covers the risks we face during the operations and works we carry out with all the service companies, contractor companies, short-term suppliers we work with.

**Supply risk class** is the class in which the risks related to all purchasing processes of our company are collected. Therefore, all risks from the beginning

to the end of this process are grouped under the same heading.

Human Resource risk class is the class in which the risks for personnel need are included. Although the most frequently repeated risk in this class is related to the number of personnel, all of the risks encountered in personnel-related issues such as competence, motivation, and openness to communication are discussed under this heading.

**Budget-Planning risk class** includes budget-related risks and possible disruptions to planning.

**Information risk class** covers the risks identified in areas such as corporate software infrastructure, hardware-software need and data privacy and security.

#### **Risk Management Methodology**



#### Risk Management Steps



#### DETERMINATION OF RISKS

What are the situations that may prevent the organization from achieving its goals?

#### ANALYSIS OF RISKS

What is the impact and probability of the risks occurring? What is the effectiveness of the controls applied for the risks?

What are the primary risks?

#### CREATING RISK DECISIONS How do I manage risks with

my resources? What is the will ad

## MONITORING and REPORTING OF RISKS

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What is the risk information that will add value to senior management?

# TPAO and According to TPAO's sustainability philosophy, having energy is not a privilege, but a fundamental right to life. The existence of all species in the world, including humanity itself, depends on their having Sustainability the energy to sustain this state of existence. Sustainability for TPAO, whose main reason for being is to meet the energy needs of humanity and the world, is to produce this needed energy respectfully to all beings, to have an excellent business understanding for this and to make energy accessible to every element that needs it.

The UN Sustainable Development Goals (SDGs) were announced in November 2015 as a joint framework by the United Nations Global Compact (UNGC), the World Business Council for Sustainable Development (WBCSD) and the Global Reporting Initiative (GRI) and presented as a framework to be considered for all natural and legal persons.

The framework of environmental, social, and economic life on a global scale has been redefined with the goals called Global Goals in Turkey.

TPAO, which adopts the concept of sustainability-based production, has taken the United Nations
Sustainability Development Goals as a guide. The UN Sustainability
Development Goals mentioned in the report are aligned with the issues.

https://sdgs.un.org/goals https://www.kureselamaclar.org/



# **Sustainability Structure**

We are aware that our success in the field of sustainability can be achieved by meeting with all our stakeholders around a common goal.

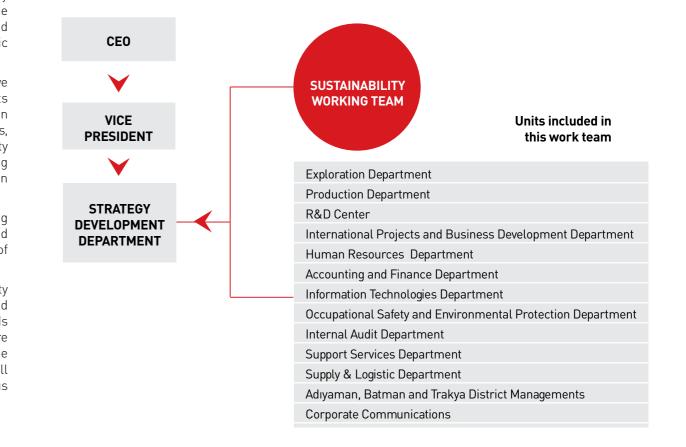
We established the "TPAO Sustainability Working Team" in 2020 with the participation of experts from different units and disciplines of our company. We have taken into account our priority sustainability topics in the selection of experts. Our Sustainability Working Team was established to contribute to the management and reporting of the issues addressed within the scope of sustainability with a more holistic approach.

TPAO Sustainability Working Team, which we established in 2020 with our experts from all units and disciplines related to the issues we focus on within the framework of our sustainability effects, consists of 40 people in total. Our Sustainability Work Team plays an important role in determining the sustainability strategy of our company and in preparing our report.

Our units, which are on our Sustainability Working Team, play a key role in managing important and primary sustainability topics within their areas of duty and activity.

As TPAO, we have implemented our sustainability structure in a way that will enable our internal and external stakeholders who are experts in their fields to participate in an egalitarian way. Our structure continues its activities in accordance with the understanding of access to information that will cover the entire value chain and will always allow us to do the right thing.

#### TPAO SUSTAINABILITY MANAGEMENT ORGANIZATION



# **Our Sustainability Priorities**

Focusing on the right sustainability topics and developing strategies for these focus areas is the most important indicator of corporate sustainability.

In selecting the right areas; ensuring business continuity, securing employment, and creating value for the stakeholders' economic, environmental, and social development are the main determinants. The identified priority issues form the basis of the sustainability vision and action plans. Our company places utmost importance on the views of both internal and external stakeholders in selecting the right focus areas. In this context, a two-step methodology was followed to determine what to focus on. Initially, "TPAO Sustainability Workshop" was held with the participation of 32 members of the Sustainability Study Team to determine sustainability topics of strategic importance for TPAO. In this workshop, sustainability topics that closely affect the sector and sustainable development goals are listed. In light of the outputs obtained from the workshop, the prioritization study of sustainability topics was carried out in 2020, taking into account both the employees and the stakeholders with whom TPAO established a relationship.

Economic, social, and universal issues, which are the main sustainability indicators, were reviewed, and 29 potential sustainability topics were identified.

While prioritizing the issues, the economic, social, and environmental effects created by TPAO; the

risks and opportunities created by the relevant sustainability topics; and the reflection of the issues on the long-term performance of the company were among the factors taken into consideration.

An online impact assessment survey was conducted with internal and external stakeholders to understand which issues affect sustainability performance the most and should have the highest

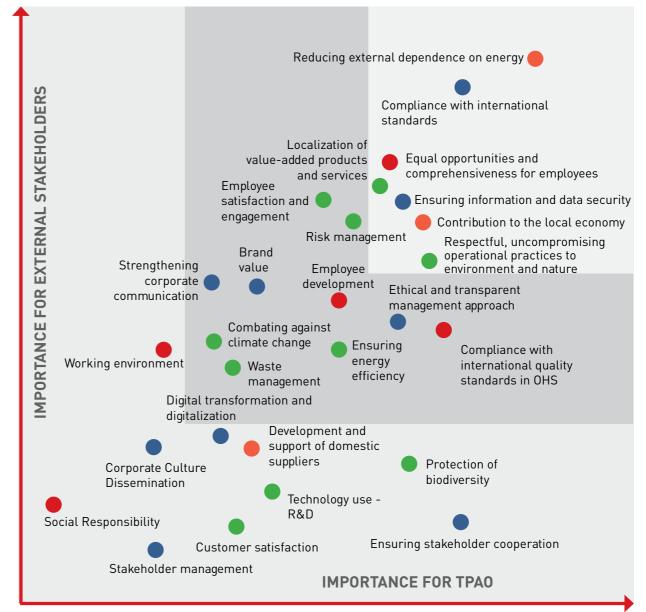
The impact of each of the sustainability topics on the corporate success of TPAO in the sector where TPAO operates was questioned.

847 TPAO employees and 137 external stakeholders participated in the survey conducted through online. The aim is to ensure participation from all units while determining internal stakeholders. Stakeholders of strategic importance for TPAO were taken into consideration when determining external stakeholders. Priority external stakeholder groups were determined according to the results obtained in the impact & importance matrix and sustainability workshop of the stakeholder list included in the 2019-2023 Strategic Plan of TPAO.

The sustainability priorities matrix has been completed by evaluating risks and opportunities, taking into account global and sectoral trends, with the meetings held under the leadership of the TPAO Sustainability Study team.

It is no coincidence that our corporate priorities have the same degree of importance as our stakeholders. As TPAO, it has always been our primary goal to act towards a common goal that will add value to all our stakeholders in every step we take. In ensuring this success, the understanding environment created by the transparent and respectful relationship we established with our stakeholders has a great impact. TPAO will continue to be an institution that has clear goals and objectives, adds value to its stakeholders and informs its stakeholders at every

### **Our Sustainability Priority Issues**



#### Brave Investment

Reducing external dependence on energy Contribution to the local economy Development and support of domestic suppliers

#### Respectful Development

Compliance with international standards Ensuring information and data security Ethical and transparent management approach Brand value Strengthening corporate communication Ensuring stakeholder cooperation Digital transformation and digitalization Promoting corporate culture Stakeholder management

Corporate Culture Dissemination

#### **Determined Growth**

Equal opportunities and comprehensiveness for employees Compliance with international quality standards in OHS Social Responsibility

Working environment

#### **Excellent Action**

Respectful, uncompromising operational practices to environment and nature

Ensuring energy efficiency

Risk management

Localization of value-added products and services

Employee satisfaction and engagement

Combating against climate change

Waste management

Protection of biodiversity

Technology use - R&D

Customer satisfaction

Employee development

# **Sustainability Approach**

Acting with the vision of being an effective, competitive, and dynamic national exploration and production company to meet our country's oil and natural gas needs, our company has taken its business goals and strategies into the axis of sustainability in line with the "National Energy and Mining Policy" of our Ministry of Energy and Natural Resources. All processes have been reviewed by considering national and international performance criteria and "Sustainability Approach of Turkish Petroleum Corporation" has been determined. At the same time, as an Corporation, we aim to contribute to and support the studies (especially in our country) that can be carried out on the issues specified in the United Nations Sustainable Development Goals

#### TPAO's Journey Along the Four Pillars

We are aware that we need to achieve equal development in every field in order to achieve our sustainability goals successfully.

We will only be able to reach our goals in all directions by determining our route correctly.

#### **TPAO's Sustainability Compass**

TPAO is on a sustainable development journey with all its stakeholders. In this journey, we modelled the aspects of our compass in harmony with our activities. Accordingly;

- The East refers to our respectful development,
- The South refers to our excellent understanding of action

- The West refers to our brave investments and
- The North refers to our determined growth.

Respect, courage, determination, perfectionism, and egalitarianism, which are the basic values of TPAO, also form the basis of our understanding of sustainability and our compass.

We express these indispensable values with five main goals by considering the common interests of all our stakeholders and focusing on our scope of activity.

- Boosting oil and natural gas production,
- Revealing the hydrocarbon potential of our seas,
- Ensuring sustainable financial balance,
- Being a corporate company that uses and produces technology,
- Having a transparent and traceable corporate structure.

Our sustainability focuses, priority sustainability topics and sub-sustainability goals are included under 4 main strategic topics for sustainable growth to achieve our five main objectives.

When it comes to oil and natural gas, the first thing that comes to mind is transportation and vehicles on the roads. However, oil and natural gas also constitute the raw material of thousands of products that facilitate our daily life and allow us to live in harmony with nature. In general, 65 per cent of oil products are used as fuel,

while 35 per cent are used safely in the electronics, construction, agriculture, and medical sectors, in household goods, textiles, sports products and toys. Utilizing new technologies to meet energy needs in transportation today will gradually reduce the carbon emission impact of petroleum and natural gas products in the future. On the other hand, petroleum products will maintain their place in our lives as sustainable raw materials that can be recycled for humanity.

Being aware that the place of hydrocarbon products in our future is not limited to transportation, TPAO continues its investments with determination.

TPAO takes its activities further every day with a responsible, respectful, and excellent understanding of action. This understanding and way of working will also reduce the environmental impact.

In this context, TPAO's understanding of sustainability is structured on four pillars.



# **Sustainability Targets**

TARGET	TARGET DESCRIPTION	TPA0		YEAR
Adding reserves by exploration		Brave Investment	9 pointer immunities and a second sec	2021
Increasing average total daily production amount		Brave Investment	9 POLISTIT I MONAÇIN MUSTHASSITUTULE	2021
Completion rate of well drillings included in the work program	100%	Brave Investment	9 POISSET INNOMEN PARTIES COURSE	2021
Reducing unit exploration cost	5% Reduction	Determined Growth	8 occast wor converge,	2021
Reducing unit production cost	5% Reduction	Determined Growth	8 DECENTIVOR DECENTIVOR	2021
Increasing the proportion of generated electrical energy in the consumed electrical energy to 17%	17%	Excellent Action	9 Industri imousisis Industrissinguise	2021

TARGET	TARGET Description	TPAO	UN.SDG	YEAR
Increasing service revenues (Analysis, Consultancy, Field and Training Services)	10%	Excellent Action	8 DECENTION OF COMMUNICATION OF COMMUNIC	2021
Reducing the amount of electricity consumption per capita at the Headquarters in Ankara	2% Reduction	Excellent Action	12 CONTROL CON	2021
Reducing the amount of natural gas consumption per capita at the Headquarters in Ankara	2% Reduction	Excellent Action	12 ESPONENT STREET STRE	2021
Performing Covid-19 screening tests in TPAO Headquarters in Ankara Workplaces	100%	Determined Growth	3 AND WELL-BING	2021
TPAO Overall_Reducing the frequency of work- related accidents (LTIF) due to day-losses to 3 accidents/million working hours	3 accidents/ million working hours	Determined Growth	8 недатних положен	2021
Obtaining ISO 50001 Energy Management System Certificate	100%	Excellent Action	13 comite	2021



# **Sustainability Targets**

TARGET	TARGET Description	TPAO	UN.SDG	YEAR
Increasing the amount of waste recycling	5%	Excellent Action	12 CONSIDERATION AND PRODUCTION	2021
Conducting risk management studies on the system	100%	Excellent Action	12 torsierte torsierte Augressiche	2021
Domestic manufacturing usage rate	25%	Excellent Action	8 DESERT WOR ECHNORG'S	2021
Establishment of the Supplier Management System	100%	Respectful Development	8 DESCRIT WOR EDITION OF S	2021
Nationalizing value-added products	5 pcs	Excellent Action	8 DECENT WOR ECHNOMIC G	2021
Training time per person (Hours)	10 hours	Determined Growth	4 QUALITY EDUCATION	2021
Establishment of an online organization familiarization and manager preparation system	100%	Determined Growth	4 COLUEY EDUCATION	2021
Number of Individual Training Plans prepared after competency assessment	600	Determined Growth	4 COULATER	2021
Completion of the digital TPAO project	100%	Excellent Action	9 PRESTRUMENTALITY AND PERSTRUCTURE	2021

TARGET	TARGET DESCRIPTION	TPAO	UN.SDG	YEAR
Establishment of cyber risk management in TPAO offshore systems	100 %	Excellent Action	9 MUSTEL IMOGETH AND PRESCRICTION	2021
Enrichment of the analysis portfolio within ARGEM	4 new analyses	Excellent Action	9 MUSTIT IMMATTH AND PRESENCE	2021
Realization rate of individual training plans	<b>7</b> 5%	Determined Growth	4 COALTY EDUCATEN	2021
Monitoring and reporting of corporate performance in quarterly periods	100%	Respectful Development	16 PEAC ASSISTED AND THE PEAC ASSISTED AND T	2021
Publication of the sustainability report in accordance with GRI standards	100%	Respectful Development	8 resear was secondars	2021
Extension of the scope of ISO 27001 ISMS to include the central units and activities of the General Directorate	100%	Respectful Development	8 recent was	2021



# Our Sustainability Strategy Matrix

Sustainability Title	Our Sustainability Focus	Priority Sustainability Topics	Relationship between TPAO Goals and Targets
Dil and natural gas are the raw materials of many products used to facilitate daily life beyond transportation. In this sector, which has a direct impact on many sectors and thus economic growth, it is of strategic importance to increase the security of our country's energy supply.  The oil and natural gas sector has an important mission in terms of balancing the need to reduce carbon emissions and the demand for the products necessary for this human development. The oil and natural gas sector allows many subsidiary sectors to develop and make innovative productions for the benefit of humanity.	Increasing oil and natural gas production Revealing regional potential	Contribution to the Local Economy Reducing External Dependence in Energy	TARGET-1.1: Daily 100,000 barrels oil equivalent domestic production will be reached in 2023.  TARGET-1.2: Daily 200,000 barrels oil equivalent international production will be reached in 2023.  TARGET-2.1: Activities to Reveal the Potential of Hydrocarbon in Our deep waters will be increased  TARGET-2.2: Activities to Reveal Hydrocarbon Potential in Our Shallow-Middle deep waters will be increased  Our Other Goals:  Supporting Development Supporting Development Maintaining Equal Participation Production Increase Increasing Exploration Activities
The oil and natural gas sector are important in terms of the continuity of the local and global economy. It is the main objective to carry out all activities with an understanding that focuses primarily on employees, stakeholders working with the sector and those directly related to the production of this sector.  Beyond the classical understanding, it is aimed that the sector will have a stable growth understanding that will benefit the common future of humanity.	Creating a sustainable economy  Human-oriented investment and business approach	Occupational Health and Safety Employee Satisfaction and Engagement Improving Employee Equality and Inclusion Work Environment	TARGET-3.1: Maintenance of the Equipment by 2023 will be carried out with Smart System and Energy Efficiency will be provided.  TARGET-3.2: A Culture of Continuous Cost Improvement will be placed.  TARGET-5.1: An Intelligent and Learning Organizational Structure will be created.  Our Other Goals:  Supporting Human Development Occupational Health and Safety Protection of Future Generations Financial Efficiency Support for the Regional Economy

Sustainability Title	Our Sustainability Focus	Priority Sustainability Topics	Relationship between TPAO Goals and Targets
The oil and natural gas sector emerges as an area that is carried out on the basis of scientific knowledge and requires advanced engineering competence. It is necessary to carry out activities and to examine the global effects of the products as a result of these activities and to address them with an understanding of excellence. For the oil and natural gas sector, it is aimed to carry out the activities in full harmony with scientifically based objectives to improve global climate conditions.	Performing and disseminating scientifically-based works  Creating a sustainable environment	Environmentally Respectful, Uncompromising Operation Practices Ensuring Energy Efficiency Waste Management Biodiversity Conservation	TARGET-4.1: Information Technology Projects Planned by 202: will be completed.  TARGET-4.2: Domestic Manufacturing Usage Rate will be increased to 50%.  Our Other Goals:  • Energy efficiency • Increasing R&D competency • Contribution to scientifically based objectives • Reducing emissions to air • Reduction of emissions to soil • Biodiversity conservation • Use of Technology
RESPECTFUL DEVELOPMENT  8 EXCEPTION OF MALAGREE 16 MALAGREE 16 MALAGREE 16 MALAGREE 16 MALAGREE 16 MALAGREE 16 MALAGREE 16 MALAGREE 16 MALAGREE 17 MALAGREE 16 MALAGREE 17 MALAGREE 17 MALAGREE 18 MAL	Ensuring a transparent development Ensuring an egalitarian development	Compliance with international standards Ethics and Transparent Management Approach Providing Information and Data Security	TARGET-5.2: Corporate Development Projects to Ensure Traceability will be completed.  Our Other Goals:  • Accountability  • Traceability

# **Sustainability Policy**

In order to have a sustainable development and inherit livable world to future generations on the basis of economy, people, environment and society.

We undertake to



 Adopt our basic corporate governance principles as company



• Adopt a management approach in which the corporate sustainability approach is integrated into the corporate culture, and raise awareness among all our stakeholders,



 Comply with all national and international legislation applicable to



• Improve the performance of TPAO. and enhance the productivity and profitability in production,



 Provide an appropriate working environment for our employees, who are our top priority stakeholders,



 Ensure the occupational health and safety of our employees while carrying out our operations.



• Encourage our employees to engage actively, and provide a solid and open communication environment,



 Continuously provide our employees with training for improvement,



• Respect human rights and ethical values, not to allow discrimination among our employees under any circumstances, and to provide equal rights to all our employees,



• Provide equal opportunities for women in the working environment and increase women's employment,



• Use energy efficiently, and protect the 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 its source in our activities, continuously improve our environmental performance, reduce our wastes, and ensure their disposal, recovery, or recycling,



• Work with the principle of zero work accident, adhering to the occupational health and safety regulations,



• Raise the knowledge and social awareness of stakeholders on climate



 Ensure the continuity and improvement of the integrated management system we have developed.



 Ensure information security and business continuity in all



• To be a pioneer and innovative in the sector operating based on the R&D and innovation studies,



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



 Make a social contribution to the local economy in which we operate,



 Follow our policy by establishing effective communication with our stakeholders



# **TPAO Stakeholder Relations Management**

**Our Corporate Communications Policy** 

Our goal is "to increase the effectiveness of internal and external communication in accordance with the vision, mission and strategic objectives of our company and to strengthen the reputation and corporate image of our company".

#### For this purpose, we undertake;



To strengthen the corporate identity of our company and contributing to its adoption within the company,



To manage corporate social media accounts by taking into account corporate reputation and identity,



To coordinate the necessary corporate communications with our internal and external stakeholders.



To provide information to the public on behalf of TPAO through the relevant communication channels,



To support the provision of representation in accordance with the identity and reputation of TPAO in the events organized or participated by our company at home and abroad,



To respect intellectual property rights, to comply with copyrights while using the information and documents produced by other persons, institutions, and organizations within the scope of our activities,



To carry out the necessary transactions related to the trademark and name rights of the company,

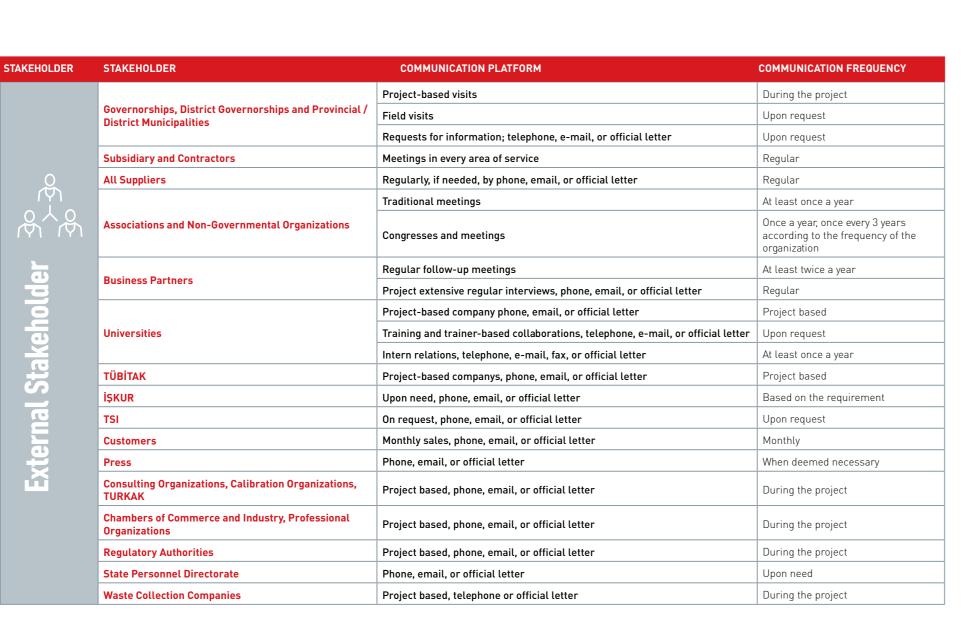


Internal Stakeholder

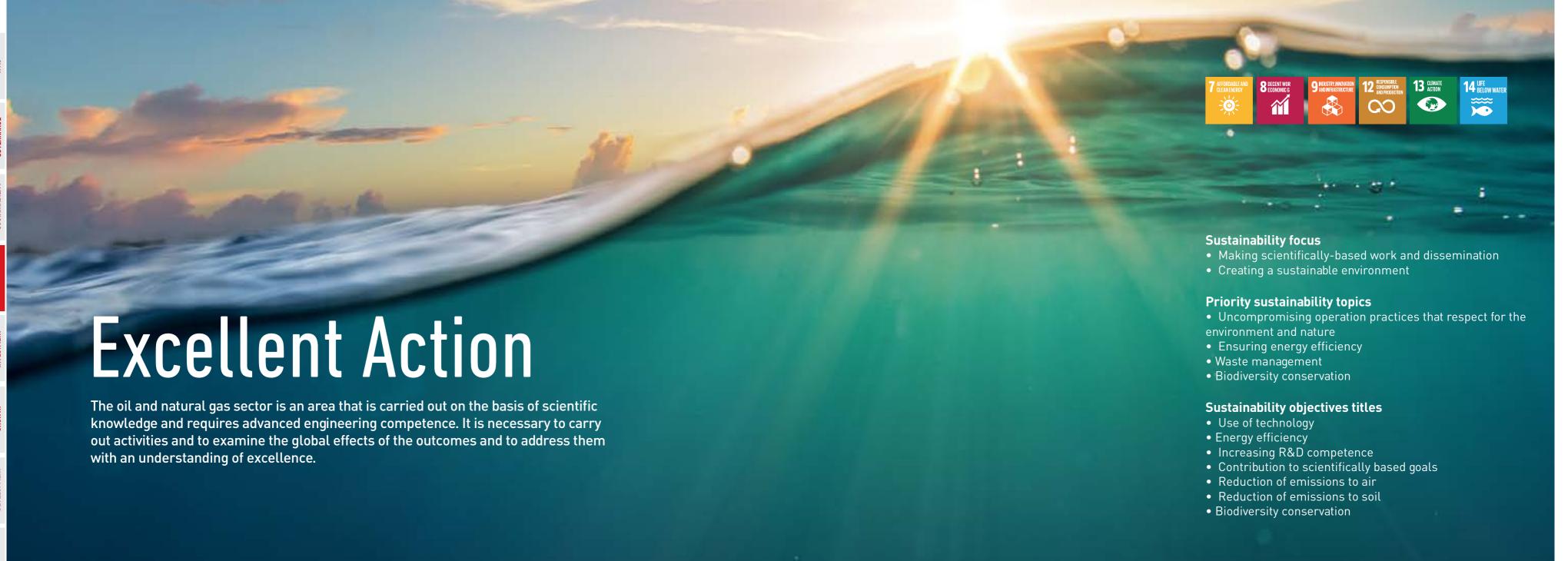


/PE	STAKEHOLDER	COMMUNICATION PLATFORM	COMMUNICATION FREQUENCY
	Company Employees	Corporate communication platform – Intranet	Continuous
		Notification emails	Weekly
		Social events	At least twice a year (Except for the pandemic process)
		Employee engagement survey	Once in a year
		Performance evaluation and feedback discussions	Once in a year
		Social media channels	Continuous
		Online corporate magazine	Monthly
		Guides	Regular, when an update is required
		Public Relations, Press & Publication	If necessary
		Website	Regular, when an update is required
	Union	Collective labour agreement negotiations	Once in 2 years
	Executive Management	Quarterly evaluation meetings	4 times a year
		Year-end evaluation meetings	Once in a year
		Unit managers meeting	Weekly
		Other digital media	Continuous

STAKEHOLDER	STAKEHOLDER	COMMUNICATION PLATFORM	COMMUNICATION FREQUENCY	
<b></b>		Social media channels	Continuous	
	Public / Society	Traditional media channels	Upon request	
		Website	Upon update	
		EIA report process	During the project	
<b>从外</b>	Presidency	Events	Upon request	
		Meetings	Upon request	
		Presentations	Upon request	
<u>6</u>		Informational notes	Upon request	
cehold	Ministry of Foreign Affairs	Project presentations	Upon request	
	Grand National Assembly of Turkey	KİT commission meetings	Once in a year	
		Budget negotiations	Once in a year	
70	Audit Court	Audit reports	Once in a year	
S	Ministry of Energy and Natural Resources	Annual reports	Once in a year	
		Project information presentation and / or reports	Project based	
External Stakeholder		Informational notes	Upon request	
		Speech notes	Upon request	
		Digital shares	Upon request	
	Turkey Wealth Fund	Phone, email, or official letter	Upon request	
	Ministries and State Center Organizational Units	SSI Transactions, in writing	Regular	
		Project Based; phone, email, or official letter	During the project	
	Other Public Institutions	Phone, email, or official letter	If necessary	
	Force Commands, Gendarmerie General Command	Based on the projects, with Air, Land and Maritime Command and the Gendarmerie, in writing	During the project	
	Administrative Courts	In the current litigation processes, in writing,	Regular	
	Banks	Telephone, e-mail, or official letter within the framework of business and transaction requirements	Regular	











### **R&D Center**

TPAO R&D Center was established in 1971 between our company and the United Nations Development Program (UNDP) with a project aiming to establish an "Oil Research and Development Center". On 9 August 1974, TPAO started its activities under the name of "Research Center Group Presidency" with the decision of the Board of Directors. It serves with increasing momentum in the 46<sup>th</sup> operating period.

TPAO R&D Center is a solution center for technical, operational, and scientific problems of national and international companies, institutions, organizations, universities, and units operating in the oil and natural gas sector. It is the hub for looking for a way to predict the future and prepare for it.

TPAO R&D Center jointly develops strategic R&D projects as well as meeting the analysis, test and evaluation demands of its stakeholders. It mentors its external stakeholders in the processes of obtaining laboratory accreditation, establishing a new laboratory, obtaining an R&D Center registration certificate, operating as a referee laboratory. It continues to transform its development-oriented approach into innovative services. It shares this scientific and technical knowledge through consultancy and vocational-technical training services, scientific and academic activities.

In accordance with UNDP Global Goals for Sustainable Development-2030, UNDP continuously increases its technical capacity with more than 500 analysis and test methods with 142 analytical devices in 27 laboratories equipped with advanced technology in line with the objectives based on supporting inclusive and sustainable industrialization and strengthening innovation by establishing durable infrastructures. For this purpose, in 2020, 11 new devices included the test system in their inventory.

# National, International Certificates, Standards, Scopes

Well Control Training, one of the training services, has been provided separately and accredited by the training program, trainer, training center, "International Well Control Forum (IWCF)" since 1997. As the first accredited center in Turkey, certified, simulator-applied courses with international validity are organized.

Although the scope of laboratory services varies every year, since 2006, it has been accredited by the Turkish Accreditation Agency (TURKAK) according to TS EN ISO/IEC 17025 standard. In addition, analysis services in the X-Rays Laboratory are provided as the first and only accredited laboratory in Turkey.

The Ministry of Industry and Technology has registered project activities with R&D and designed content and qualifications since December 2015, and 100% of them have been established with public capital and carried out as the first R&D Center in Turkey.

The sustainability of documented activities was ensured in 2020 by successfully passing the necessary internal and external audits.





### **R&D Center Activities in 2020**

TPAO R&D Center continued its activities in 2020 with increasing momentum with its practical, theoretical, conceptual, technical content and quality.

R&D Project executed

R&D Project completed

Accredited Analysis 36

Laboratory

27

Scientific/Technical/Applied Training Program

Well Control Training Center International Well Control Forum Standards: Opened Courses

R&D Project planned

Accredited Laboratories

Trained Persons 118

R&D Project put into practice

### **Performance of R&D Center**

Current Studied & Reported Exploration/Appraisal/Production Well

Prepared Drilling Program-Well

Total Number of Persons Trained

Sedimentological, Biostratigraphic Geochemical Analysis 12,383

Total Cement Design Performed 1,834

Prepared article, communiqué, poster

Total Analysis performed 44,739

PVT Test Performed on the Sample

Onshore and Offshore Geological Field Work (Man/Day)

416

Drilling Fluid Operations (Well)

Test Performed on the Plug 1.084

Drilling Fluid Operations Tracking on Field (Man/Day)

1,593

Cement Design (Well) 109

Analysis performed for the wells drilled in previous years

2,622

PVT, Corrosion and Acidification Works in the Field (Man/Day)

164

Acid Design (Well)

Total Analysis Performed 88,664

55

### **R&D** Center

In 2020, TPAO R&D Center increased its laboratory test, analysis, device, technical capacity, and capability:

- Concurrent geological monitoring of all exploration wells drilled in the Black Sea and the Mediterranean Sea, including the Tuna-1 well that resulted in discovery, was carried out in mobile laboratories on Fatih and Yavuz drillships.
- Proppant, quality control tests have been developed.
- With the purchase of a new XRF device and the upgrading of the XRF device with the new technology, the measurement precision of the elements has been improved.
- The portable XRF device has also been used for elemental analyses in the field.
- Within the scope of three-axis rock mechanics tests, domestic production automatic pressure supply system was used for lateral pressure applications and used in the tests.
- With the supply of ultrasonic probes, stable dispersions and emulsions related to nanomaterials have been prepared.
- A new microwave melting device has been purchased, and we have begun sample preparation procedures to be performed for analysis in samples such as rock and soil with higher quality.
- With a digital surface tension meter device, we have begun carrying out the quality control tests of the additives used in acidification operations more precisely, and their evaluations have started to be more accurate.

- With the Rockeval-7S device, the source rock potential and organic sulphur content were determined in rock samples.
- With the GC-MS/MS device, high precision biomarker analyses required in oil and source rock correlations have been performed.
- Measurement accuracy has been increased, especially in plug samples with low permeability values, by taking a CMS-300 tester.
- An orbital platform shaker device has been taken to remove drilling sludge chemicals from rock samples.
- In 2020, TPAO R&D Center prepared a total of 23 publications, 16 of which were communiqués and 7 articles, to share and present its knowledge and technological gains in scientific and academic activities.

#### **Our R&D Projects**

TPAO R&D Center has developed a total of 89 R&D projects, 55 of which were completed, 17 of which was approved and planned to start, 17 of which were ongoing, in the 2016-2020 activity period, where R&D project activities are registered by the Ministry of Industry and Technology.

In line with the 2019-2023 strategies of our company TPAO R&D Center follows R&D strategies that reveal the potential of hydrocarbon in Turkey's onshore & offshore, direct oil, and natural gas exploration, bring innovation, develop unconventional technologies that increase oil and natural gas production. Particular emphasis ensures that their strategies are aligned with the United Nations Development Programme, Goals for Sustainable Development-2030.

R&D and design projects and activities are carried out in accordance with the provisions of Law No. 5746 on the Support of Research, Development and Design Activities and the Implementing and Audit Regulation on the Support of Research, Development and Design Activities.

All activities related to the acceptance, execution, monitoring, evaluation, finalization, reporting, closure and rewarding of R&D and design projects; regulation and protection of financial, commercial, intellectual, industrial, and other legal rights are carried out by adhering to the R&D and Design Activities Implementation Procedure of Turkish Petrolleum Corporation. This procedure was revised in 2020 and has responded to current requirements and have content and quality. In the epidemic conditions, work opportunities have been expanded.

The R&D Center project portfolio consists of projects for scientific-technical innovation, invention, product development, process improvement, renewing and expanding an existing business, developing technologies with the potential to create new jobs, and localization.



# **Our R&D Projects**

In 2020, 28 R&D projects with the following information were carried out within the scope of TPAO R&D Project Portfolio. The results of 8 of these R&D projects have been implemented through information-technology transfer in field studies and applications. These contributions to the field activities of our company are summarized

- With the Formation Pollution Project, the "FLO-THROUGH" application was carried out in two wells with the results obtained.
- As a result of the tests and investigations carried out according to the High-Pressure and High-Temperature Drilling Fluid Design Project, chemicals with positive effects in applications have been identified.
- Within the scope of the Geochemical Evaluations Project to be carried out by Removing offshore Drilling Chemicals from Rock Samples, the technique of removing drilling sludge chemicals from rock samples that adversely affect source rock analyses has been developed and healthier and more reliable source rock analyses, primarily offshore wells, have been provided.
- In the Development of a New Emulsion Acid System with the Use of Surfactant Project, the application phase has been reached.

- The Source Area (Provenance) Project of the Black Sea Myo-Pliocene Period and the Sediments Carried Today will be completed, and the obtained data will be used in the Prospect evaluations in the Black Sea
- Porosity calculation over the thin section image developed in the Carbonate Pore Facies Modelling Project; permeability calculation method; pore size distribution calculation methods have been used in the currently studied and evaluated wells.
- The decision has been made to move the R&D study titled "Design, Synthesis and Characterization of Polymer Gel System for Low Permeability Oil Reservoirs", which has been completed as an EOR study with "Water Shutoff" target, to the pilot field

• Within the scope of the Palinostratigraphic

- Characteristics and Biostratigraphic Modelling Project of the Formation in South-eastern Anatolia Platform, the fossils of the Formation in source rock feature in the wells drilled in Diyarbakır Basin were studied in great detail and biozonations were obtained. In this way, the regional spread is monitored with biozones. In the newly drilled wells, the Formation was divided into biozones and studied in more detail
- Another indicator of the importance, priority and acceleration given to R&D activities has been R&D expenditures.

#### **Budget Allocated to R&D and** Innovation by Years (TL)

2018

1.6 million TL

2019

16.9 million TL

2020

24.4 million TL

Regarding R&D expenditures, these increases in the last two years have formed the basis for obtaining additional incentives in 2019 and 2020 activity periods. Since the share of R&D expenditures in total turnover increased by at least 20% compared to the previous year, 50% of the increase amount of R&D expenditures made during this year (2020) compared to the previous year was added to the tax deduction amounts

# Our R&D Quality Policy

In line with the vision, mission, and values of our company TPAO R&D Center has adopted the principle of quality in scientific-technical innovation, invention, product development, process improvement, renewal and expansion of existing business, development of technologies with the potential to create new jobs and nationalization activities.

#### For this purpose, we undertake:



To continuously increase the quality level by giving importance to training and teamwork in order for all personnel to become competent and able to use their talents at the highest level and to learn quality system documents, to apply policies and procedures during their work,



To conduct analyses according to nationally and internationally accepted standards and methods, to closely monitor technological developments for these analyses,



To comply with the requirements of TS EN ISO/IEC 17025 "General Requirements for the Qualification of Experimental and Calibration Laboratories -December 2017" standard.



To adhere to the principles of confidentiality and impartiality; to protect intellectual and industrial property rights,



To manage all data obtained during the performance of experimental activities within the framework of legal obligations,



To increase the quality of services offered with a continuous improvement approach,



To create a healthy and safe working environment for its employees within the framework of environmental protection awareness and to ensure employee satisfaction.



To develop, execute and finalize R&D projects that will create added value in our company and country and contribute to knowledge.



59

# **Environmental Management**

As humanity, we are in a very critical decade as the foundation of our future. In the case of global cooperation and solidarity, a great performance is put forward in every field and sector in order for the world to have a more liveable tomorrow. As with all performances, it is a fact that the activities of protecting the world and the future also need the power to do business, that is, energy.

The sector we operate in provides humanity with Urbanization. Studies are carried out to evaluate access to more accessible energy and a very important raw material used in hundreds of spheres the economic development, also possesses scientific knowledge that will enable all its activities to maintain the balance of the planet at every level.

The understanding of doing business based on science is an accumulation of knowledge that will enable the energy and raw materials needed by humanity to be explored, produced and used with the same responsibility through the entire value chain.

This knowledge, which will ensure the environmental compatibility of our entire value chain, is developed, and shared both while performing our activities and improving our stakeholders' activities in our entire value chain.

In our company environmental issues are followed up with 19 Environmental Engineers/Environmental Officers as of 2020. The Environmental Management Unit is established in the Corporation to provide legal follow-up of all environmental issues arising from

the compliance of our activities with environmental legislation, to ensure that all necessary measures of life. Our sector, which has a critical importance in are taken in this direction, to assess environmental risks before operations, to implement pollution prevention and reduction studies, to reveal and report environmental performances.

> TPAO, which has ISO 14001 Environmental Management Certificate since 2014, carry out business in accordance with the standards.

> In TPAO workplaces, considering the parties that are or may be affected by our activities, the environmental dimensions of our activities are evaluated with a lifecycle approach, and environmental impacts are revealed. Studies are being carried out to minimize these environmental impacts to an acceptable level and ensure the continuity of control measures.

Within the scope of Environmental Permit and License Regulation, Temporary Activity Certificate/ Environmental Permits are obtained for our facilities that impact the environment through the "Environmental Management Unit" established within our activities before the Ministry of Environment and the Agency. The Environmental Permit Certificates

previously obtained are followed, and the relevant procedure is implemented.

In accordance with the studies of the Environmental Impact Assessment Regulation; the relevant Units prepare project Presentation Files for our search and production activities, and the "EIA Not Required Certificate" is obtained from the Provincial Directorates of Environment and Urbanization.

In order to achieve our core objectives, it is of utmost importance for us that our employees have sufficient knowledge of their work areas. In this context, our employees are periodically provided with "General Waste Management Training", specific waste management according to their work areas (Medical Waste Management Training, Waste Electrical and Electronic Equipment Management Training, Non-Hazardous Waste Management Training, etc.), "Environmental Protection Consumables Training" for our personnel participating in field activities. and "Safety Data Sheet Training" for our laboratory employees due to their chemical use.



# **Waste Management**



As TPAO, we know that in our process of creating a value for the benefit of humanity, there may be residues that will not be presented with this value but have a value in all circumstances. Therefore, our waste management practices have the understanding to utilize these wastes that occur while producing. At the same time, our waste management covers both our main activity wastes and our social activities required while performing these activities.

Hazardous wastes generated in the Campus Area are taken to the Waste Temporary Storage Area and stored separately in appropriate containers according to their types.

Hazardous wastes (waste chemicals, oil spills, etc.) generated as a result of R&D Center Laboratories activities are collected separately in containers suitable for the type of waste and taken to the Waste Temporary Storage Area.

Vegetable waste oils released as a result of Central Dining Hall and Local activities are collected separately and recycled. In addition, our staff can leave the vegetable waste oils generated at home to the "Vegetable Waste Oil Collection Points" at the entrances of the buildings.

In addition, the accumulation equipment specially designed for the waste batteries formed in the Campus Area is located in the corridors where the personnel can easily reach.

#### **Zero Waste Project**

Because we have fulfilled the provisions of the "Zero Waste Regulation" implemented by the Ministry by Environment and Urbanism, the "Zero Waste Certificate" was given to the Head Office and District Managements in 2020. Within the scope of Zero Waste Regulation, the current Waste Management Plan of the Head Office Campus Area

currently being implemented has been reviewed and necessary updates have been made within the scope of the Project. While Zero Waste System is implemented in our company

#### **Recovery of Waste Oils**

The work of mixing the waste oils generated in TPAO fields and workshops to the produced crude oil by 0.01% continues.

Data on the amount of waste oil mixed in crude oil is transmitted monthly to the Ministry of Environment and Urbanization. In 2020, 107.234 kg of appropriately qualified waste oil was mixed with crude oil and brought to the economy.

#### **Drilling Waste Management**

In order to minimize or eliminate the negative environmental effects of the wastes generated due to drilling activities, we continue with studies and pilot application preparations for dewatering of drilling interruptions and treatment of waste waters. Similarly, cooperation is being made with universities and private organizations to develop environmental studies in hydrocarbon exploration and production activities.

#### **Waste Pools Improvement Project**

In order to prevent environmental accidents caused by leakage, collapse, etc. in the waste pools

where drilling wastes are temporarily stored, improvements have been made in the locations and revisions have been made on issues such as the robustness of the pools, membrane quality, etc. With these studies, environmental accidents caused by waste pools were reduced in 2020.

#### **TÜBİTAK-KAMAG Patent:**

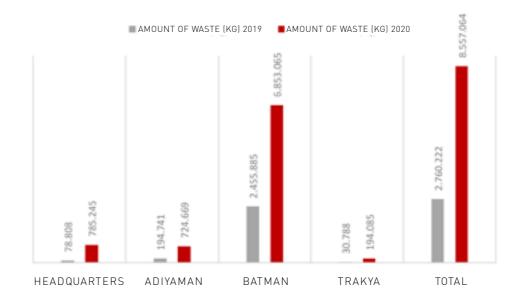
#### **Waste Water Management Project**

The patent of the "TUBITAK-KAMAG Oil and Natural Gas Production Activities Resulting Waste Water Management Project", which is a joint project of TPAO-ITU, was obtained from the Turkish Patent Institute on 04.11.2014 and the patent right is still in our Corporation as of 2020.

# Zero Pollution Unit (ZPU) in Drilling Vessels

With the "Zero Pollution Unit (ZPU)" in the Drillships, the ship drainage waters are not polluted or not accumulated as ship waste. Drainage waters formed in the ships are collected in the warehouses, the pollutants (oil, chemical, etc.) in them are separated in the system, the pollutants arising at the end of the process are sent to the shore for disposal, and clean water is discharged to the sea. In this way, the cost of waste disposal from drainage water is reduced by 90% and no pollutants are discharged to the sea.

#### **Amount of Waste Recycled**







#### **Environmental Benefits**

**5,141.48 kg** greenhouse gas emissions were prevented.

153,684.84 KWh energy saving was achieved.

raw material saving was achieved.

oil savings were achieved.

**405 trees** were saved from cutting.

**3,793 kg** contributed to the production of biodiesel.



# **Biodiversity**

Conservation and sustainability of ecosystem diversity and biodiversity hosted by ecosystems are vital for future generations. The ability to continue our lives and live in prosperity also depends on the services and products (soil, water, and nutrients, etc.) provided by ecosystems.

As in the whole world, the destruction of natural ecosystems has reached a striking level in the rate of rapid population growth, urbanization, industrialization, unsustainable production, and consumption habits in Turkey. While we are experiencing widespread ecological problems today, understanding the nature and the natural events and managing our ecosystem, services and products (freshwater, forest, steppe, etc. ecosystems) effectively and sustainably gains a great importance.

As TPAO family, we are working on the following issues within the scope of biodiversity conservation in all our activity areas;

- Preventing possible adverse effects arising from our activities, if any, and reducing them,
- Contributing to the conservation of biodiversity in the regions where we operate.

#### **Bioremediation**

One of the most important environmental pollution effects in oil exploration and production is the pollution caused by oil and its derivatives. This creates both economic and environmental problems.

Oil pollution, which is very common in the sea, underground spring waters and soil environment, and the resulting harmful compounds affect all living things in the ecosystem.

The consumption of soil and aquaculture products contaminated with petroleum products by humans creates health drawbacks even when the oil concentration in these products is very low.

Bioremediation is defined as the process of disintegrating long hydrocarbon chains into the final product carbon dioxide and water, and it is the most economical, easiest to apply, natural and soil recovery method known among soil, sludge, and tank cleaning methods.

The most important feature that distinguishes the bioremediation method from other methods is the elimination of hazardous waste in situ, under natural conditions and economically. Thanks to the bioremediation process, the risk of creating another hazardous situation by removing the hazardous waste is eliminated and no other chemical waste is generated by the cleaning method.

Within TPAO, the bioremediation method is used for the following;

- Recovery of contaminated soils
- Prevention of pollution on oil pipelines and around fuel tanks.
- Safe collection of wastes such as oil, oil, bilge, acid, etc. spread on land, sea, lake, or any water surface by preventing them from spreading to the environment quickly and effectively,
- For the purpose of biodegradation by rapidly absorbing all kinds of organic pollution spilled on hard surfaces, especially oil-originated hydrocarbons (oil, grease crude oil),
- Bioremediation product is used within the scope of prevention of slippery surfaces in terms of OHS in working environments.

In 2020, approximately 66,750 m<sup>2</sup> soil pollution was decontaminated by the studies within the scope of bioremediation.









# 6 CLEAN WATER AND SANITATION

## **Water Management**

In all fields where we operate, with the awareness that water resources should be protected, a water management approach that takes into account the responsible, effective, and efficient use of water has been adopted.

In TPAO, unnecessary water consumption is prevented by taking all necessary measures related to the water usage. As a result of the studies and improvements carried out:

since the woodland was increased and drip irrigation method was started in our campus of TPAO Headquarters in Ankara, water consumption was reduced by 10.1%.

The Trakya District Management Domestic Waste Water Treatment Plant, which was commissioned on May 15, 2010, was designed as a package type facility to treat domestic waste water from accommodation, social facilities and administrative buildings belonging to the District Management.

Capacity of the plant is  $120 \ m^3$  /day, and it operates with 100% efficiency.







# **Energy Management**

Like all human activities on the planet, energy is needed during the production of the raw materials, which are necessary for sustainable development. As TPAO, we understand that to provide the energy needed during our production activities in the most appropriate way and to use it in the most efficient conditions is of utmost importance.

It is our main principle to minimize our energy needs that will enable our activities to be carried out. Our energy management system, which allows us to realize this understanding of doing business, is at a maturity level that will contribute to the global knowledge of our sector.

The establishment of ISO 50001 Energy Management System for the efficient and effective management of energy, which is one of the important input sources of our company started in 2020.

### ISO 50001 Energy Management System Certification

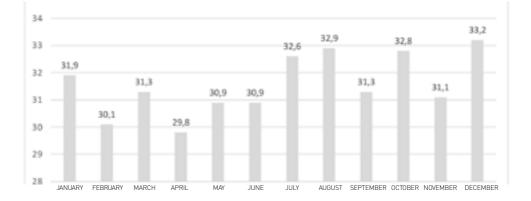
ISO 50001 Energy Management System certificate was obtained in 2021.

#### **Energy Efficiency in Production Activities**

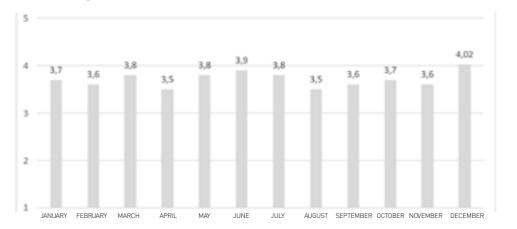
In 2020, a total of 379.4 million kWh of electrical energy was consumed in TPAO's oil and gas production fields. By the Energy Production systems established in Katin and Mudlu Sites, the amount of electrical energy produced from natural gas, which is our own production, was 45 million kWh.

Electricity Consumption in Production fields of TPAO and Electricity Production from TPAO Natural Gas in 2020 are shown in the tables on the right side of the page.

#### **Electric Consumption in Production Fields in 2020 (million kWh)**



#### **Electricity Production from Natural Gas in 2020 (million kWh)**



In 2020, 12% of the total electric consumption was produced from our own production, and this rate reached 19% in 2021.

## **Our Energy Efficiency Studies by Locations**

### **Headquarters**

The Solar Solar Power Plant is in use within the Turkish Petroleum Complex. The electricity of our Sitki Sancar building is supplied from this solar

The added value we create:

Installation of led luminaires with high energy efficiency in office block offices and corridors in our TPAO Headquarters

By this way, electricity consumption was reduced by using 36W armatures instead of 72W armatures. Electricity consumption decreased by 12.6% compared to the previous year. By converting 100 pieces of 400W Metal State Perimeter Lighting armature to 140W led armature in a way to give the same light flux, 65% saving was achieved.

As a company operating in the field of energy, we are aware of the indispensable value of energy for humanity. It is possible for a person to continue his/her individual and social life by having the energy to carry out every action. However, the use of surplus energy can put our present and future at great risk. As TPAO, our top priority is to ensure that energy is used efficiently and correctly and to encourage all our stakeholders to this understanding.

## **Batman District Management**

Energy consumption (electricity, natural gas, utility water) of our company facilities are monitored up to date and projects that will save costs are supported. Our employees are informed about Energy Efficiency. There is also a solar panel in the Batman District Management campus.

The added value we create:

## Variable Speed Drive

Faster, safer, and more efficient operation was achieved with VSD (Variable Speed Drive) without causing energy loss in order to operate oil production wells at the desired efficiency.

### **High-Efficiency Motors**

Energy saving has been achieved by selecting new high efficiency suitable engines in oil wells and stations in Batman Region Production fields.

## Maintained New Type A Efficient Transformers

Energy saving has been achieved from each transformer by selecting new high efficiency suitable transformers in oil wells and stations in Batman Region Production fields.

### **Energy Transmission Lines**

In Batman Region Production fields, energy transmission lines are replaced with new lines and energy loss and production loss are minimized. With the introduction of the 31.5 kV, Kapıkaya-Yemişlik Medium voltage line, which is approximately 25 km

long, in the Garzan area, both the line losses have been reduced and the loss of oil production due to energy interruptions has been minimized

### **Heating System**

Within the framework of the improvement project carried out in 7 different heat centers in TPAO Batman District Management site, it has been supported with renewable energy based solar collectors and modern heating system has been commissioned Thus, a much more environmentally friendly green project has been implemented by significantly reducing the heating and sanitary hot water costs of the enterprise.



## **Our Energy Efficiency Studies by Locations**

## **Adıyaman District Management**

Within the scope of energy efficiency studies, low-loss equipment is provided instead of high-loss equipment (transformer, electric motor, etc.), variable speed drive (VSD) and wells and pumps are energized to ensure that the equipment operates at optimum values and thus energy saving is achieved.

### The added value we create:

In order to ensure the uninterrupted and lossless use of existing energy, monoblock breakers have been installed in energy transmission line electricity network distribution facilities over the years, uninterrupted supply of energy and rapid intervention to failures and prevention of production losses have been carried out.

In addition, energy costs have been reduced by providing cheaper and better-quality energy from the electricity received from the distribution companies by carrying out connection studies directly to the TEIAS transmission system for cheaper and betterquality electrical energy supply.

In order to see the effect of the energy efficiency studies of Adıyaman District Management for the last 5 years, energy consumption and gross production data by years have been examined. In the analysis, it has been found that the energy consumed per gross production has decreased by 7.42% in the last five

### Power Transformer Revisions

In 2020, the revision works of 21 power transformers used in the production fields of Adıyaman District Management and completed their economic life have continued. It has been calculated that annual 102.273 kWh energy saving will be achieved by reducing electrical losses of transformers. The revised transformers have been commissioned in the camps and production wells. In addition, operation, and maintenance activities such as oil testing or oil disposal were not required since the transformers were made hermetic, and operation and maintenance costs of the transformers were reduced.

## Placing Monoblock Root on Energy Transmission

KÖK (Measurement Cabin with Breaker) buildings are established to detect the failures occurring in Energy Transmission Lines in short periods of time and to reduce the areas affected by failures.

Remote Monitoring System is installed in existing KÖK and newly installed KÖK buildings and ENH failures and breaker conditions are monitored remotely. With the breaker monitoring panel installed in the Karakus camp electrical shift room, it is ensured that the failures are intervened as soon as possible.

## Energy Saving with Variable Speed Drive for Waste Water and Oil Production Pumps

It is aimed to save energy by using frequency converter in Wastewater and Oil Pumping systems located in Adıyaman District Management production fields. For this purpose, a total of 5 VSDs (Variable Speed Drive) were first provided for Karakuş and Cendere wastewater and oil pumping systems in 2019. An annual energy saving of 1.6 million TL has been achieved

## Trakya District Management

Electrical energy consumption is monitored up to date. Monthly consumption values of the fields are recorded, and studies are carried out about energy demand projection.

### The added value we create:

### **Energy Analyzer Installation**

Energy analyzer installations have been made on all fields where electrical energy is available and instantaneous voltage, current and power data can be monitored from SCADA environment. By this way, losses have been prevented with early and correct intervention in cases such as failure.

## Variable-Speed Drive

The large, powerful, and inefficient motors in the oil production pumps have been replaced by lowpower and newer motors. SRP, PCP and waste water motors are operated with VSD (Variable Speed Drive). and electric motors are operated in a more accurate manner

## Change of projectors

In oil production pump (SRP) installations, actions are taken by observing the balance between the pump arms and the tool weight, and more loading of the electric motors is prevented. In this way, the operation was provided with less power demand from the network.

### Transformer Replacement

Metal projectors in the fields have been replaced by led projectors. More lighting than usual is provided with 50% lower power demand.

### Installation of SCADA System

According to the demand for electrical energy, it has been determined that transformers with measuring devices are periodically performed. excessive power are used in some areas, and these transformers have been replaced with transformers measurements at both production and sales points. with optimum power. In this way, transformer losses are reduced, and more efficient A+ transformers are of the fluid tanks.

## Stand by Generators

SCADA systems have been installed on all wells and well data can be tracked instantly from the computer environment. By this way, production losses have been minimized by taking early and correct actions due to the occurrence of alarms in case of failure.

### Gas Measuring Devices

Oil production fields have been backed up with standby generators, and disruption in oil production has been prevented with the loss of electricity.

### Heat Insulation of Fluid Tanks

Annual maintenance and calibrations of gas Losses have been prevented by making correct Savings have been achieved with the heat insulation





## **Offshore Operations**

We are working with all our strength to add the value of offshore resources into the economy of our country. Within the framework of our offshore business plan, our primary goal is to reveal the oil and natural gas potential of our country's offshore areas with both deep water and shallow water drilling in the Mediterranean and Black Sea.

Fatih Drillship, Turkey's first national drillship, participated in the TPAO inventory in 2017. Fatih Drillship, which was equipped with the Managed Pressure Drilling (MPD) system after the necessary maintenance works were carried out, started drilling Alanya-1 deep water well on 29 October 2018 with full national resources for the first time in our history. With the participation of the Yavuz Drillship in the TPAO inventory in 2018, our deep water exploration capabilities increased even more.

In accordance with our national energy policy, TPAO continues to work in the Blue Homeland in order to reveal the hydrocarbon potential of our country with our ongoing offshore drilling.

Taşucu shorebase was established where logistic support of our deep water Drilling Operations carried out in Mediterranean Sea was provided. 2020 was a year in which we strengthened our logistics infrastructure in this field. Our deep water drilling activities were supported by national facilities from this center uninterruptedly and cost-effectively.

Despite all the negative impacts experienced due to the pandemic, 2020 was recorded in history as a year in which successful results were obtained in the hydrocarbon sector on behalf of TPAO and our country. Sakarya Gas Field, which was discovered by TPAO in the Black Sea, is one of the biggest discoveries made all over the world in 2020 and has also been the largest hydrocarbon discovery in our country's history to date. With goals such as continuing this success, strengthening the country's economy, and reducing our foreign dependence on energy, TPAO continues to carry out exploration and production activities of high strategic importance.

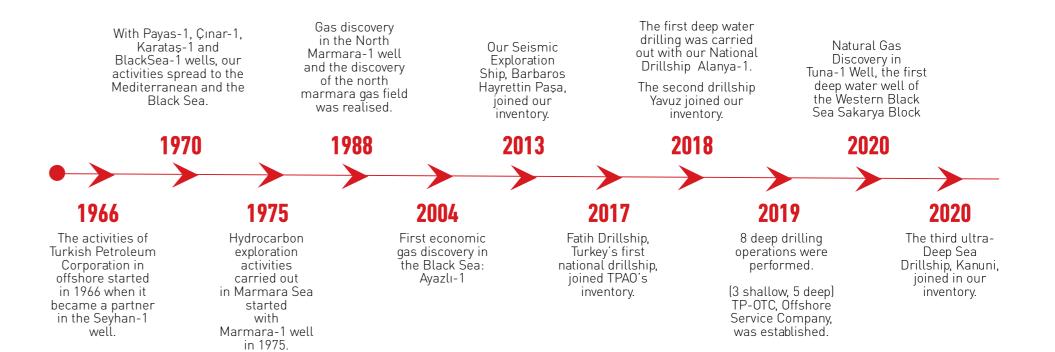
TPAO, as an environment friendly national oil company, carries out all of its operations in accordance with the international rules and regulations by giving a particular importance to occupational health and safety.

Despite all the negative impacts experienced due to the pandemic, 2020 was recorded in history as a year in which successful results were obtained in the hydrocarbon sector on behalf of TPAO and our country. Sakarya Gas Field, which was discovered by TPAO in the Black Sea, is one of the biggest

Our aim in all these activities is to discover hydrocarbon potential in our blue homeland and contribute to reduction of our country's dependence on foreign energy.

In accordance with the national energy policy, TPAO continues to work in our blue homeland to reveal the hydrocarbon potential of our country with our ongoing offshore drilling activities.

## Offshore Operations Milestones





## **Localization Studies in 2020**

Within the scope of the localization project; Yavuz Drillship was supported with the first domestic containers with international certification.

The majority of the crew of the Support Ships consist of Turkish citizens and all of the ships are managed by Turkish captains.

In addition, training on survival in sea is carried out at Istanbul Technical University (ITU), and BOSIET- Turkey FOET training courses are given to our personnel by signing a protocol with ITU.

The BOSIET-FOET Training courses organized for the personnel working on drilling and seismic vessels and offshore platforms of our company have international certification.

With these training courses, organized entirely with domestic and national facilities, an important competence will be gained in the training of human resources to work in the oil and natural gas industry of our country.

## **Localized Values**

- Deliveries of the first domestic production J55 Quality 13 3/8 diameter drilling storage pipe used in land wells were completed.
- Domestic Production Explorer-1 ROV started to be used actively.
- Domestic production and factory testing of Electric Submersible Pumps (ESP) used in oil production was completed.

- Domestic production of Dew Point Control Plant, Hydrostatic Test Unit and Slug Catcher equipment was started.
- The production of 24 chemicals used in cementing. acidification and fracturing operations was localized.
- Localization was achieved in some work positions on Fatih and Yavuz drillships.
- Bosiet and Foet training courses were provided in

In February 2020, "National Technologies in the Petroleum Industry" PEMT' 20 meeting was held with the theme of "We are Enough For Each Other".

## Thanks to PEMT'20

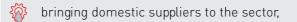
Active involvement of domestic producers in the National Energy and Mining Policy,



Creating a road map by bringing together the stakeholders.

## In the Petroleum Industry;

Increasing the production and use of domestic technology,





Increasing cooperation in activities and procurement processes, are aimed.







**Domestic Exploration Activities** 



Oil and natural gas resources, that constitutes a significant part of primary energy consumption in the world and in our country, are an indispensable element of our lives that are needed at every point of modern life.

The raw materials are essential for the continuity of economic development and our daily lives. The absence of these resources indicates the strategic importance of oil and natural gas in the determination of the "Growing Turkey" vision and policies.

In 2020 exploration investments were realized mainly in offshore and in other regions, especially in Thrace and South-Eastern Anatolia regions.

Seismic and geological studies have revealed significant findings about the offshore hydrocarbon potential. Additional 2- and 3-dimensional seismic data acquisition programs were carried out in the required areas in order to describe the prospects, onshore and offshore (Black Sea, Mediterranean, Aegean Sea).

TPAO conducted extensive exploration activities in order to determine onshore and offshore hydrocarbon potential and to serve the national economy.

- As a result of drilling and well completion activities, TPAO discovered 35 oil wells and 11 gas wells in 2020
- In 2020, 37 million boe reserves were added through new onshore discoveries.
- Within the scope of our exploration activities, gravity-magnetic and remote sensing studies continued in 2020.
- The Contract for the Coal Bed Methane (CBM) Pilot Project made between the Turkish Hard Coal

Enterprise Institution and TPAO in the Concession Site of the Turkish Hard Coal Enterprise Institution was signed on 13.04.2020. The geology and geophysical data of the region in the TTK, MTA and TPAO databases were compiled, the necessary technical study was completed, and underground models and correlations were created.

• Our exploration, production and research license number, 355 in 2019, reached to 369 in 2020.

### **Unconventional Investments**

The process of using techniques other than the conventional method for oil production or extraction is known as unconventional in the sector.

The main objective of TPAO is to contribute to the goal of reducing our country's energy dependency to the foreign resources. The aim of its studies in this field is to successfully apply unconventional methods in our country and to add the value of unconventional resources to the Turkish economy. The activities of TPAO, which are concentrated in the South-Eastern Anatolia and Thrace Regions, continue to be successfully carried out today.

Hydraulic fracturing operation was performed in 3 wells in 2020 within the scope of unconventional projects

Ensuring the continuity and sustainability of healthy growth needed by the local and global economy depends on the availability of the resources to be needed. TPAO has a rational understanding of development that is compatible with the growth that humanity needs.



# **Domestic Production Activities**

As a result of the activities in line with our strategies, it has been a year in which approximately 37 million boe reserves have been added, and production records have been broken with discoveries in onshore in addition to offshore discovery in 2020.

Since 1999 the highest daily production was noted as 56,084 boe on 15 December and the 20 years highest monthly average domestic production 54,024 boe was also recorded in December. Moreover a historical record has been broken with daily 185

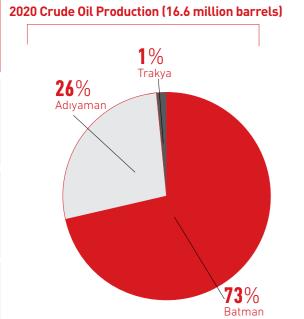
thousand barrel oil equivalent total domestic and international production.

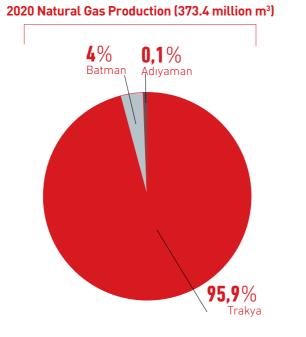
The wellhead production the average wellhead rate of production from the production wells increased approximately 2 times of the previous year. The number of reserves added by exploration in 2020 was approximately 37 million barrels, 6% above the target of 35 million barrels.

### **Production Enhancement Activities**

Within the scope of production enhancement and field development activities, drilling of new production wells and re-completion of the old wells were carried out intensively. 1,03 million barrels of additional production was provided from 38 new production wells commissioned in 2020. As of the end of 2020, the contributions of the new production wells to production increased by 84% compared to the 2019.

In order to increase production of the old wells, recompletion operations were carried out in 130 oil and 20 natural gas wells and by this way an additional 250 thousand barrel oil eq. was produced in 2020. Moreover polymer gel operation was performed in 13 wells and acid cracking operation was performed in 11 wells. In Karakuş-47, a horizontal well, the daily oil production was recorded as 1,300 barrel.







# **International Activities**

8 DECENT WOR ECONOMIC G

Concentrating its investments abroad, especially in the Caspian Region and the Middle East, TPAO carries on its activities in Azerbaijan, Iraq, the Turkish Republic of Northern Cyprus (TRNC), Afghanistan and the Russian Federation in order to ensure the energy supply security of our country.

2020 average daily international production 94,993 BOE per day

2020 International total production 34.8 million BOE

**International** 

**Projects** 



In terms of operational performance in 2020, the highest domestic and international total production level in the history of TPAO was reached. Increased international production has a significant share.

New exploration fields were acquired in the Mediterranean within the scope of the Exclusive Economic Zone (EEZ) Agreement with Libya in 2020.



In our company the information of the supplier companies is stored in the Supplier Registration System. The evaluation procedure of the suppliers is carried out by the relevant stakeholders within our corporation prepared according to the system containing certain criteria and the Supplier Performance records are kept on the system and in our company as the original document.

Within the scope of the project of localization of the products procured from abroad in 2020, there were 42 different products. These products have been welcomed and nationalised by domestic companies, and a cost advantage of approximately 22% was obtained.













## **Supporting Development**

We have a fundamental responsibility for contributing to the social development. While supporting the national economy, we have carried out social responsibility projects that create value for the society.

## **Contribution to Local Economy**

TPAO's primary goal is to ensure the oil and natural gas needed by the country's economy by domestic resources and to minimize the energy dependency by new discoveries. TPAO takes this goal one step further and has an impact on a wide economic and social field by providing direct and indirect contributions to the country's economy with its local procurement practices, support for education, sports and tax payments.

TPAO made a direct contribution to the country's economy by paying 1.8 billion TL for legal obligations in 2020.

Within the scope of TPAO activities, employment is created in our Adıvaman. Batman and Trakva District managements and a contribution is made to the local economy. TPAO carries out social responsibility projects in the fields of sports, education, environment, culture-art, and health in order to fulfill its social responsibility.

## **Contribution to Society**

In addition to carrying out its activities under its responsibilities. TPAO leads social investments with a sense of responsibility to make a positive and permanent impact on the demographic structure in the regions where they operate and create values in various areas.

Our District Managements in Adıyaman, Batman and Trakya also play an important role in developing the economic and social life of the regions.

## Training

TPAO Batman District Management has pioneered the establishment of the first examples of education in its own campus as well as economic and labor contributions to Batman.

In addition, our support for the schools affiliated with MEB continues, and a school called TPAO Vocational and Technical Anatolian High School was built in Lüleburgaz with the latest grant and continues to provide education and training.

## **Tablet Aid to EBA Support Points**



TPAO Batman District Management donated tablets to schools for EBA support points established in Sabri Ülker Primary School and Cengiz Topel Secondary School with the social responsibility to minimize the negativities experienced by our country during the pandemic process. With the EBA Support Points established to provide students who do not have the opportunity to study from EBA during the ongoing distance education process due to the global pandemic, students have thus found the opportunity to study and participate in live lessons.



Wrestling Athletics | Basketball

Batman Petrolspor Amateur Club, which was founded in 1960 in order to train successful athletes and to provide local athletes to the sports community of our country, to encourage our young people to sports, to prevent them from being used in regional and global traps, and to make a positive contribution to the socio/cultural and sports development level in the South-eastern Anatolia region, was founded in 2010 and has been carrying out its activities in amateur branches by being supported as an association.

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Since 2014, it has been active in Infrastructure. Football, Wrestling, Athletics, Basketball, Volleyball and Tennis branches.

In addition to sports education, efforts are made to prevent our young people from acquiring bad habits and to raise them as individuals beneficial to their homeland, nation, and society.

In our infrastructure building with 24 bed capacity located in the campus of our District Management; accommodation and food service are provided free of charge to our successful athletes. In addition, one meal a day is provided free of charge to our other successful athletes who continue their activities as licensed athletes in our Batman Petrolspor Club. In addition, it contributes to the physical development of our athletes.

**Tennis** 

**78** 

The work has begun to bear fruit in a short time and 25 wrestlers. 20 in athletics. 7 wrestlers and 1 athlete have been added to the Turkish Olympic Center. In the Wrestling Branch; the number of World Championships medals is 1, the number of World third place medals is 3, the number of European Championships medals is 1, the number of European third place is 2. the number of Balkan Championships medals is 2 and the number of



In the branches mentioned above, a total of 858

athletes, 753 licensed and 105 unlicensed between the ages of 8-18, receive sports training in our Club

Balkan second place is 1. in the Athletics Branch: the number of Mediterranean Games medals is 3, the number of European third place is 1, the number of Balkan Championships medals is 3, the number of Balkan second place is 1, the number of Balkan third place is 1 and the number of International Individual Medals is 19.

So far, 110 Turkish championship medals, 75 Turkish second-place medals and 60 Turkish third-place medals have been obtained in Athletics and Wrestling branches, and 39 team trophies, 17 international trophies have been received in the Athletics branch. With the awareness of social responsibility, Turkish Petroleum Corporation pioneers to open its campus and enable young people, children, and their families to be beneficial individuals and gain qualifications.

## Environment and Health: Blood Donation Campaign to the Red Crescent

The mass blood donation campaign was conducted regularly every year in our District Managements in 2020 by taking the necessary measures.

## **A Sapling Thousand Lives Project**

Within the scope of a Sapling Thousand Life Project, our afforestation activities were carried out by TPAO District Managements.

## **Community Investments**

TPAO Batman District Management provides opportunities for the construction and repair of school police stations, donations to Batman Petrol Spor and the use of infrastructure facilities. It makes social investments in provinces, districts, and towns with asphalt grant aids.

TPAO Batman District Management contributed to EBA support programs for social development, teasugar-food aid for condolence meals, food aids were provided in Ramadan, and 850 amateur Petrolspor athletes were supported.

TPAO Batman D	istrict Management Social Investments
Contribution to Local Economy	841 million TL was contributed to local economy.
Economic Benefit Created for Suppliers	Batman District Management has provided <b>8.5 million TL</b> benefit to Batman companies.
Amount Spent for Infrastructure and Surface Facilities	In order to improve the system, to invest in occupational safety, to increase the production capacity and to discover new production areas and to bring them into the economy,  712 million TL has been invested. For maintenance and repair works of existing facilities  62 thousand TL has been spent.
Support for Amateur Sports	3.2 million TL
Support to Provincial and District Municipalities	68 million TL
For Social Activities	220 thousand TL











## **Our HSE Activities**

In line with the Integrated Management System (IMS) policy, our procedures and instructions have been created in order to carry out all operations safely, protecting employee health and environmentally friendly; they are followed in our business processes.

Our "Occupational Health and Safety and Environment Board" which forms the basis of OHS and Environmental studies, is important in ensuring employee participation in the workplaces and obtaining their opinions. Occupational Health and Safety Board Meetings were held periodically in our Head Office and District Managements according to the hazard class of the workplaces to discuss the measures on occupational health and safety and follow up the decisions taken.

In addition to the basic occupational health and safety training courses, Occupational Health and Safety Awareness Training Courses were provided to our senior managers and chief/engineer staff in order to increase our awareness as a corporation.

In addition to the on-the-job training given to our newly recruited personnel in our corporation, foreign personnel who make department of business unit changes or are assigned to work for a short period have been informed about occupational health and safety issues, including job-specific hazards and risks.

The workplace audits have been carried out within the scope of the occupational safety specialist authority and responsibilities specified in audit procedure and occupational safety legislation in the Head Office and District Managements; inspections, OHSE audits, internal audits, external audits, and field tours were provided. The findings have been recorded, reported, and communicated to the relevant persons. The findings and the improvement recommendations, determined as a result of the audits were carried out according to the "Corrective and Preventive Action Procedure".

Notifications made by our personnel regarding occupational health and safety via QDMS Corrective Action Module, e-mail, or other channels (verbal, OHS Board, audits, etc.) have been evaluated. The measures taken as a result of these evaluations and the feedback on the activities carried out were made to the relevant personnel via QDMS software and/or e-mail.

In our company Personal Protective Equipment (PPE) are provided in accordance with the hazards and risks of the works carried out and the standards and at an adequate level of protection. The supply of personal protective equipment (PPE) in accordance with the standards has been carried out by considering the workplace environment and working conditions and missing

materials have been procured. Personal protective equipment work was also carried out in accordance with Yavuz, Fatih and Kanuni drillships, coastal logistics center works and increasing offshore works.

Considering the complaints from our employees, new needs in the face of new hazards and risks, developments and innovations in the PPE market and legal obligations, studies were being carried out to improve the existing PPE continuously and provide new PPE.

Analysis and imaging activities were continued with polyclinic services at the Head Office and District Management Health Units. Periodic porter inspections and examinations for the personnel working in food works were regularly performed.

Microbiological and bacteriological analyses of drinking and utility waters used in the workplaces and foods offered in the cafeteria have been regularly conducted. It has been determined that the report results were within acceptable limits. Social facilities (cafeteria, local, conditioning center and tea hobs) in the Head Office and District Management have been inspected regularly for cleaning and hygiene. First aid cabinets have been inspected during the year, and their deficiencies have been completed.

Periodic health checks have been completed according to workplace hazard classes. Health screening of university students who were interns in our company has been conducted.



## Occupational Health and Safety Practices

Studies were initiated to carry out all electrical/ mechanical repair and maintenance activities carried out in the Headquarters campus within the scope of Tag, Lock, Secure, Test.

As a result of the Occupational Safety Analysis study in the Headquarters, the training required to be received by the technical personnel has been determined and the personnel has been provided with tag, lock, secure, test, Safe Working in Closed Areas and Safe Working at Height training courses.

In the Headquarters, after the department or business unit change, informing the personnel about OHS, COVID-19 informing studies for foreign personnel involved in Exploration and R&D studies, and OHS informing meetings for subcontractors working in the Headquarters were carried out in 2020.

Within the scope of COVID-19 measures, library, training & meeting rooms and workplace areas were examined. and necessary evaluations were shared with the relevant business units. COVID-19 audits were carried out for the subcontractors serving in the workplace of the Headquarters and the findings of the audits were shared with the company officials and the contracted Common Health and Safety Unit.

## Occupational Health and Safety Performance Indicators

Occupational health and safety performance indicators (Accident Frequency Ratio / Accident Weight Ratio), which we control the effectiveness of our corrective work to prevent all kinds of occupational accidents that may occur in our company, to increase work efficiency by minimizing possible labor losses and reducing costs, inform us about our situation and guide us while planning our work.

In the field operations carried out by TPAO, the Recordable Work-Related Accident Frequency has decreased significantly since 2016 as a result of the increase in the OHS awareness of the employees with the effectively carried out OHS activities. In 2020, it was realized approximately 32% below our corporate target of 3 to increase the awareness of our employees, practices accidents / million hours.

## **Disaster and Crisis Management**

Applications and plans to be implemented against all extraordinary conditions and disasters such as fire, explosion, earthquake, flood, chemical spread, terrorism, and sabotage were determined in advance and team and equipment preparations were made in this direction. Emergency situations were intervened with appropriate equipment and competent personnel within the scope of national and international standards.

Training courses were carried out in order to improve emergency and crisis management systems and to increase the competence of the personnel in charge. In order to minimize the risks that may arise in emergencies, to test the existing emergency systems and methods and are carried out in line with the scenarios, post-practice performance evaluation and corrective preventive action planning were made in this direction.

Measures taken against emergency risks have been constantly reviewed.



## **Working Life**





## **Our Human Resources Policy**

The largest resource of our enterprise in line with its strategies and goals constitutes our employees. We prioritize to invest in qualified work force in order to continuously improve our human resources and realization of their potentials.

For this purpose, we undertake:



To ensure the employment of innovative candidates with high personal awareness, open to development and suitable to carry our company into the future, who will enable our Corporation to carry out its activities effectively and corporation efficiently,



To prepare and implement training and development programs according to the needs and to contribute to the development of our employees,



To achieve a continuously learning organizational structure,



To implement a fair and equal rewarding system that will increase the loyalty of our employees,



To develop a performance management system that will enable our personnel to be successful, to evaluate their performance and to increase their satisfaction, and to ensure the continuity of this system in line with the objectives of our company,



To ensure the formation of corporate culture and awareness by meeting the social and cultural needs of the personnel,



To provide a safe working environment and conditions for all our employees in accordance with Occupational Health and Safety principles.



To create a work environment where reliability, trust and ethical values are encouraged as well as a healthy work environment.



To continuously increase the satisfaction of our employees,



To prioritize the our employees, To prioritize the motivation and loyalty of



♠ To create equal opportunities for all our employees within our company not to discriminate between our employees in terms of race, religion, language, and gender, and to take measures to protect employees against physical, mental, and emotional ill-treatment within the Company.

### Our company employees;

• White collar employees are our non-union employees with white collar and mostly engineers and experts.

Provisional Article 9 of the Decree Law on Regulation of Personnel Regime of Public Economic Enterprises no. 399, which is subject to the provisions of Labor Law no. 4857 and Social Insurance and General Health Insurance Law no. 5510 and is outside the scope of collective labour agreement, is employed pursuant to Article 5 of the Turkish Commercial Code.

Turkish Petroleum Corporation's Personnel Regulation stipulates the rules that the white collar employees will be subject to in terms of appointment, transfer promotion, staff, working principles, social, administrative, financial and other personal rights, as well as disciplinary provisions.

• Blue collar temporary employees are our blue-collar and unionized employees.

Our employees work within the scope of 4-a subject to the provisions of Labor Law no. 4857 and Social Insurance Law no. 5510, and General Health Insurance Law no. 5510 and subject to the collective labour contract.

The Collective Labour Agreement regulates the rights and working principles of blue collar personnel the starting wages of the personnel, the principles to be applied in the transfer and promotion of the position are regulated by the blue collar personnel Wage and Promotion Directive

The parties to the Collective Labour Agreement to which our Blue collar and Temporary Employees is subject are Turkish Union of Public Heavy Industry and Services Sector Employers (TÜHİS) and Oil, Chemical, Rubber Workers Union of Turkey (PETROL-İŞ).

## **Employment Profile**

Number of Employees by Regions	White collar	Blue collar	General Total
Head Office	975	445	1,420
Batman	175	956	1,131
Adıyaman	118	489	607
Trakya	69	263	332
General Total	1,337	2,153	3,490



**Female Manager Rate** (Within Management)



**Global sector average in** the same period

## **Included in Collective** Labour Agreement



In 2020.



Number of employees aged 20-30 is



**Number of people** with disabilities at **TPAO** 

## Financial Rights and Benefits Provided to Our Employees



In our company, salary payments are made on the 15th of each month. While the personnel of our Head Office and our white collar personnel working in our District Managements receive their salary in advance, our blue collar personnel working in the District Managements receive their salaries in return for their monthly work. In addition, 2 "Full Bonus" payments are made in the amount of gross basic salary and 4 "Half Bonus" payments are made in the amount of your 13-day gross basic salary. The Presidential Decrees determine the payment dates of the half bonuses, and the full bonuses are paid in February and July.

### Recruitment fees:

- For white collar personnel; according to the white collar Personnel Regulation, wage increases are generally determined twice a year by Presidential Decrees.
- For blue collar personnel; According to the blue collar Personnel Wage Regulation, wage increases are generally determined twice a year as a result of Collective Labour Agreement negotiations.
- In order to promote the commitment of the staff to the Company: for every 5 years (5,10,15,20,25,30 and above), a severance incentive bonus is paid in the amount of daily basic wages determined.
- The personnel who are allocated annually paid leave for at least 10 working days will be granted a leave advance for not exceeding 1-month gross salary in the month in which the leave is to be used and not exceeding the ceiling fee, if desired, once a
- Foreign language knowledge has been paid according to the Education and Foreign Language Compensation Directive.

## Other Financial Rights:

### White Collar Personnel:

Authority and Professional Liability Compensation, Occupational Compensation, Batman-Adiyaman Regional Compensation, Audit Compensation, Food Benefits, Social Benefits, Birth-Death and Marriage Benefits, Disability Benefits, Treatment Benefits and Work Accident Compensation.

## Blue Collar Personnel:

Collection Compensation, Food Benefit, Clothing, Child-Family and Education Benefit, Marriage Benefit, Birth Benefit, Death Benefit, Disability Benefit and Personal Accident Insurance, Social Assistance. Natural Disaster and Disease Advance.

## **Education and Rehabilitation Benefits** with Nursery and Day Care

In order to make our future generations feel that we are with them in the first period of their education/ training life, to contribute to the family economy of our staff and to increase their loyalty to our Company, nursery and day care aid is provided to our staff who send their children (upto age 6) licenced Nursery and Day Care Centers from the Provincial Directorates of Family and Social Services, Provincial Directorates of National Education or Municipalities.

In addition, Special Education and Rehabilitation Assistance is provided without exceeding the monthly nursery and day care allowance without any age limit in case the children of our personnel receive education/training in Special Education and Rehabilitation Centers in order to bring their dependent disabled children to the society and to contribute to their being self-sufficient individuals.

## **Adaptation to Changes in Working Life**

To keep up with the changes in working life in extraordinary periods in the world and ensure that our production and services are carried out without interruption, we follow the developments in the world and quickly create the necessary regulative

For this reason, a Working Management Procedure has been created for Pandemic Periods, and the application principles of remote/flexible working methods have been determined in extraordinary periods by integrating it into our regulations.

## Personnel Benefiting from Maternity Leave

In 2020, 31 female personnel benefited from maternity leave, all of our mentioned personnel did not start work by benefiting from the sanitary leave, annual leave and 6-month period included in the labor law and the longer term unpaid leave rights included in the Staff Regulation and Collective Labour Agreement (CLA), and thanks to the personal rights granted to them, they were ensured to be with their children in the development of their children, especially when the role of the mother is great. In addition, in cases where they start work, 1 hour of breastfeeding leave and part-time working opportunities are provided until the child reaches the age of 1, and the child reaches the school age.



## **Employee Development and Our Training Courses**



Our aim is to fulfill the need of trained & qualified personnel in accordance with TPAO's mission and vision.

## **Targets**

- To increase the number of internal trainers
- To set out individual training plans
- To achieve the training period per person 10 hours, excluding OHS training courses
- To create training videos and making them available to staff through the academy
- To increase the foreign language proficiency of the
- To create a pool of executive candidates.
- To develop existing managers
- To empower professional competency
- To contribute to the personal development of staff

## **Training Programs**

- Management Trainee Program
- Manager Development Program
- Online Foreign Language Training Program
- TP Academy Online Education System
- Programs for Professional Competency **Development** (well control course, computer software training courses, quality training courses, HR training courses,
- Bosiet Training Programs

In the training and development programs organized in Head office and District Managements of our Company, 12,775 days of training were given to 5,239 people in 2020. A training and development program has been organized in accordance with the training and development activities to equip employees with the knowledge and skills that will enable them to contribute to corporate goals.

In accordance with the Vocational Education Law No. 3308, a total of 276 vocational high schools and 153 university students were provided with internship opportunities during the academic year.

In addition, 35 students were given lessons on 10 different subjects by supporting the Non-Governmental Organization within the scope of online internship.



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## TP Academy Online Training and Development Platform

TP Academy carries out its activities in line with with the differentiated training contents in 2020. and our employees for the future.

TP Academy Online Training and Development Platform is to support our employees with needsoriented training courses in a way that will enable them to continue their duties with high motivation and performance.

TP Academy online training and development platform, which has been specially designed for the training and development of our company staff, has been used for 3 years and has been made available to our employees with video and interactive training courses.

Various vocational and technical training courses 95 employees in 2019. Online Foreign Language were assigned to our personnel according to their titles under the title of Mandatory Training Courses Spanish languages.

its objectives of equipping our employees, who Under the heading of Customisable Training Courses, constitute the most important source of our the option of customising the training courses, which Company's activities and strategic goals, with the are considered necessary and are of interest from information required by the sector providing 24/7 dozens of different disciplines, has been offered to access to training practices for professional and the personnel by determining the training courses personal development, and preparing our Company by the personnel. Under the title of audio files and reading materials, it aims to ensure our employees personal development by sharing 2 articles and 1 Training for Internal Trainers short book within 1 month.

> videos on exploration, drilling and production activities for the oil and natural gas sector were shot in the virtual studio with expert personnel and 1818 personnel uploaded to the video system on 23 different subjects were watched.

### Online Foreign Language Training Courses

In 2020, 385 employees attended the Online Foreign Language Training, which had been attended by Education is provided in English, Arabic, Russian and

### **Bosiet-Foet Training Courses**

Within the scope of the BOSIET-FOET localization program, within the framework of the protocol made with Istanbul Technical University (ITU) and ITUNAVA Technology Transfer Office in 2020, it is planned to provide BOSIET and FOET training courses to 900 employees within 10 years.

In 2020, 60 groups were provided with training In addition, within the scope of our Company, training services in the training courses provided through internal trainers.

## Occupational Health and Safety Training Courses

In our company, one of the institutions carrying out field activities in our country, occupational health and safety training courses were provided online to all personnel with the utmost sensitivity to receive Occupational Health and Safety training courses.

In addition, first aid, fire protection, Personal Data Protection Law (LPPD), information security training courses have been organized as required by the leaislation.

Online Foreign Language Training Courses

**Bosiet-Foet Training Courses** 

Training for Internal **Trainers** 

**Health and Safety Training Courses** 

**Occupational** 

## **Performance and Career**

## **Performance Management**

High Performance Management System started in

Within the scope of the system, individual target definitions were made for each white collar employee in 2020 and it was aimed to measure performance by considering the realization rates of these targets.

During the design phase of the High-Performance Management System, 7 focus group meetings were held, and 25 hours of training and workshops were held for senior executives in the Head Office and 3 District Managements.

At the manager level, a total of nearly 30 hours of training and workshops were held and the system was spread. Individual objectives, the objectives of all white collar employees collected from all of our company were determined. Software has been created with a contracting firm in order to make objective entry and evaluations.

In our company, a total of 3.398 personnel were evaluated in the High-Performance Management System in 2020. In 2021, promotional, awareness and training programs related to the High-Performance Management System will be continued to increase its effectiveness.

In addition, the "Internal Stakeholder Satisfaction Survey" was also created on the High-Performance Management System to measure these units' satisfaction for the Departments of Exploration and R&D Center, and people were enabled to respond to these surveys.

## **Competency Management**

The Competency Management Project aims to align the workforce objectives of our Company with the corporate strategy and objectives, to make career and training planning in oil industry standards, to create an input to the performance evaluation system, to ensure the systematic increase of the technical knowledge.

It was aimed to determine 127 subject matter experts for 1000 white collar personnel to be included in the system and to evaluate all personnel until the end of 2021 and to create individual training plans.

By this way, the staff learned their competencies and the gaps in their carrer development plans.

The scope of competency management:

- 115 job descriptions
- Competency software installation
- Transferring competency profiles to the system
- Preparation of individual training plans
- Training and evaluation by the relevant experts

## Manager Training Program (MT, Management Trainee)

The Executive Training Program aims to support the meeting of our Company's executive needs and improve the knowledge and skills of promising employees. The candidates to participate in the MT Program are selected according to the determined

competency and experience criteria. The selected candidates participate in the training courses in the Individual Training Plans created according to the needs of the company.

The program continues with 2 groups formed in 2018 and 2019. There are 9 manager candidates in the first group and 10 in the second group.

In 2020, 52 training courses were given to the candidates, including business unit's training courses, administrative training courses and career conversations.

It has been decided to conduct the training courses planned during the pandemic period online and the completion rate of the program is 54% for Group 1 and 33% for Group 2. The performance report of the white collar personnel has been created through this system.

## **Cross Career Development Program**

The Cross Career Development Program, which has been ongoing since 2018, is a certified inhouse career development system that includes theoretical and practical work in the business units in its own internal processes where it works for nonmanager white collar personnel. The Cross Career Development Program aims to improve the expertise of the personnel, to increase efficiency, to provide new competencies to the personnel, to improve teamwork and internal relations.





## **Employee Engagement**

In our company, an employee engagement survey was conducted in 2020 to ensure employee engagement to the workplace and increase their motivation and productivity. Survey was delivered to our employees via SMS and e-mail.

50.5% of our total personnel, 63.5% of our white collar personnel and 31.4% of our blue collar personnel participated in the survey. Our Company engagement score, which had been measured as 67 in 2019, was measured as 73 in 2020. It has been observed that there is a significant increase in employee engagement.

Based on the 2019 survey results, improvement plans were prepared for the important topics and the activities were followed up. These headings are:

### **Business Relationship:**

Employees reaching their maximum potential

## Relationship with management:

Company strategy in the right direction

### **Business Environment:**

Effective execution of the decision-making process within the company

## **Corporate Culture:**

Equal opportunities are given to all employees in our company, and they are related to their happiness

### Relationship with the organization:

Expectation of employees about their own future in TPAO

### Performance Management:

Feedback culture and ways to improve performance

### Personal Development:

Having an understanding of employees' needs, expectations, and career goals

### Communication:

Employees should learn the developments affecting the company before the media







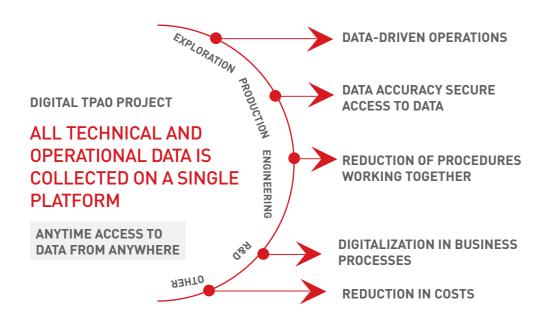
## **Digital Transformation**

Digital TPAO project is a digital transformation project initiated within the scope of structuring all technical and operational data used by TPAO under a single platform.

Within the scope of the digital TPAO project, it is aimed to consolidate the digital data to be accessible from a single platform, to digitize and include non-digital data in the platform, to collect instant data from fields/operations, to provide accurate and upto-date information to decision makers, and to create an infrastructure where technical and operational process management is ensured.

The consolidation of the wells and seismic data within TPAO and produced until 2019 were completed in 2020. Furthermore, 5 out of 12 new or planned studies to be rewritten that are related to the well and seismic operation process were completed in 2020

Under the digital transformation, the Supplier Performance Evaluation System was completed in 2020 and began to be used through ERP.



## **Digitalization Projects**

## Digitization of the Registry Archive Project

The aim of our project, which started in 2018, is to increase the security and accessibility of data containing the personal rights of our personnel and to minimize data loss through digitization. All data of our personnel working within the scope of the project have been digitized and as Phase-2 study, the process of ensuring the integration of the data with the Electronic Document Management System (EBYS) system and digitization of the data of the personnel leaving our company continues.

## Corporate Memory and e-Library

In 2020, significant work was carried out within the scope of the project, which aims to collect and record the data and documents related to Turkish Petroleum Corporation's operation fields, which are not recorded or archived separately in other electronic platforms, and which are critical for the Company, and to make them available to all employees through a system and based on an authorization matrix.

- In 2020, data collection activities were continued within the scope of the Corporate Memory and e-Library Project.
- 126,418 file data were uploaded to the system.
- The installation of the relevant software in 2020 and its integration with the existing systems have been completed.
- Since the first months of 2020, procedures such as indexing data, entering data, transferring to the system, etc., have been started with a team of 6 people, and the final stage has been reached.







## **Information Security**

## **Our Information Security Management Policy**

Our fundamental target is to ensure that any information is reached through electronic media instantly in a reliable and uninterruptable manner in line with the strategies of TPAO and provide efficient functioning of these tools. In this respect. our commitment is to:



present technological services in line with the company's strategic goals,



supply the needed hardware,

ensure required information is reached,



supply the required software.

install the necessary substructure,



plan, install, operate, control and improve the information security management system.



identify the relevant roles and responsibilities to operate information security management system and ensure its continuity,



identify targets specific to information security management system and assess their compliance in specific periods,



manage the risks under information security management system.



identify uninterruptedness goals and business continuity strategies in order to meet the requirements of information security management system,



protect the confidentiality, integrity and accessibility factors in order to properly meet the requirements of information security management system,



allocate necessary resources and plan relevant training programs to increase competency level of our employees in order to meet the requirements of information security management system as well as ensure its efficient functioning.



ensure regular review are performed in order to provide continuous enhancement to the used processes for the performance of information security management system,



plan for activities in terms of awareness and orientation with the aim to ensure harmonization and participation of all our employees and business partners are provided according to our approach to information security management system,



guarantee that information security management system complies to the relevant standards and laws.



implement information security management system as an indispensable part of our corporate culture

## **Ethical Principles**

In accordance with Article 29 of the Regulation on the Principles of Ethical Behavior and Application Procedures and Principles of Public Officials prepared based on Articles 3 and 7 of the Law No. 5176 on the Establishment of the Ethics Committee of Public Officials and Amendments in Some Laws;

In our company, the Ethics Committee was established to develop an ethical culture, to provide advice and guidance on the problems faced by staff regarding the principles of ethical behavior, and to evaluate ethical practices.

All employees in TPAO are obliged to comply with the principles of ethical conduct in the relevant legislation while carrying out their duties. When they start to work, all our employees are informed in detail of the ethical principles, the issues that can be done to support the compliance with the ethical rules within the institution, the operation of the Ethics Commission and the application methods and the processes applied in case of violation of the ethical rules. Newly-employed persons are made to sign an Ethical Conduct Statement and are provided with information about the relevant legislation and practices.

In our company, the evaluation and sanctions of the Ethics Commission are implemented under the relevant laws and regulations mentioned above. The Ethics Committee monitors the ethical suitability and evaluation of the practices annually.

Within the scope of the Anti-Bribery and Corruption Law No. 3628, it is obligatory to make declaration of property at certain periods.

## **Accountability and Audit**

## **Internal Audit**

The purpose of the Internal Audit is to present suggestions for the development of corporate governance, risk management and control processes with a systematic and disciplined approach and to add value by contributing to the achievement of corporate goals.

Internal audit activities are carried out in accordance with our General Directorate's Duty, Authority and Responsibility Directive, Internal Audit Directive, and International Professional Practices Framework (UMUÇ) and Ethical Rules and The Institute of Internal Auditors (IIA) Standards.

## **Inspection Works**

In our company, inspection activities are carried out within the scope of "TPAO Inspection Board Regulation". In the Inspection Program, which includes the subjects deemed appropriate to be examined/ investigated by the General Directorate Authority in 2020, in addition to the inspection of the company central and provincial organizations and foreign offices, the inspection of all project companies within TPOC and TPAO was included,

and the auditors inspecting the project companies also audited the accounts of the relevant project operator.

In 2020, as in previous years, the audit of the accounts of the project operators related to domestic and international joint operations was carried out within the framework of "TPAO Joint Operations Audit Procedures and Principles".

## Audit Court Inspection and GRAND NATIONAL ASSEMBLY OF TURKEY STATE ECONOMIC ENTERPRISES Commission

Our company is audited every year by the Presidency of the Court of Accounts on behalf of the Turkish Grand National Assembly. The suggestions and recommendations in the report prepared by the Court of Audit are followed sensitively. The report prepared by the Presidency of the Court of Audit forms the basis for the examinations of the Grand National Assembly of Turkey State Economic Enterprises Commission.

## 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 on Determination of Independent Audited Companies dated 26/03/2018 and no. 2018/11597 published in the Official Gazette dated 26/05/2018 and no. 30432 and are audited by an independent audit company at the end of each year

## Internal and External Audits of Integrated Management System (IMS)

16 PEACE JUSTICE AND STRONG INSTITUTIONS

Internal audits are carried out to ensure continuous improvement, which is a requirement of IMS. In 2020, internal audits were carried out with 151 internal auditors and internal auditor candidates who were personnel of our Company.

External audits are carried out by an independent and accredited certification body. The scope of this examination is composed of TS EN ISO 9001:2015 Quality, TS EN 27001 Information Security Management System, TS EN ISO 14001:2015 Environment and TS EN ISO 45001:2018 Occupational Health and Safety standards.





## **Financial Indicators**

## **Revenues for 2020**

Operating Income (Thousand TL)	
Income from sales of crude oil	4,691,695
Natural Gas Sales Income	507,104
Service Incomes	84,375
Other Incomes	51,430
Total Operating Revenues	5,334,605
Non-operating Incomes	
Other Activities Ordinary Income and Profits	7,120,032
Extraordinary Incomes and Profits	66,842
Total Non-Operating Income	7,186,875
General Total	12,521,481

## 2020 Expenses (Thousand TL)

Total	10,954,207
Taxes and Other Legal Obligations	137,578
Extraordinary Expenses and Losses	267,740
Financing Expenses	730,539
Expenses and Losses Incurred from Other Operations	3,384,562
Operating Expenses	4,495,644
Cost of Sales	1.827.529
Sales Discounts	110.615

## Taxes and Legal Obligations Paid in 2018-2020 (Thousand TL)

	INSTITUTIONS T.	OTHER(*)	VAT	STATE SHARES	REVENUE 10%	TOTAL
2018	1.266.648	166.405	702.000	604.000	400.830	3.139.883
2019	156.043	165.645	821.607	755.400	504.076	2.402.771
2020	137.578	188.710	698.555	680.888	110.614	1.816.345
Total	1.560.269	520.760	2.222.162	2.040.288	1.015.520	7.358.999

NOTE: Other [\*] = Includes Withholding Tax ,Stamp Tax, Dues, Special Consumption Tax ,Motor Vehicles Tax and Real Estate Tax.

## **Supplier Statistics**

	2018	2019	2020
Total number of suppliers	521	967	1,095
Total number of local suppliers	462	848	983
Total payments to suppliers (TL)	586,664,779	2,001,698,774	4,306,209,250
Total payments to local suppliers (TL)	362,964,611	1,030,009,845	2,896,517,923
Ratio of payments to local suppliers	62%	51%	67%

## **Social Indicators**

## Number of Employees by Employment Type

		2019				
	Female	Male	Total	Female	Male	Total
Total number of employee	563	3123	3686	532	2958	3490
Number of employees white collar	354	1033	1387	337	1000	1337
Number of employees blue collar	209	2090	2299	195	1958	2153

## Number of Employees by Location

Region/status	White Collar	Blue Collar	Total
Head Office	975	445	1420
Batman	175	956	1131
Adıyaman	118	489	607
Trakya	69	263	332
	1337	2153	3490

## Number of Employees by Age

Age	White Collar	Blue Collar	Total
Age 20-30	40	173	213
Age 30-40	797	591	1388
Age 40-50	361	979	1340
Age 50-60	126	410	536
60 years and above	13		13
	1337	2153	3490

## Distribution of Executive Positions by Age and Gender

	2018		2018 2019			9		
	Female	Male	Female	Male	Female	Male		
Under 30 Y.O	1	4	2	3	0	3		
Age 30-50	49	229	53	237	55	233		
Over 50 years old	4	35	4	35	5	28		

## **Newly-recruited Persons**

	2018		2018 2019		2020	
	Female	Male	Female	Male	Female	Male
Under 30 Y.O	13	31	9	11	0	1
30-50 years old	5	22	2	14	0	8
Over 50 years old		2	1	4	0	1
Total of newly-employed persons during the year	18	55	12	29	0	10

## **Employee Turnover**

	2018		2018 2019			2020
	Female	Male	Female	Male	Female	Male
Number of employees under 30 leaving the job	1	1		2		1
Number of employees between the ages of 30-50 leaving the job	5	44	6	32	15	32
Number of employees over 50 years of age leaving the job	4	83	3	43	16	150
Total number of employees leaving the job	10	128	9	77	31	183
Employee turnover rate	1,78 %	4,00%	1.58%	2,44%	5,78%	6,14%

## Number of Employees with Disabilities in TPAO

	Female	Male	Total
2018	23	130	153
2019	24	127	151
2020	23	123	146

Number of Years of Employees by Seniority	White Collar	Blue Collar	Total
0-5	79	9	88
5-10	454	431	885
10-15	378	397	775
15-20	146	341	487
20-25	151	492	643
<b>→</b> 25	129	483	612
	1,337	2,153	3,490

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## **Environmental Indicators**

## **Environmental Investments (TL)**

Location	2018	2019	2020
Head Office	5,227,030	7,093,319	8,629,433
Adıyaman	379,727	3,993,335	1,974,014
Batman	1,428,877	3,548,668	3,534,625
Trakya	454,258	531,179	1,044,964
Total	7,489,892	15,166,500	15,183,036

## **Internal Energy Consumption**

Location	Type of Energy	Unit	2018	2019	2020
Adıyaman	Natural gas	MwH	3,664	4,248	4,292
Adıyaman	Electricity	MwH	94,340	98,359	100,962
Batman	Natural gas	MwH	104,447	100,939	101,461
Batman	Electricity	MwH	226,575	229,383	231,692
Batman	Diesel Oil	Lt	57,440,921	56,777,650	55,882,283
Trakya	Natural gas	MwH	73,000	104,459	124,946
Trakya	Electricity	MwH	3,459	3,510	3,976

## Water consumption (m³)

Location		2018	2019	2020	Unit
Adıyaman	Municipal Water	37906	18421	56489	m³
Trakya	Underground Water	12120	12120	12120	m³
Batman	Underground Water	641000	684000	663000	m³
Head Office	Municipal Water	118937.04	140231	161135	m³

## Reused Waste water (m³)

Location		2018	2019	2020	Unit
Adıyaman	Waste water amount	18953	9210,5	28244,5	m³
Trakya	Waste water amount	43200	43200	43200	m³
Batman	Waste water amount	641000	684000	663000	m³
Head Office	Waste water amount	118937,04	140231	161135	m³

## Wastes - General Directorate (ton)

Head Office	2018	2019	2020	Unit
Hazardous waste				
Total hazardous waste	97,5	680,27	941,04	ton
Sanitary landfill / wastes transported to landfills				ton
Wastes recovered for energy purposes	96,38	680,27	940,24	ton
Wastes reused				ton
Electronic wastes	1,12	0	0,8	ton
Non-hazardous waste				
Total Non-Hazardous Waste	25,5	25,5	25,6	ton
Sanitary landfill / wastes transported to landfills	24	24	24	ton
Wastes Recycled	1,5	1,5	1,6	ton

## **Environmental Indicators**

## Wastes – Adıyaman District Management

Adıyaman District Office	2018	2019	2020	Unit		
Hazardous waste						
Total hazardous waste	716.9	257.1	434.9	ton		
Wastes recovered for energy purposes			112.1	ton		
Wastes reused	11.7	7.2	9.6	ton		
Electronic wastes	1.86		4.0	ton		
Other (please specify):	0,012	0.006	0.079	ton		
Non-hazardous waste						
Total non-hazardous waste	2.5	3.285	299.37	ton		
Wastes Recycled	2.5	3.285	4.51	ton		
Wastes recovered for energy purposes	0.02		0.1	ton		
Other			294.76	ton		

## Wastes – Trakya District Management

Head Office	2018	2019	2020	Unit		
Hazardous waste						
Total hazardous waste	97.5	680.27	941.04	ton		
Sanitary landfill / wastes transported to landfills				ton		
Wastes recovered for energy purposes	96.38	680.27	940.24	ton		
Wastes reused	1.12	0	0.8	ton		
Non-hazardous waste						
Total Non-Hazardous Waste	25.5	25.5	25.6	ton		
Sanitary landfill / wastes transported to landfills	24	24	24	ton		
Wastes Recycled	1.5	1.5	1.6	ton		

## Wastes – Batman District Management

Batman District Office	2018	2019	2020	Unit
Hazardous waste				
Total hazardous waste	804.730	2,433.13	6,708.559	ton
Electronic wastes			3.160	ton
Other (please specify):	804.730	2,433.13	6,705.399	ton
Non-hazardous waste				
Total non-hazardous waste			144.506	ton
Wastes Recycled		22.76	144.406	ton
Wastes recovered for energy purposes	0.110		0.100	ton

## International IWCF Certified Applied Well Control Training Courses

BOP Category	IWCF Certificate Level	TPAO Certificate Level
	Level 2	Introductory
S ( DOD(E   ID :::: )	Level 3	Driller
Surface BOP (For Land Drilling)	Level 4	Supervisor
	Level 5	Advanced (Well Engineer)
	Level 2	Introductory
Unified Surface & Seabed (Land	Level 3	Driller
and Sea Drilling Together)	Level 4	Supervisor
	Level 5	Advanced (Well Engineer)

# Scope of Analysis whose Method is accredited by TURKAK

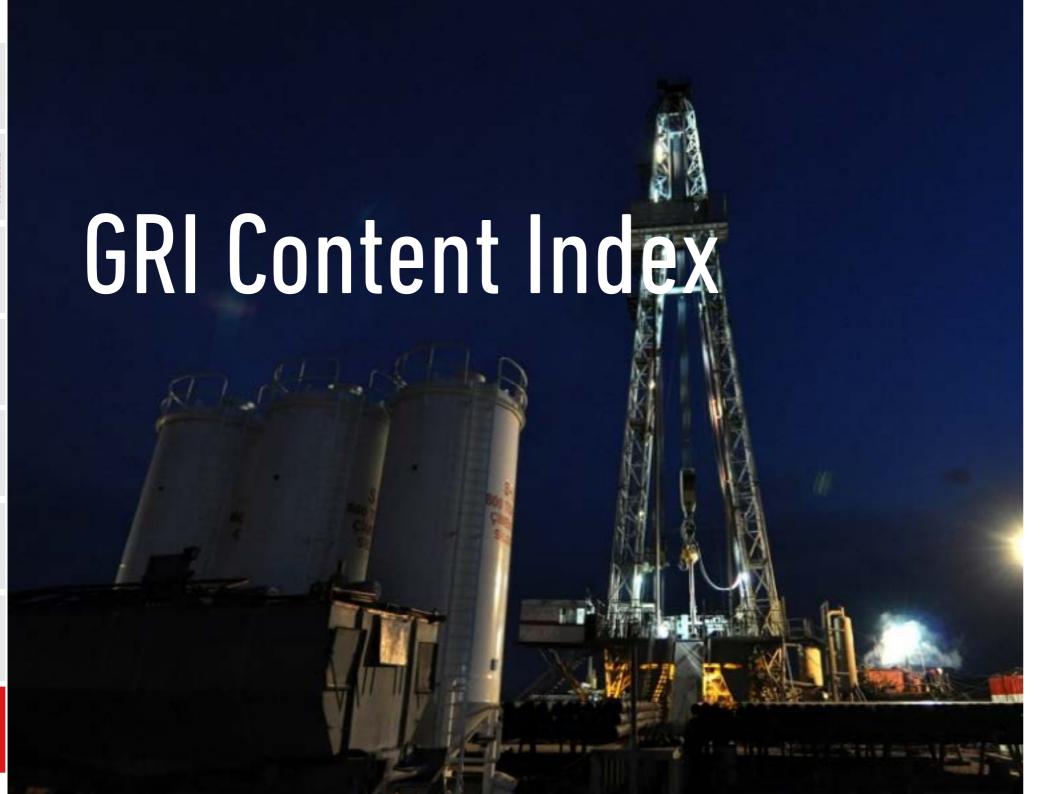
Testing Area Materials/ Products Tested	Name of Testing	Method of Testing National, International Standards Internal Methods
	Determination of Density and Relative Density Oscillating U-Tube Method	TS EN ISO 12185
	Determination of Kinematic Viscosity and Calculation of Dynamic Viscosity	TS EN ISO 3104
	Determination of Flash Point	TS EN ISO 2719
	Ash Content	TS EN ISO 6245
Diesel	Determination of Distillation Properties at Atmospheric Pressure	TS EN ISO 3405
	Sulphur (S) Quantification Ultraviolet Fluorescence Method	TS EN ISO 20846
	Determination of Copper Strip Corrosion	TS 2741 EN ISO 2160
	Determination of Oxidation Stability	TS EN ISO 12205
	Determination of Cold Filter Clogging Point (CFPP)	TS EN 116
	Water Content	TS 6147 EN ISO 12937
	Calculation of Cetane Index Four-Variable Equation Method	TS EN ISO 4264
Crude Oil	Salts in Crude Oil (Electrometric Method)	ASTM D 3230
Natural Gas	Composition of Natural Gas	ASTM D1945
Water	Conductivity in water	TS 9748 EN 27888
Trace:	PH in water	TS EN ISO 10523
Bentonite (Raw) Bentonite	Determination of suspension reology	API Spec 13 A TS EN ISO 13500+AC+T1 ISO 13500

Testing Area Materials/ Products Tested	Name of Testing	Method of Testing National, International Standards Internal Methods
CMC-LVT	Viscosity Readings in Deionized Water	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
CMC-HVT	Viscosity Readings in Deionized Water 40g/l Salt Solution Viscosity Readings Viscosity Readings in Saturated Salt Solution	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
PAC-LV PAC-HV	Determination of Visible Viscosity of Fluid	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
Starch	Viscosimeter Reading in 40g/l Salt Solution Viscosimeter Reading in Saturated Salt Solution	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
Startin	Determination of Permeate Volume in 40g/l Salt Solution Permeate in Saturated Salt Solution	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
Bentonite (Raw Bentonite) CMC-LVT CMC-HVT PAC-LV PAC-HV	Determination of Permeate Volume	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
Bentonite Barite	Determination of residue larger than 75 m in diameter in bentonite barite content	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
PAC-LV PAC-HV	Determination of Moisture Content	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500

Testing Area Materials/ Products Tested	Name of Testing	Method of Testing National, International Standards Internal Methods
	Determination of Water-Soluble Soil Alkaline Metals in Calcium	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
Barite	Determination of Particles with an Equivalent Spherical Diameter of Less than 6µm	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
	Determination of Density - La Chatelier Balloon Method	API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
	Dry Sieve Analysis	In-house Method "D.03.A.08 Rev.06" (Ro-Top Testing Sieve Shaker Model-B Instruction Book)
CaCO <sub>3</sub>	Determination of Solubility in Acid	In-house Method "D.03.A.10 Rev.06" (Dowell Schlumberger Home Method)
	Determination of Density La Chatelier Balloon Method	In-house Method "D.03.A.06 Rev.05" API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
XCD Polymer	Determination of pH	In-house Method "D.03.A.09 Rev.04" Oakton pl 1-500 Series Instruction Book
	Determination of Suspension Rheology	In-house Method "D.03.A.01 Rev.06" API Spec 13A TS EN ISO 13500+AC+T1 ISO 13500
Dust Thinner	150° F and 300° F Determination of Thinning	In-house Method "D.03.A.01 Rev.06" API Spec 13a, TS EN ISO 13500+AC+T1 ISO 13500
Natural Solid Dust Rock Sample	XRD-Whole Rock Mineral Determination	In-house Method "D.05.A.02 Rev.03" JADE 7.0 Easy Quant
	XRD-Clay Fraction Mineral Determination	In-house Method "D.05.A.02 Rev.03" JADE 7.0 Easy Quant

## **Institutions and Associations Membership**

Riglogix-Westwood Global Energy Group World Oil Council (WPC) World Energy Council Turkish National Committee (WEC) International Well Control Forum (IWCF) Mediterranean Oil Industry Group (MOIG) Turkish Heavy Industry and Service Sector Public Employers' Union (TÜHİS) Turkish Association of Public Enterprises Enverder (Energy Efficiency Association)



## TURKISH PETROLEUM CORPORATION Sustainability Report 2020 GRI Standards Content Index – Basic



	GRI Standard	Description/Name of Department	Page
GRI 101: B	ASIC 2016		
GRI 102: GI	ENERAL NOTIFICATIONS 2016		
Corporate	Profile		
102-1	Name of the Organization	Türkiye Petrolleri Anonim Ortaklığı	-
102-2	Primary brands, products and services	About TPAO	12
102-3	Headquarters of the organization	Activity Centres	132
102-4	The number of countries in which the organization operates and the names of the countries in which the organization has significant activities or which are related to the sustainability topics described in the report	About TPAO	12
102-5	Nature of ownership and legal structure	About TPAO	13
102-6	Markets it provides service	About TPAO	12
102-7	Scale of the Organization	About TPAO	12
102-8	Information Related to the Employees	Working Life	95
102-9	Supply Chain	Supply Chain Management	83
102-10	Changes in the organization and supply chain	There was no significant change in the reporting period.	-
102-11	Precautionary approach or precautionary principle	Corporate Risk Management, Ethical Principles	26, 109
102-12	Supported Initiatives	Memberships	123
102-13	Memberships	Memberships	123

We have developed the content of the report in accordance with the requirements of the GRI Standards Basic option. We have received confirmation that general notices 102-40 to 102-49 of the GRI Standards under the "Materiality Disclosures Service" provided by GRI are correctly included in the Report. This service was provided through the Turkish version of the report.

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	GRI Standard	Description/Name of Department	Page
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Ethics and	Honesty		
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102-44	Key Topics and Concerns	Our Sustainability Priorities	32-33

	GRI Standard	Description/Name of Department	Page
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102-47	List of priority topics	Our Sustainability Priorities, Sustainability Strategy Matrix	32-33, 40
102-48	Information rearranged according to previous reports	It is the first report published.	-
102-49	Changes in reporting	It is the first report published.	-
102-50	Reporting period	About the Report	1
102-51	Date of previous report	It is the first report published.	
102-52	Frequency of reporting	Reporting will be made in annual period.	
102-53	Contact information for questions regarding the report and its contents	About the Report	1
102-54	Compatibility option selected according to GRI Standards	About the Report	1
102-55	GRI content directory	GRI Content Index	126
102-56	External assurance	No external audit received.	-

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GRI 400 SOC	IAL STANDAR	RDS SERIES 2016		
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### Reporting Consulting

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## Design and Implementation with the Report

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