



SAKARYA GAS FIELD DEVELOPMENT PROJECT

LIVELIHOOD RESTORATION PLAN

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LIVELIHOOD RESTORATION PLAN

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DEFINITIONS

COMPANY	Turkish Petroleum - Offshore Technology Centre A.S. (TP-OTC)
CONSULTANT	WSP Golder Associates Turkey Ltd. Şti. (GOLDER)
PROJECT	Sakarya Gas Field Development Project (SGFD)
PROJECT OWNER	TP-OTC

ABBREVIATIONS

Abbreviation	Definition
BOTAS	Petroleum Pipeline Company
CLC	Coastal Logistics Centre
CLO	Community Liaison Officer
ECA	Export Credit Agencies
EIA	Environmental Impact Assessment
EPCI	Engineering, Procurement, Construction and Installation
ESIA	Environmental and Social Impact Assessment
FMS	Fiscal Metering Station
GRM	Grievance Mechanism
HP	Horse Power
HSSE	Health, Safety, Social and Environment
IFC	International Finance Corporation
LRP	Livelihood Restoration Plan
MoEUCC	Ministry of Environment, Urbanization and Climate Change
OPF	Onshore Processing Facility
PAC	Project Affected Communities
PAPS	Project Affected People
PIU	Project Implementation Unit
Project	Sakarya Gas Field Development Project

PS	Performance Standard
SCT	Special Consumption Tax
SEP	Stakeholder Engagement Plan
SPS	Subsea Production System
SURF	Subsea Umbilical, Risers and Flow Lines
TPAO	Turkish Petroleum Corporation
TP-OTC	Turkish Petroleum Offshore Technology Centre

GLOSARRY

Associated Facility: Facilities that are essential to the construction or operation of an International Financial Corporation (IFC)-financed project but are not themselves financed by IFC. The IFC policy on involuntary resettlement may apply to resettlement induced by such facilities.

Amateur fishers¹ Refers to the fishing activities for sport fishing, made only for sport or recreation or for household consumption, and not for financial or commercial gain.

Amateur fisherman: A person who fishes only for sport and recreation or for household consumption, without seeking financial or commercial gain.

Compensation Payment in cash or in-kind of an asset or resource acquired or assigned by a project where the asset is to be replaced.

Cut-off date: The date after which anyone who moves into the project area is no longer entitled to compensation and assistance. The cut-off date is typically the completion date of the census and assets inventory of persons affected by the project. After the cut-off date, persons occupying the project area are not eligible for compensation and resettlement assistance. Similarly, fixed assets (such as built structures, crops, fruit trees, and woodlots) established after the date of completion of the assets inventory or an alternative mutually agreed on date, will not be compensated.

Economic Displacement Economic displacement refers to the loss of assets, resources, or access to resources that lead to a loss of income and livelihood. Economic displacement may result from Expropriation or restrictions on land use due to project-related requirements. Economic displacement does not necessarily go together with physical displacement.

Eligibility refers to criteria identifying which affected persons are entitled to receive compensation, resettlement assistance and/or other benefits as a result resettlement. Usually established either by law or via policies of International Financial Institutions (IFIs).

Land Expropriation: Process whereby a public authority, usually in return for compensation, requires a person, household, or community to relinquish rights to the land it occupies or otherwise uses.

Livelihood The range of means by which individuals, families and communities earn a living. Agriculture, bartering, fishing, foraging, natural resource-based livelihoods, petty trade, and wage-based income are included.

Livelihood Restoration Plan The livelihood restoration plan document is required for projects that only entail economic displacement. The Livelihood Restoration Plan sets out measures to restore and improve the effects of economic displacement on populations. Livelihood restoration and improvement are characterized by restored or improved income levels, household food security, the standard of housing, the security of tenure, household health and nutrition, income sources, access to infrastructure and services, access to markets, yields, food consumption and diet, resilience to natural or economic shocks.

Project-affected person (PAP) Any person who, because of the implementation of a project, is subjected to physical or economic displacement.² Such displacement adversely impacts the right to own, use, or otherwise benefit from a built structure, land (residential, agricultural, or pasture), annual or perennial crops and trees, or any other fixed or moveable asset, either in full or in part, permanently or temporarily.

¹ Amateur fishers are regulated by the Regulation on Offshore Fisheries for Amateur (Sports) Purpose Circular No. 37/2. Per the Circular, if there is species specific kilogram limitation as per the legislation, the amount of fish to be caught cannot be more than 5 kg.

² (International Finance Corporation, 2019, p. 270)

Small-Scale Fisheries (SSF) Small-scale fishing is defined as daily fishing activities with boats smaller than 12 meters and passive fishing gear in areas close to the shore. This type of fishing activity is especially important for the welfare of coastal communities that make a living from fishing.

Stakeholders All individuals, groups, organizations, and institutions interested in or who are directly or indirectly affected by a project. People having the ability to influence a project are also considered to be stakeholders

Vulnerable Groups Individuals who could be more adversely affected by displacement than others and thus may be limited in their ability to claim or take advantage of resettlement assistance related development benefits. Factors that influence vulnerability include gender, ethnic origin, age, physical or mental disability, economic disadvantage, or social circumstances. Vulnerable groups in this context include the poorest among the poor, the landless, the elderly, households headed by women and children, ethnic minorities, communities that depend on natural resources. Displaced people not protected by national and international law are also considered vulnerable

1.0 INTRODUCTION

This Livelihood Restoration Plan (LRP) prepared for Sakarya Gas Field Development Project (the Project) to minimize the onshore and offshore livelihood impacts of the Project and to provide the principles and procedures for the restoration of the livelihood that will be impacted by the Project. The scope of the LRP covers onshore and offshore areas which will be used temporarily and permanently by the Project during construction and operation phases of the Project including the construction and operation of Energy Transmission Line (ETL) and marine usage restrictions.

The LRP identifies Project Affected People (PAPs), fishers affected by marine restrictions on the fisher communities both during the construction activities in the onshore and offshore sections of the Project

Data for the analysis of impacts on the PAPs and fishers, were obtained during the baseline studies conducted during the Environmental and Social Impact Assessment (ESIA) studies for the Project in February 2022 and the survey held in December 2022 to analyse impacts of the ETL and the NAVTEX restrictions.

2.0 PROJECT OVERVIEW

2.1 PROJECT DESCRIPTION

The Project is planned by Turkish Petroleum Corporation (TPAO) to extract, transport to shore and process the natural gas discovered in the Sakarya Gas Field, in the exclusive economic zone of Turkey, off the Western Black Sea Region, and the natural gas reserves to be discovered through the ongoing exploration. Turkish Petroleum Offshore Technology Centre (TP-OTC or Project Owner), 100% owned by TPAO will be conducting Project Management and Engineering, Procurement, Construction and Installation (EPCI) for the Project.

The Project consists of three main units, including the subsea production facility in Sakarya Gas Field, in the exclusive economic zone of Turkey, the onshore processing facility in Filyos Industrial Zone in the Çaycuma district of Zonguldak province, and the marine and coastal transition subsea pipelines and umbilical laying connecting these two units.

The Project investment will be realized in two phases, Phase 1 and Phase 2:

- Under Phase 1, natural gas to be produced with the subsea production system from 10 wells in Sakarya Gas Field will be transported onshore through a 16-inch (40.64 cm) diameter steel pipeline, processed at the onshore processing facility. In Phase 1, the daily production capacity will reach a maximum of 10 million standard m³.
- Under Phase 2, the natural gas whose production will continue in Sakarya Gas Field will be connected to the subsea production system with 30 additional wells reaching a total of 40 producing wells under Phase 2. A 24 inches pipeline (60.96 cm) or above will be needed to transport the additional gas produced in Phase 2.

Once processed at the onshore processing facility, the gas produced by the Sakarya Gas Field will be measured at a Fiscal Metering Station (FMS) and offloaded to the national grid via a ~36 km onshore pipeline. Both the FMS and the pipeline will be designed, constructed, and operated by Petroleum Pipeline Company (“BOTAŞ”) and, in line with the OECD and IFC Performance Standards definition, will be considered as Associated facilities to the main Project. The present document deals with the Phase 1 of the Project.

TP-OTC had a national Environmental Impact Assessment (EIA) prepared for the Phase 1 of the Project per the requirements of Turkish EIA Regulation. After the disclosure process, EIA Positive Decision was secured from the Ministry of Environment, Urbanization and Climate Change (MoEUCC) on Nov 26th, 2021. TP-OTC is considering receiving a loan from Export Credit Agencies (ECAs) or International Finance Institutions (IFIs) for purchase of Phase 1 Subsea Umbilical, Risers and Flow Lines (SURF).

A Gap Analysis Study, previously prepared by WSP Golder Associates Turkey Ltd. (Golder) in December 2021, has identified gaps in the existing national EIA Report and included actions that need to be undertaken in order to close these gaps and reach a full Environmental and Social Impact Assessment (ESIA) compliant with the relevant International Standards (Equator Principles IV, World Bank Environmental and Social Framework and Environmental and Social Standards, IFC Performance Standards and Guidelines, and Good International Industrial Practice - GIIP).

Golder Associates Turkey Ltd. (Golder) was retained by TP-OTC as a consultant to carry out an ESIA according to the findings of the Gap Analysis Study and further review of the Project design.

The potential lenders require the Project environmental and social information to be disclosed to stakeholders and this information is referred to as the disclosure package, which demonstrates Project's compliance with the lenders' requirements.

Layout showing Sakarya Gas Field Development Project and BOTAŞ FMS and Pipeline is presented below.



Figure 2-1: Sakarya Gas Field Development Project, BOTAS FMS and Pipeline Layout

2.2 PROJECT COMPONENTS

The Project (Phase 1) consists of three main units, including:

- Subsea Production System (SPS) in Sakarya Gas Field;
- Onshore Processing Facility; and
- Marine and coastal transition subsea pipelines (Mono ethylene glycol (MEG) pipeline and gas pipelines) and umbilical laying connecting these two units.

Geographically, these main units are located in the offshore section, the coastal transition section, and the onshore section.

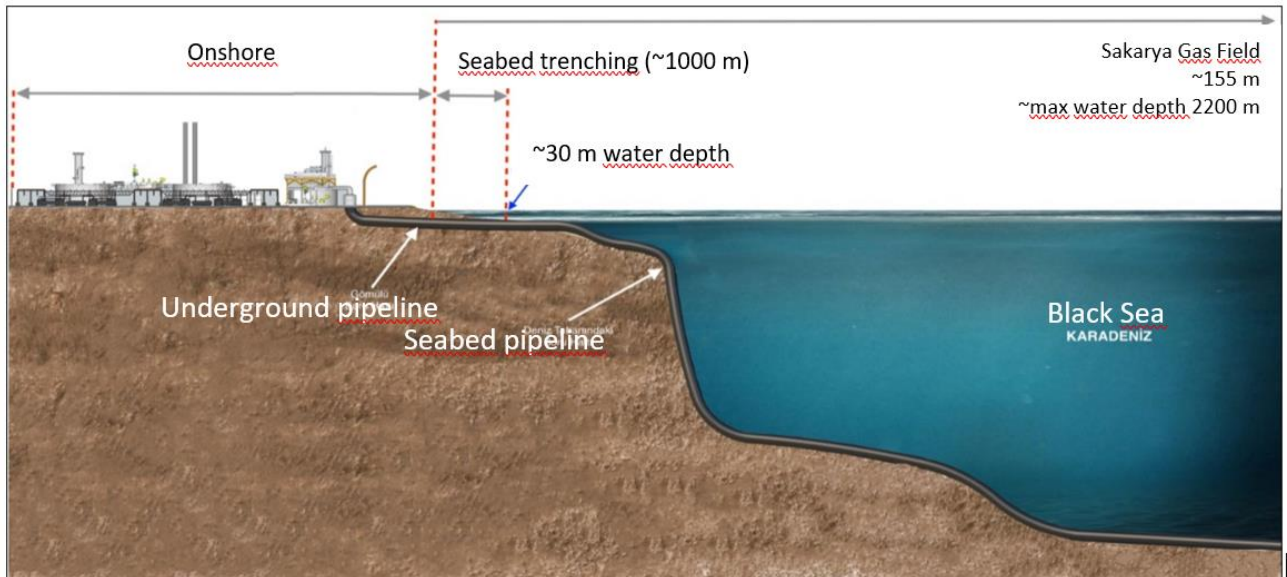


Figure 2-2: Illustration of Main Project Units

2.3 ENERGY TRANSMISSION LINE

The amount of electrical energy required for the Project was calculated as 9,000 kW(e) in Phase 1. There will be 15kV 3 gas engines (2 in operation and 1 spare) each having a capacity of 4,500 kW(e) will be used inside the facility to generate the necessary energy in Phase 1. These engines will burn natural gas to generate electricity. The total thermal power of the 2 gas engines (operational ones) is 18.9 MW(t). Furthermore, the Project will be connected to the national electrical grid through a substation (with 400 kV Overhead transmission line with a maximum of 1.3 km and GIS Switchyard. Transformer Station includes 400 kV Gas Insulated Switchgears, 400/15kV Transformers, MV Switchgear and related Control System. A national EIA is not required for the Overhead ETL since it is below the limit values for the power transmission line length, indicated in Appendix-1 and Appendix-2 Lists of the "Regulation on Environmental Impact Assessment", which came into effect through publication on the Official Gazette No. 29186 dated 25.11.2014. The national electrical grid will be utilized as a backup power supply when the gas engines are not in use during a maintenance repair. Also, the emergency generators powered by diesel fuel will be available inside the facility.

2.4 PROJECT ASSOCIATED FACILITIES

Under the understanding that the ~36 km pipeline will have the sole purpose to offload the gas from the TP-OTC processing facility to the national grid, both the BOTAS FMS and pipeline have been considered as associated facilities. A high-level E&S Assessment Report and a Management and Corrective Action Plan with a list of mitigations measures focused on the construction phase of the

pipeline and FMS, have been prepared. A separate Supplementary LRP has been prepared for the BOTAŞ Pipeline and FMS.

2.5 OTHER FACILITIES

Sakarya Gas Field – Block C 26

Sakarya Gas Field is located in the exclusive economic zone of Turkey, off the Western Black Sea Region.

Block C 26 is located 155km from the coast at a depth of about 2,200 m. Gas explorations and wells installation in this area have both been undergoing since October 2020 and are forecasted to continue well into 2023. The area is undergoing completion of Phase 1, with four of the ten wells already installed, while Phase 2 will possibly see an additional 30 wells installed starting from 2023.

In the scope of the Project, Sakarya Gas Field Block C 26 is the production area of the gas to be transported to the onshore processing facility.

Coastal Logistics Centre (CLC)

Ministry of Transport and Infrastructure allocated the CLC, which is located within the boundaries of the Port of Filyos, to TP-OTC to be used for the coordination of supply and logistics on sea drilling operations in the Black Sea Region, as well as the berthing of drilling support vessels and the loading of drilling equipment on these vessels. CLC operates for the storage of water-based and oil-based drilling chemicals, the supply and storage of the requirements for drilling operations and workers on board, as well as the separation of drilling fluid and sludge that is generated during the drilling activities undertaken by TPAO in Sakarya Natural Gas Basin of the Western Black Sea. The CLC has an area of approximately 24 hectares.

Filyos Port

Filyos Port, owned by Ministry of Transport and Infrastructure, is under construction. Filyos Port will primarily serve the Filyos Industrial Zone, which is planned to be established across the Filyos River. Filyos Port/Industrial Zone Connections Project (Project) is planned by the Ministry of Transport and Infrastructure, General Directorate of Infrastructure Investments, to carry out transportation and distribution of goods arriving at Filyos Port.

In the scope of the Project, Filyos Port will also be used for marine vessel berthing and SPS equipment maintenance, site receipt and pre-deployment tests before installation.

2.6 LIVELIHOOD RESTORATION CONTEXT

2.6.1 Onshore Context (Energy Transmission Line)

Project will be connected to the national electrical grid through a substation (with 400 kV Overhead transmission line with a maximum of 1.3 km and GIS Switchyard. Transformer Station includes 400 kV Gas Insulated Switchgears, 400/15kV Transformers, MV Switchgear and related Control System.

Construction activities of the overhead transmission lines can be listed as sub-assembly, top-assembly, wiredrawing, testing and commissioning. Within the scope of sub-assembly works, the areas where the pole feet will be placed will be stripped and excavated, and after the preparation of iron bars around the pole feet, concrete pouring will be carried out in moulds. Topsoil and subsoil will be stripped and stored separately during this process. Within the scope of the upper assembly works, after the pole feet are placed in the pits, galvanized steel pylons will be mounted to each other with bolts and electricity poles will be constructed. After the assembly works are completed, the wire drawing processes will be completed. Construction works will continue in the corridor with a total

width of 50 m, 25 m from the right and left of the route, especially in the areas hit by the poles. Material will be transferred from the site store to the tower location via trucks.

According to information obtained from Turkish Electricity Transmission Corporation (TEİAŞ) 29 parcels were affected from the construction of ETL consisting of 8 private parcels and 21 government owned lands. Agricultural land will be expropriated, and non-agricultural land use permit will be obtained from the Provincial Directorate of Agriculture and Forestry if required. Forest land will be allocated after the permission to be obtained from the Provincial Directorate of Agriculture and Forestry.

2.6.2 Offshore Context

When the Western Black Sea region is compared with the other regions of the Black Sea, it is seen that it is not at the desired level in terms of aquaculture and aquaculture activities. In terms of fishing, it can be said that anchovy fishing has an important potential in the coastal provinces of Zonguldak and Bartın in the Western Black Sea Region. However, this situation, which can be a source of high income, cannot turn into sufficient economic value due to the lack of necessary infrastructures (cold storage, sorting area, etc.) in the fishermen's port. In addition, the fact that fully equipped fish markets have not yet been established within the boundaries of the municipality, deficiencies in the organizational structure and insufficient marketing cause significant losses. In this context, no significant increase has been achieved in the amount of fishing in the region over the years. In the Western Black Sea region, there are a total of 9 fishermen's ports, 5 in Zonguldak and 4 in Bartın. The names of the districts and coastal structures where the fishermen's ports are located are shown in Table 2-1. According to the data of the Ministry of Agriculture and Forestry, as of January 2020, there are 3 fishery administrative buildings in the region (Zonguldak-Ereğli-Ereğli Fishermen's Sanctuary (2005), Zonguldak-Central-Kozlu Fishermen's Port (2011), Bartın-Amasra-Tarlaağzı Fishermen's Port (2018)). . In addition, the number of producers registered to Fisheries Cooperatives in Zonguldak province in 2019 was determined as 443 people. The fishing ports in the region are provided in below table.

Table 2-1: Fishing Ports in the Region

Province	Name of the Fishing Port
Zonguldak	Alaplı
Zonguldak	Çaycuma
Zonguldak	Kilimli
Zonguldak	Ereğli
Zonguldak	Merkez
Bartın	Amasra
Bartın	Amasra
Bartın	Kurucaşile
Bartın	Kurucaşile

3.0 ANALYSIS OF ALTERNATIVES

3.1 GAS FIELD

Sakarya Gas Field is located within the Sakarya Gas Field Block C26 in the western Black Sea, approximately 155 km offshore Filyos, located in Zonguldak, Turkey. The Sakarya Gas Field is the first deep-water gas field discovery and the biggest natural gas reserve in the country. It is anticipated that 30% of the domestic natural gas demand will be met by the SGFD Project with the first production from the field planned in the first quarter of 2023.

Sakarya Gas Field discovery was initiated with the Tuna-1 deep-water exploration well, set at a depth of 2,115 m to reach a depth of 4,525 m, using its sixth generation deep-water drillship Fatih, in August 2020. The well intercepted more than 100 m of the natural gas-bearing reservoir in the Pliocene and Miocene sandstone formations. The initial natural gas reserve estimation was 320 billion cubic meters (bcm)/11 trillion cubic feet (tcf) of lean gas, which is considered the largest gas reserve discovered both in the Turkish Exclusive Economic Zone and in the Black Sea.

3.2 SURF

The SURF, connecting the wells to the coast, will include:

- A seabed umbilical, approximately 6 inches (15.24 cm) in diameter that bundles together small pipes containing fluids, chemicals, and electrical and fibre optic lines;
- Gas pipeline, 16 inches (40.64 cm);
- The MEG line approximately 10 inches (25.4 cm) in diameter.

Several options to the **landfall siting** in Filyos were taken into consideration. In particular, two areas were considered as appropriate to the landfall (Figure 3-1).



Figure 3-1: The two possible landfall sites in Filyos area.

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In these two areas, choosing the one that was previously designated as an industrial area and that was already subject to environmental impacts due to projects of other institutions prevented the introductions of pressures and impacts (e.g., dredging, cutting trees and deforestation) in an area almost pristine. For this reason, the **1st Area** was selected.

Within the selected area (1st Area) in the Filyos landfall location, the least environmental impacting (as far as technically feasible) **routing option** was selected. In particular, the direct impact (pipeline footprint) on a wetland (i.e., the pond in Figure 3-2) was avoided as much as possible. In fact, even if the technical study highlighted the green track shown in Figure 3-2 as the technically most feasible option, the red one plus the dotted line was chosen. This option was the furthest feasible site from the wetland where the first onshore pipeline curve could be placed. Any further option towards east results technically hardly achievable because the pipeline would require the creation of angles (curve) below the minimum technically possible value.

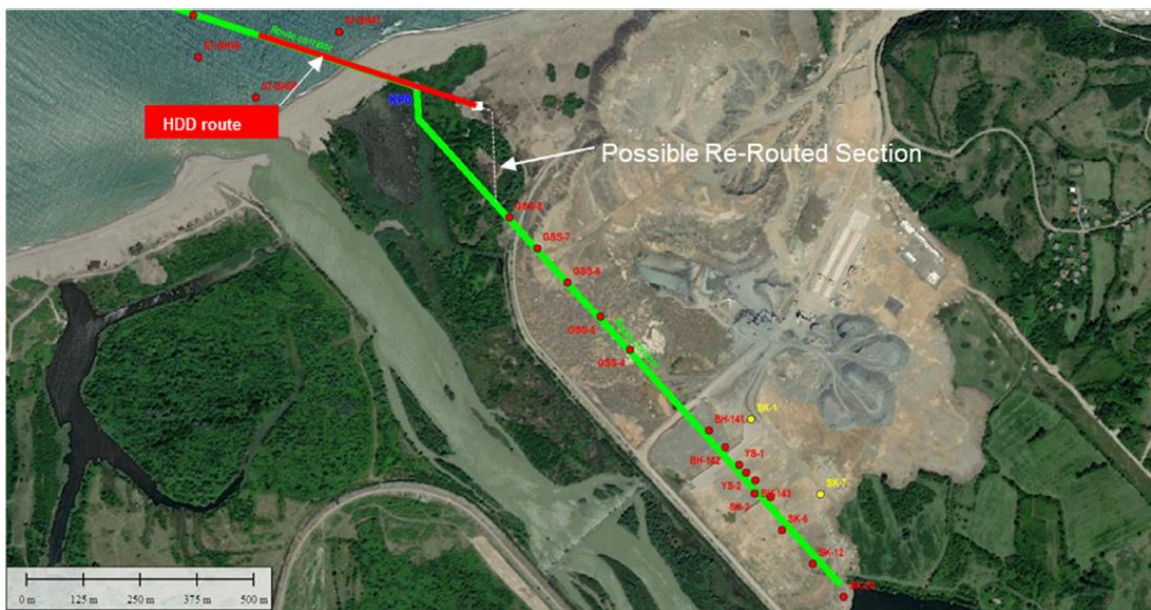


Figure 3-2: Possible routing options in the 1st Area of Filyos landfall location.

3.3 ONSHORE FACILITIES

While determining the site for onshore production facilities, several conditions have been considered. In order to assure the safety of the gas flow, the Project site has been selected to be the shortest distance from the Sakarya Gas Field. The shortest SURF is substantial for minimizing the pressure and conductivity loss inside the lines and therefore assuring the safety of flow and controls.

The project area is also significant in terms of its transportation and logistics facilities. In comparison to nearby ports, the Port of Filyos, close to the project area, has a significantly wider area of use. TP-OTC, the affiliate of TPAO, also operates the Coastal Logistics Centre, which is located inside the boundaries of the Port of Filyos. The logistics centre will be temporarily utilised during the construction stage under the Project scope. As can be seen from the figure below, while the distance of Filyos Port to the Sakarya Gas Field Tuna-1 well location is 155 kilometres, the distance of the other land points hosting a port to the said location is at least 45 kilometres longer.

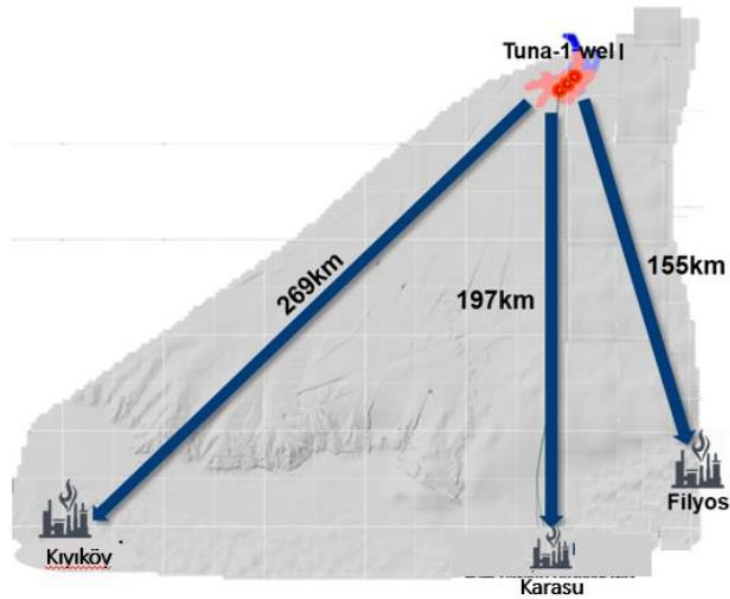


Figure 3-3: Port Alternatives

In the route of Karasu port, there is a difficulty in urban road transport in the process of transporting materials and equipment and Karasu Port area is very close to the city centre and living areas and is among the holiday centres of the Black Sea coast region.

In the selected Project area, the transportation routes that will be available in the region are planned to be expanded through the highway and railway networks, which will incorporate the Filyos Industrial Zone in the future. No new temporary roads will be built to be utilised during the construction stage due to the existing highways in the region. Considering the distances between the alternatives and the nearest airports, the Filyos Industrial Zone comes out the closest, with an 18-kilometre distance to Çaycuma Airport.

The selected project area in Filyos has been designated as an industrial zone and is not surrounded (or limited surrounded) by any private land or forest land. Furthermore, since the selected Project area was organized as an Industrial Zone and used during the construction of the Filyos Port, a limited extension of vegetation clearing within the area will be necessary.

In case Filyos area is chosen for the establishment of the onshore production facilities, a shorter umbilical and MEG/Methanol (chemical liquids) pipeline will be required to be constructed due to the decrease in the distance between the Sakarya Gas Field and the facilities, this process will be shorter when the depressurization operation (pressure reduction) will be performed in the pipeline, less gas flares will occur, and the required equipment supply, delivery time and construction time will be shortened due to the decrease in construction items. For example, the construction of an extra 45 kilometres of pipeline imposes an extra 45 bar (650 psi) pressure load on the wells, given the overall pressure loss of 1 km/bar. A pressure load that will occur in this way will directly affect the production capacity of the wells and will cause a decrease in production. Also, as the reservoir is known to depressurize over the years, the need for seabed compressors will arise more severely, in greater numbers, and sooner in response to decreasing reservoir pressure. If Filyos Port and its surroundings are selected for the onshore production facilities, it is anticipated that a daily minimum of 2.2 million m³ more production will be provided, even compared to the alternatives at the closest distance.

In addition, the extension of the pipeline has an effect on hydrate and fluid management and flow safety. Flow problems in natural gas pipelines are mostly caused by solid sedimentation. The most common of these deposits are hydrate, asphaltene and paraffin/wax formations. They occur

depending on many parameters, especially pressure, temperature and fluid composition. The pressure and temperature change that occurs during the transport of wet gas creates favourable conditions for the formation of hydrate in the pipeline. Although it is a substance formed by gas and water at certain pressure and temperature, it constitutes one of the most important problems in terms of flow safety. Failure to carry out the necessary work in case of its occurrence has the risk of causing blockages in the pipeline and stopping the operations. In this way, the construction of longer pipelines increases the mentioned risk and makes the management of this risk more complex and costly. Namely, the extra distance the gas has to be transported, the more the gas temperature will drop, the gas expansion will occur, and the greater the hydrate management difficulty. In addition, the length of the pipelines from land to sea for MEG to be piped to manage the hydrate will also increase to the same extent. In terms of the amount of water to accumulate in the pipeline, the amount of water produced from the well will increase with the increase in the distance. strategy will be required. In summary, the analyses show that if the Filyos area is selected for the production of natural gas discovered in the Sakarya Gas Field, there will be a significant reduction in flow safety risk and a reduction in associated costs.

For the production facilities to be built a total area of 1,150 decares is needed which is composed of area requirements presented in Figure 3-4. Filyos Port and its surroundings meet the aforementioned need with a port area of 1,900 decares and a port expansion area of 650 decares; other alternatives on the Black Sea coast are far from meeting this need. It should also be noted that while the said expansion area is capable of providing a usable area for the other phases to be constructed following the first phase production facilities; other alternatives cannot offer such a usage area as seen in the figure below.

		Units in decares		
Land		Need	Filyos	Karasu
Port area use	Port area	250	✓ 1650	✓ 250
	Onshore Facility Usage	400	✓ 400	✗ -
Port Expansion Area	Subsea Contractor	200	✓ 200	✓ 200
	Onshore Facility Contractor	100	✓ 100	✓ 100
	Pipeline Contractor	100	✓ 100	✗ -
	Well Completion Contractor	100	✓ 100	✗ -
Total Area		1150	✓ 2250	✗ 550



Figure 3-4: Port Surface Area Needed to Support the Project

In addition, due to the limited presence of privately owned land, there will be limited or no need for an expropriation process within the scope of the Project. In addition, the existing environmental plan and master development plan are also suitable for the planned facilities. These issues will also bring with them the minimization of cost and time loss that will arise with expropriation, environmental and zoning plan studies.

In summary, Project site selection was made according to following reasons:

- Closest tieback route to onshore.
- The subject of construction work will be less items.
- Relevant material procurement, their delivery time and construction time will be shortened.

- By reducing the pressure loss, flow safety will be maximized and thus a serious saving will be achieved in daily production.
- Hydrate management is provided in a more practical and less costly manner; the amount of liquid that will accumulate in the pipeline can be minimized and this will serve to establish the flow safety at the maximum level.
- Sufficiently large processing land area - already designated as an industrial zone prior to gas discovery – for maximum economic recovery of the reservoir in a phased manner.
- It will be in an advantageous position in terms of infrastructure and transportation networks.
- Minimum environmental and social impact due to isolated location and predeveloped nature of the industrial zone.
- Since there is limited privately owned land in the relevant areas and the existing environmental plan and master development plan are suitable for the planned facilities, the expropriation process will be limited or not required and there will be no significant cost in these matters.

3.4 BOTAS PIPELINE

Aşağıhsaniye

Between 0+574-1+734 (the route extended by 90.00 m. Since the route formed as a result of the measurement station relocation hits the middle of the settlement units, the route was changed by the by BOTAS taking into account the demands of the resident and the opinions of the Mukhtar.

The court process has been started for the immovables located on the new route, and information meetings will be held with the citizens over the price to be given by the court.

Derecikören

Since the pipe axis of the old route between 3+300-3+800 (the route was extended by 2.00 m) hit the sloped area, the route was changed to increase the safety of the pipeline.

The court process has been started for the immovables located on the new route, and information meetings will be held with the citizens over the price to be given by the court.

Esentepe-Yukarigöynük-Esenyurt

Between 8+224-12+942 (the route was shortened by 148.00 m). The route was changed due to the fact that the pipeline axis coincides with a high inclined hard rock (basalt structure), the region is at the foot of the settlements and adjacent to it, and the crew and equipment could not be deployed due to the high slope.

The court process has been started for the immovables located on the new route, and information meetings will be held with the citizens over the price to be given by the court.

4.0 LEGAL AND INSTITUTIONAL FRAMEWORK

The LRP will comply with all applicable national legislation and will apply relevant World Bank Operational Policies 4.12, IFC Performance Standard 5 and guidelines and international best practices for the management of impacts on livelihoods of project affected communities.

4.1 NATIONAL LEGISLATION

The main national legislation related with the land acquisition and fisheries and marine ecosystems in Turkey are summarized in Table 4-1 and Table 4-2 below.

Table 4-1: National Legal Framework for Land Acquisition

Related Legal Requirement	Topic	Remark
Constitution of the Republic of Turkey	Expropriation requirement	The Constitution states that the compensation value and the decreed increased value will be paid in full and in cash to the owners.
		<p>There are no direct constitutional principles for resettlement in Turkey. However, Articles 44 and 45 of the Constitution indirectly relate to resettlement activities.</p> <ul style="list-style-type: none"> Article 44 addresses land ownership and stipulates the responsibility of the government to protect the landless and those with inadequate land. Article 45 describes the responsibility of the government to support those working on agricultural and stockbreeding activities. Article 56 reaffirms the right of all to live in a healthy environment.
		<p>Article 46 addresses expropriation concepts:</p> <ul style="list-style-type: none"> State and public entities; In cases where the public interest requires it, it is authorized to expropriate privately owned immovable properties in whole or in part, and to establish administrative servitude on them, following the principles and procedures prescribed by law, provided that the actual compensation is paid in advance. The expropriation price and the final decision are paid in cash and in advance. However, the implementation of the agricultural reform, the realization of large energy and irrigation projects and resettlement projects, the cultivation of new forests, the protection of the coasts, and the payment method for the expropriated lands for tourism purposes are indicated by law. In such cases where the law may require payment in instalments, the instalment period cannot exceed five years; In this case, the instalments are paid equally. The cost of those belonging to the small farmer who directly manages that land from the expropriated land is always paid in advance without instalment.

Related Legal Requirement	Topic	Remark
		<ul style="list-style-type: none"> In the instalments envisaged in the second paragraph and the expropriation prices not paid for any reason, the highest interest foreseen for public receivables is applied.
Expropriation Law (Law No: 2942), as amended in 2020	Procedures for expropriation of immovable property	<ul style="list-style-type: none"> Sets out the procedures for expropriation of immovable property in possession of natural and private legal entities by the state and public legal entities in circumstances where the public interest requires, as well as procedures and methods for calculation and payment of the expropriation price, notifications, negotiations, registration of the immovable property and the right of way in the name of the authority, and settlement of related disputes. Land Expropriation Law forces that where expropriation is inevitable, the expropriation price must be paid to the landowner before land entry. Moreover, the owner and occupant of the immovable property subject to expropriation and other concerned parties has the right to object Expropriation process, the project itself or the price offered to them.
	Land Requirement	<ul style="list-style-type: none"> Article-3: The administrations shall obtain the immovable properties, resources and easement rights required to execute public services or enterprises that they are obliged to do by laws and Presidential decrees; They can make expropriation by paying the costs in cash and in advance in equal instalments.
	Determination of the affected land	<ul style="list-style-type: none"> Article-7: The administration that is responsible for the expropriation will identify the land owners and land users by using large-scale plan and each user/owner will be identified by using the documents such as title deed and/or the addresses, tax and population records.
	Land Purchase (Settlement Agreement?)	<ul style="list-style-type: none"> Article-8: According to this law, the administrations will make it essential to apply the procurement procedure first in expropriation.
	Expropriation	<ul style="list-style-type: none"> Article-10: If the procurement procedure cannot carry out the expropriation, the administration shall apply to the first degree court where the immovable property is located by adding the information and documents it has collected in accordance with Article 7 and the other information and documents to a petition and to determine the expropriation value of the immovable property. This price is paid in cash or instalments if the expropriation is made in accordance with the second paragraph of Article 3.

Related Legal Requirement	Topic	Remark
	Land Valuation	<ul style="list-style-type: none"> Article-11: a) Land type, b) Size of the land. c) All the qualities and elements that can affect its value and the value of each element separately, d) Tax declaration, if any, e) Appraisal made by the official authorities at the date of expropriation, f) Land, immovable property or resource and its net income g) The sales value of the lands according to the precedent sales without a special purpose, h) The depreciation of the structures, i) Other objective measures that will be effective in determining the price,
	Court process	<ul style="list-style-type: none"> Within thirty days from the date of notification made by the court by the owner of the immovable property subject to expropriation in accordance with Article 10, the court's announcement with the newspaper to replace the notification to those who cannot be notified, a lawsuit can be filed for an annulment in the administrative jurisdiction against the expropriation process and for correction in the judicial jurisdiction.
	Urgent Expropriation	<ul style="list-style-type: none"> The Expropriation Law (Article 27) states that, subject to a Council of Ministers Decree for national defence or in case of emergency, any immovable property may be expropriated by the administration undertaking expropriation for public interest. To apply the emergency clause of the law and to urgently acquire land through this mechanism, the value of the immovable property and asset (crop values are determined and paid before land entry) in question must be appraised by the Valuation Commission (established within the expropriation agency consist of relevant discipline experts) according to the Article 11 of the Expropriation Law within seven days. The expropriation shall be made after the total appraised value of the immovable is deposited by the administration in the owner's name. Article 27 of the law allows the expropriation body to enter the field earlier than the timing of entry under the standard expropriation procedures. Still, the article does not limit the owner's claims on the valuation of land and fixed assets. The valuation process is done by the court or court nominated experts within one week. This article will only be used when other avenues have failed.
Forest Law (1956, No. 6831)	Compensation of Forest Lands	<ul style="list-style-type: none"> The law was enacted in 1956 and amended in 2003, 2004, 2013 and 2020. Under the Forest Law, those responsible for implementing the Project must obtain permission from the Ministry of Agriculture and Forestry to perform activities in forests or lands classified as forest and are required to indemnify damages to public forests resulting from the

Related Legal Requirement	Topic	Remark
		<p>construction of the Project. According to the law, the Ministry has the authority to permit the use of forest land (49-year lease periods).</p> <ul style="list-style-type: none"> In addition to the law itself, the regulation on "Permits to be Given on Land Considered Forest Areas" (Official Gazette dated 22 March 2007, Law No: 26470) settles the methods and principles of the approvals, permits and easement rights to be given. Another addition to the regulation regarding the implementation of Article 16 of the Forestry Law published in the Official Gazette numbered 28976 and dated 18 April 2014 stipulates the implementation of Article 17/3 and 18 of the Forest Law. Article 9 of this regulation redefines the fees and the calculation of the fees to be collected from other authorities utilising forest land.
Pasture Law (1998, No. 4342)	Compensation of Pasture Lands	<ul style="list-style-type: none"> This law was enacted in 1998, and amended in 2004, 2008 and 2013. The acquisition of pasture lands is identified as being public common land. The area crossed by the Project will be separated in the title deed. Its status will be changed from 'pasture' designation to treasury land. No further action will be required. Neither the public's right nor the specific users of pastures are recognised under the law for compensation. Available payment under local laws is made for grass. Therefore, Turkish legislation cannot compensate PAPs' pasture and meadow losses and associated income losses.
Cadastral Law (1987, No. 3402)	Determination of the legal status and boundary of the land	<ul style="list-style-type: none"> The Cadastral Law determines the boundaries and legal status of immovable assets based on the national coordinate system and the cadastral or the topographic cadastral maps to register land and constitute the basis of the spatial information system as the Civil Law (No. 4721) stipulates. The Cadastral Law also defines the process for identifying landowners without registered title deeds or where there is a dispute over land ownership.
Land Registry Law (1934, No. 2644)	Land title	<ul style="list-style-type: none"> The law was enacted in 1934 and amended numerous times between 1934 and the present. Land Registry Law (No. 2644) is the main land title regulation. Land registration in Turkey is based on the Cadastral Law (No. 3402). Land Registry Law also states that citizens can rent treasury lands for agricultural, commercial, sports and social activities.

Related Legal Requirement	Topic	Remark
Agricultural Reform Law on Land Arrangement in Irrigated Areas (1984, No. 3083)	Land consolidation and allocation	<ul style="list-style-type: none"> The law was enacted in 1984 and amended in 2001 and 2014. The law covers matters regarding land consolidation and allocation of land for purposes other than agriculture when this is needed. It is stipulated in the law that in areas where agricultural production is no longer economically viable due to fragmentation, land consolidation will be undertaken to prevent fragmentation or a reduction in the spatial extent of agricultural land, that would result in it not being sufficient to provide a household's livelihood, and make use of the household workforce.
Law on Soil Protection and Land Use (2005, No. 5403)	Protection of the agricultural lands	<ul style="list-style-type: none"> The law was enacted in 2005 and amended in 2008 and 2014. It sets out the principles for agricultural lands to be improved, protected against misuse, properly categorised and to prevent fragmentation.
Notification Law	Notification of landowners and land users	<ul style="list-style-type: none"> With its amendments in 2003, 2008 and 2011, the law provides the basis for a notification process for property owners. It consists of specific procedures to reach a range of public and private owners, including those whose addresses are unknown. According to the law, notification provisions include sending letters to registered addresses, seeking support from local authorities, publication through an advertisement placed in a national newspaper and published throughout the country in significant numbers, and electronic communications. The law provides guidance for communicating with different categories of stakeholders, including resident owners, absentee owners, owners outside Turkey, and various public agencies. The Notification Law details the notification process for landowners and land users whose address is unknown, as determined by the Notification Officer. According to the modifications made in the law in 2011 (Article 10), the notification can be made wherever appropriate for the affected owner and to the last address known. If the person cannot be reached, notification is sent to the last known residence and is directed to the village or municipal quarter headmen. Upon receipt of notification, the owners have the right to apply to those responsible for implementing a Project for a negotiated settlement. Should the owner reside in a foreign country, a registered mail is sent to the last known address. The expropriation agency can also seek the support of consulates to reach owners.
Land Registry Code (2013, No. 28738)	Land registry records	<ul style="list-style-type: none"> This Code aims to keep the land registry records in order with respect to the Civil Law (No. 4721). It comprises the principles

Related Legal Requirement	Topic	Remark
		<p>and procedures about ownership, limited real and individual rights of immovable assets, and their entry, amendment, cancellation, and rectification to the land registry.</p> <ul style="list-style-type: none"> Articles 24 and 25 of this Code protect the rights of the illiterate, disabled and non-Turkish speaking right holders.

Table 4-2: National Legal Framework for Fisheries

Related Legal Requirement	Topic	Remark
<p>The Fisheries Law (Law No: 1380/ 3rd March 1971):</p>	Fishery	<ul style="list-style-type: none"> Fisheries Law No. 1380 of 1971, as amended by Laws No. 3288 of 1986 and No. 4950 of 2003, is the framework law for fisheries and aquaculture related activities. The law provides the basis for the regulations and communiqués, issued under the authority of the competent minister (the minister of Food Agriculture and Livestock), which are used to regulate fisheries and aquaculture. All activities in fisheries and aquaculture are based on the Fisheries Law, No.1380 of 1971. With this law, and its related regulations, definitions were codified. Based on this law, regulations and notifications are prepared to regulate fisheries. Law No. 3288 of 1986 amended the Fisheries Law No.1380 of 1971. According to Laws 1380 and 3288, and Continental Waters Law No. 2674 of 1982, foreigners are not allowed to participate in commercial fishing activities. Article 1 of the Law explains the scope of the Act – “protection, production and inspection of aquatic products” – and Article 2 gives the definitions, including the aquatic products, which are further completed by other regulations. Fisheries Law No. 1380 sets out rules for: <ul style="list-style-type: none"> Management of fisheries and aquaculture. Fisheries and aquaculture activities. Improvement, incentives and protection. Prohibitions. Fish markets. Procedural provisions. Inspection and control. Penal clauses. A separate critique of the draft amendment to the fisheries law was prepared and submitted to the Prime Minister’s Office (2008) but in summary there are issues with the current law which compel a recommendation that the law be re-drafted and that a new law is made to deal specifically with aquaculture.

Related Legal Requirement	Topic	Remark
Aquaculture Regulation No. 25507. 29 Jun 2004	Aquaculture	<ul style="list-style-type: none"> The objective of this Regulation is to ensure planned investments on fishery for a more efficient exploitation of water resources, fishery activities sustainability, environmental protection and certified fish products quality. Conditions for the setting up of fishery facilities in inland waters are detailed, including the minimum distance between two facilities, minimum water surface area requirements for dam, lakes, ponds and other inland waters, use of net cages, off-shore production, etc. Individuals and companies involved in fish production should apply to the Ministry of Agriculture and Rural Affairs. Procedures and required documentation are given in details. A preliminary concession is granted to individuals and companies for a period of twelve months, allowing them to prepare their detailed project. These projects are then submitted to the Ministry of Agriculture and Rural Affairs for ratification. Corresponding provisions of Environmental Impact Assessment should be observed during ratification process. Fishery Producers Certificate should be obtained by the producers from the Provincial Directorate of Agriculture when facilities are completed. This certificate is prepared for each production facility and is subject to visa every three years. Revocation procedures and circumstances are given in the regulation. Importation of eggs, fries, and breeders are subject to consent by the Ministry of Agriculture and Rural Affairs. Procedures and required documents are given in details. Inspection details for the production facilities are also given in the regulation.
The Regulation on Fisheries (Published in the official gazette on 10th March 1995):	Fisheries	<ul style="list-style-type: none"> As stated in Article 4, the duration of license certificates for legal entities and fishing vessels is two years, and the duration of license certificates for real persons is five years. Article 13 stipulates that the vessels with a length of less than 12 meters may hold fishing gear such as beam trawl, shrimp trawlers and harpoons
Decision Concerning Agricultural Supporting Materials for 2012 (Decision No:2012/3106):	Fisheries	<ul style="list-style-type: none"> According to Article 4, in order to protect and sustainable operation of the aquatic resources and to reduce the fishing pressure on stocks, the vessel owners with aquaculture authorization certificate who have vessels of twelve meters and over are paid an amount according to the ship's length in support of the withdraw of the vessels from the fishing. shrimp catching. According to Article 18, Sardinian catching with extension nets is free throughout the period. As stated in Article 19, in all territorial waters, from 1 April to 31

Related Legal Requirement	Topic	Remark
		August, catching bonito is prohibited with any kind of fishing gear.
Subsidy Notification Implementing Those Withdrawn Their Vessels from Fishing (Communique No: 2016/40):	Fishing Vessels	<ul style="list-style-type: none"> As stated in Article 1, the purpose of this communiqué is to provide the procedures for works and operations related to the support of the ship-owners who intentionally sold the fishing vessels ten meters or more in order to protect the stocks, reduce the fishing pressure and ensure sustainable fishery in accordance with the Decision of the Agricultural Supports to be made in 2016 put into effect by the Decision of the Council of Ministers. Article 4 stipulates that the vessels registered in Fishery Products Information System (SUBIS) with a length of ten meters or more, which are licensed by the Ministry of Food, Agriculture and Livestock and to be engaged in fishing activities in the seas and which are still valid, are in the scope of support.
Decision Concerning Agricultural Supporting Materials for 2012 (Decision No:2012/3106	Fishing Materials	<ul style="list-style-type: none"> According to Article 4, in order to protect and sustainable operation of the aquatic resources and to reduce the fishing pressure on stocks, the vessel owners with aquaculture authorization certificate who have vessels of twelve meters and over are paid an amount according to the ship's length in support of the withdraw of the vessels from the fishing. Subsidy Notification Implementing Those Withdrawn Their Vessels From Fishing.

4.2 INTERNATIONAL STANDARDS

IFC Performance Standard-5

This Performance Standard applies to physical and economic displacement resulting from the following types of land-related transactions:

- Land rights or land use rights acquired through expropriation or other compulsory procedures following the host country's legal system.
- Land rights or land use rights acquired through negotiated settlements with property owners or those with legal rights to the land if failure to settle would have resulted in expropriation or other compulsory procedures.
- Project situations where involuntary restrictions on land use and access to natural resources cause a community or groups within a community to lose access to resource usage where they have traditional or recognisable usage rights.
- Certain project situations requiring evictions of people occupying land without formal, traditional, or recognisable usage rights.
- Restriction on access to land or use of other resources, including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, freshwater, medicinal plants, hunting and gathering grounds and grazing and cropping areas.

Relevant PS5 aspects are highlighted in Table 4-3.

Table 4-3: IFC Performance Standard- 5

Related PS5 Paragraph	Topic	Remark
8	Project design	<ul style="list-style-type: none"> The client will consider feasible alternative project designs to avoid or minimise physical and economic displacement, while balancing environmental, social, and financial costs and benefits, paying particular attention to impacts on the poor and vulnerable.
9	Compensation and benefits for displaced persons	<ul style="list-style-type: none"> When displacement cannot be avoided, the client will offer displaced communities and persons compensation for loss of assets at full replacement cost and other assistance to help them improve or restore their living standards or livelihoods, as provided in this Performance Standard. Compensation standards will be transparent and applied consistently to all communities and persons affected by the displacement. Where livelihoods of displaced persons are land-based, or where land is collectively owned, the client will, where feasible, offer the displaced land-based compensation. The client will take possession of acquired land and related assets only after compensation has been made available and, where applicable, resettlement sites and moving allowances have been provided to the displaced persons in addition to compensation. The client will also provide displaced communities and persons with opportunities to derive appropriate development benefits from the project.
10	Community engagement	<ul style="list-style-type: none"> The client will engage with affected communities, including host communities, through the process of stakeholder engagement described in Performance Standard 1. Decision-making processes related to resettlement and livelihood restoration should include options and alternatives, where applicable. Disclosure of relevant information and participation of affected communities and persons will continue during the planning, implementation, monitoring, and evaluation of compensation payments, livelihood restoration activities, and resettlement to achieve outcomes that are consistent with the objectives of this Performance Standard. Additional provisions apply to consultations with Indigenous Peoples, following Performance Standard 7.
11	Grievance mechanism	<ul style="list-style-type: none"> The client will establish a grievance mechanism consistent with Performance Standard 1 as early as possible in the project development phase. This mechanism will allow the client to receive and address specific concerns about compensation and relocation raised by displaced persons or

Related PS5 Paragraph	Topic	Remark
		members of host communities in a timely fashion, including a recourse mechanism designed to resolve disputes impartially.
12-16	Resettlement and livelihood restoration planning and implementation	<ul style="list-style-type: none"> Implementation of a RAP or livelihood restoration plan (LRP) will be considered completed when the adverse impacts of resettlement have been addressed in a manner consistent with the relevant plan and the objectives of this Performance Standard. It may be necessary for the client to commission an external completion audit of the RAP or LRP to assess whether the provisions have been met, depending on the scale and complexity of physical and economic displacement associated with a project.
19-24	Physical displacement	<ul style="list-style-type: none"> In the case of physical displacement, the client will develop a RAP that covers, at a minimum, the applicable requirements of this Performance Standard regardless of the number of people affected. This RAP will include compensation at full replacement cost for land and other assets lost. The plan will be designed to mitigate the negative impacts of displacement; identify development opportunities; develop a resettlement budget and schedule, and establish the entitlements of all categories of affected persons (including host communities).
25-29	Economic displacement	<ul style="list-style-type: none"> In projects involving economic displacement only, the client will develop a LRP to compensate affected persons and communities and offer other assistance that meets this Performance Standard's objectives. The LRP will establish the entitlements of affected persons and communities and will ensure that these are provided in a transparent, consistent, and equitable manner.
30-32	Private sector responsibilities under government-managed resettlement	<ul style="list-style-type: none"> Where Expropriation and resettlement are the government's responsibility, the client will collaborate with the responsible government agency, to the extent permitted by the agency, to achieve outcomes consistent with this Performance Standard. In addition, where government capacity is limited, the client will play an active role during resettlement planning, implementation, and monitoring.

4.3 GAPS BETWEEN NATIONAL REGULATIONS AND IFC PERFORMANCE STANDARD

The key gaps between the Expropriation Law and PS-5 are presented comparatively in the table below for minimizing Project impacts, compensation of land users, defining support to vulnerable people when needed, effective stakeholder engagement process and implementation of grievance mechanism.

Following table presents an assessment on the gaps between Turkish Legislation and IFC PSs.

Title:	LIVELIHOOD RESTORATION PLAN	Classification:	Public
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Table 4-4 Gaps Between IFC PS-5 and Turkish Legislation

IFC Requirement	National Requirement	Gaps	Actions to Bridge the Gaps	Implementation of TP-OTC
Compensation and benefits to displaced persons				
<p>When displacement cannot be avoided, the client will offer displaced communities and persons compensation for loss of assets at full replacement cost and other assistance to help them improve or restore their standards of living or livelihoods, as provided.</p>	<p>Expropriation Law provides cash compensation to economically and physically displaced people. The valuation process of the lands and the residential buildings are being conducted according to the type of land as defined by the Expropriation Law.</p>	<p>Compensation payments are not always at full replacement cost. Some deductions are made during the valuation process as given by Expropriation Law. Illegal users (users on public lands) or ecosystem usage are not recognized in the scope of the law, but users on private lands are entitled to compensation. Livelihood impacts, including access to agricultural lands due to land division, access to pasture or agricultural lands, marine usage restriction or the construction phase livelihood impacts including noise, dust, light and vibration, are not considered.</p>	<p>LRP fund will be deployed to fishers and PAPS LRP will be implemented. Where possible in-kind compensation and additional assistance will be provided to fishers.</p>	<p>LRP fund will be established for the marine usage restrictions. LRP will be implemented and within the scope of LRP cash compensation for fuel consumption and in-kind compensation will be provided to fishers.</p>
RAP and LRP preparation				
<p>A RAP/LRP is required for the mitigation of the Expropriation and the livelihood impacts.</p>	<p>Turkish Expropriation is limited to land and asset compensations. Compensations are paid in cash through bank accounts directly to the owner of the land and assets. Users on public lands and ecosystem and marine users/beneficiaries are not addressed either in the law.</p>	<p>Livelihood impacts are not addressed.</p>	<p>A /LRP should be prepared in compliance with IFC PS5 and implemented by TP-OTC</p>	<p>After the approval of the restoration plan by the Lenders, this plan will be implemented.</p>

IFC Requirement	National Requirement	Gaps	Actions to Bridge the Gaps	Implementation of TP-OTC
Definition of the eligibility criteria				
Eligible people may be classified as persons (i) who have formal legal rights to the land or assets they occupy or use; (ii) who do not have formal legal rights to land or assets but have a claim to land that is recognized or recognizable under national law; or (iii) who have no recognizable legal right or claim to the land or assets they occupy or use.	Turkish law covers persons with legal rights/claims and customary/traditional users' rights on private property. There is no provision for those who use public land.	Turkish law only provides compensation for the formal owners and users on private lands (who have a justification of any kind) who have their land ownership registered as part of the Expropriation process. There is no requirement to undertake a census to identify or compensate those not currently included in the official land registry.	A fisheries survey was undertaken in February 2022 to identify all fishers	Eligible fishers were identified according to records of cooperative and surveys.
Monitoring				
Where Expropriation and resettlement are the government's responsibility, the client will collaborate with the responsible government agency, to the extent permitted by the agency, to achieve outcomes consistent with this Performance Standard. In addition, where government capacity is limited, the client will play an active role during resettlement planning, implementation, and monitoring.	No provision	The law does not require input and output monitoring and a completion audit to assess the effectiveness of the valuation, compensation strategies, Expropriation impacts and the restoration of the livelihoods.	Monitoring activities should be conducted as defined in the plan.	Monitoring activities will be conducted as defined in the plan.

5.0 AREA OF INFLUENCE

The Area of Influence (Aoi) is the area that may be impacted by a project. Understanding the Aoi is an essential requirement for a social impact assessment (SIA). Following that, the social baseline must focus on the Aoi, although the baseline may have a broader focus, depending on the nature and impacts of the project.

According to the Guidance Note 1 Assessment and Management of Environmental and Social Risks and Impacts of IFC (2012), where the project involves specifically identified physical elements, aspects, and facilities that are likely to generate impacts, environmental and social risks and impacts will be identified in the context of the project's Aoi. This Aoi encompasses, as appropriate:

The area likely to be affected by:

1. The project and the client's activities and facilities that are directly owned, operated or managed (including by contractors) and that are a component of the project; impacts from unplanned but predictable developments caused by the project that may occur later or at a different location; or indirect project impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent.
2. Associated facilities³, which are facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable.
3. Cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted.

Aoi includes all project-related structures, ancillary facilities and related activities that are heavily dependent on the project, owned or managed by the project owner and subcontractors, including the access roads using for the Project activities. In addition, areas and communities directly affected by the proposed project and ancillary facilities form part of the impact area. Cumulative impacts and potentially undesirable but predictable project outcomes should also be considered in defining the Area of Influence.

The closest settlement to the ETL is Aşağıhsaniye shown in the Figure below.

³ According to IFC PS1; associated facilities are facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable.

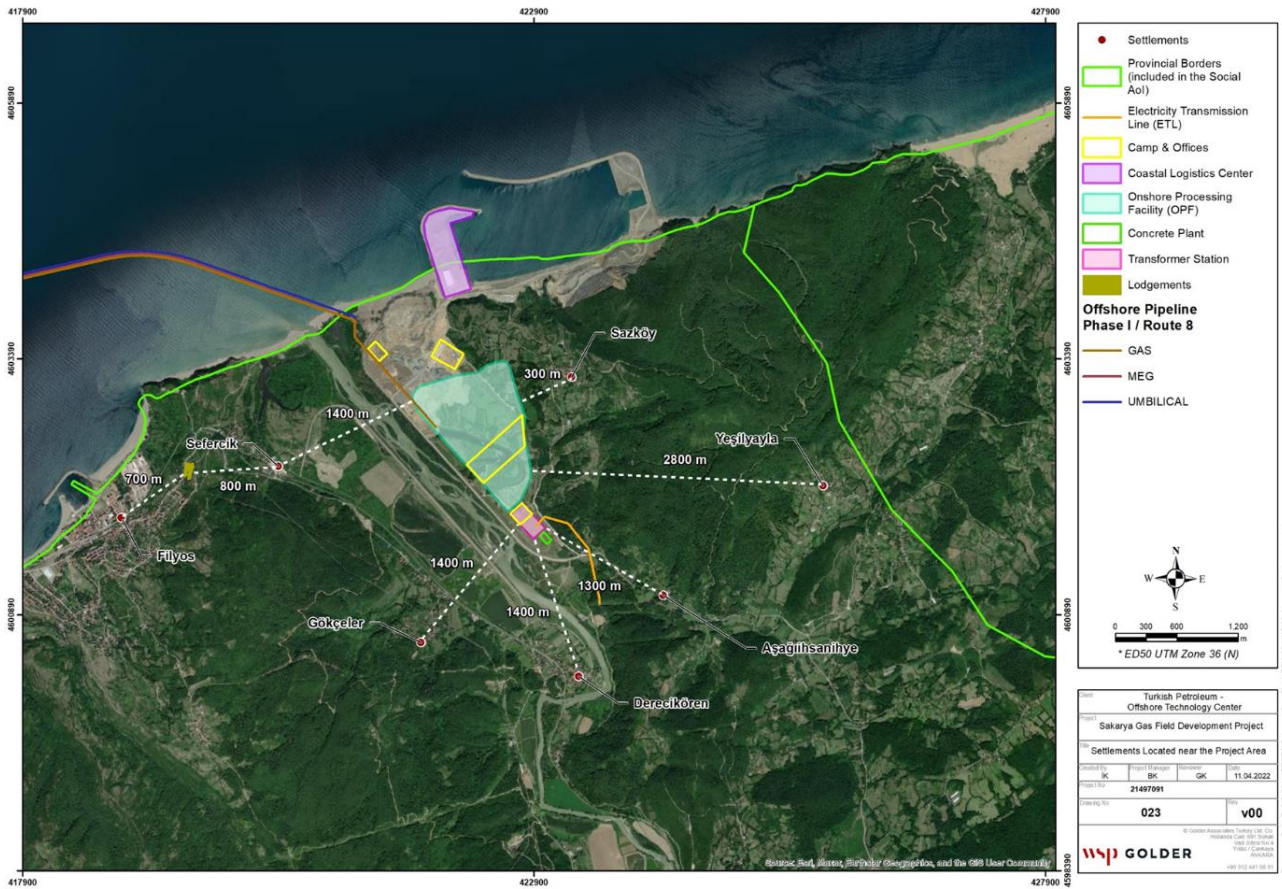


Figure 5-1 Nearest Settlement to ETL

The offshore local impact area within the scope of the Project is 2 km from each site of the pipeline, which was announced by the NAVTEX decision and it was observed during the field studies are Filyos fishing port is using the subject area. Within the framework of the conducted interviews, it is seen that the port fish within 3 miles of the shore. Considering the effects of the Project on the income sources of the fishers, the following Area of Influence has been determined as the intersection of the pipeline and the NAVTEX restriction area.

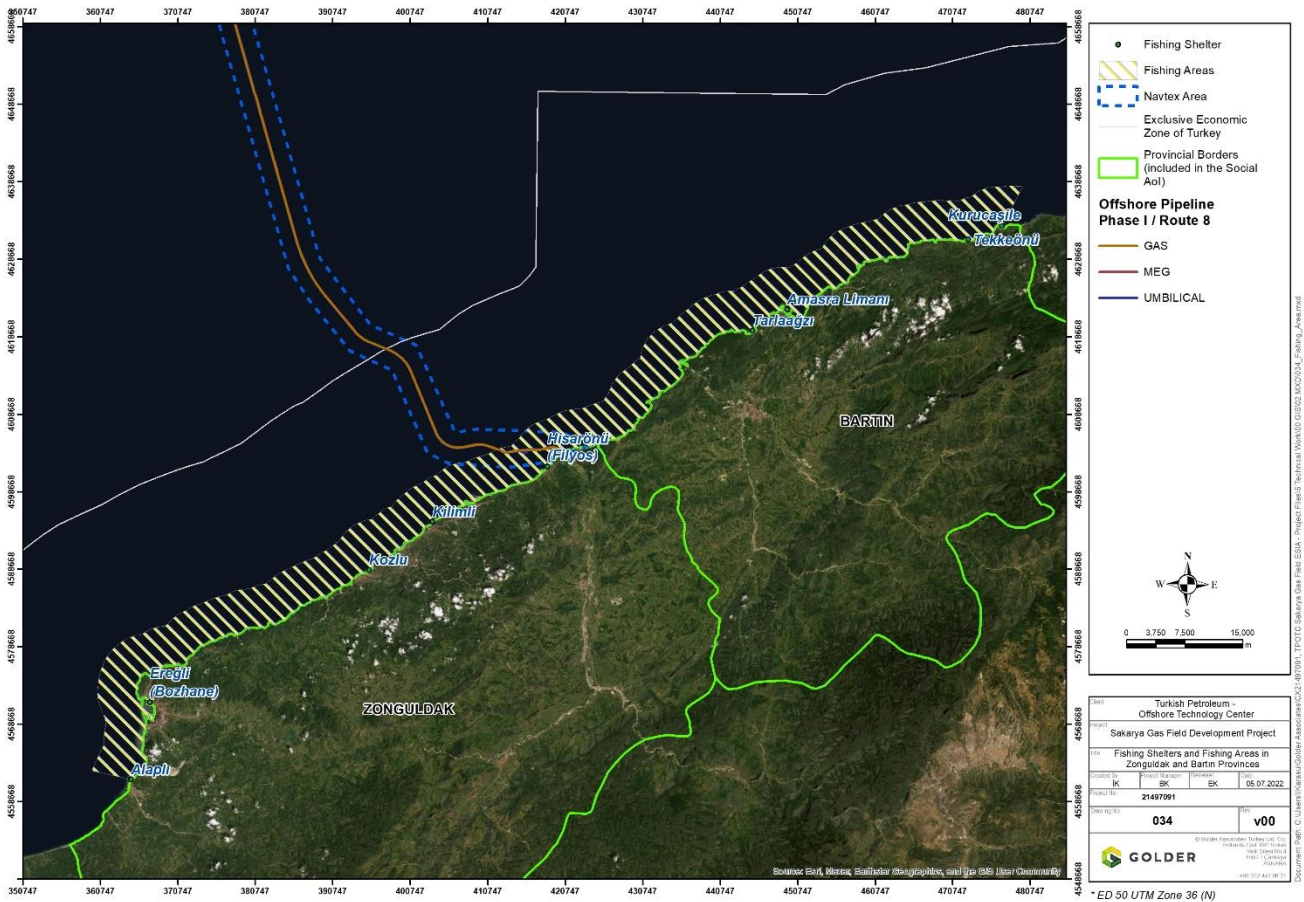


Figure 5-2 LRP AoI

6.0 METHODOLOGY

The ESIA Gap Analysis Report dated December 2021 and the results of the social field surveys, which were completed in February 2022 for the ESIA by GOLDER suggests that the development of livelihood restoration plan is required considering the prohibition of fishing during the offshore pipeline construction which will cause economic loss for the fisheries in the social AoI. Detailed information of the PAPs is presented in Chapter 8.

According to IFC Performance Standard 5 in order to avoid or mitigate any adverse impacts occurred directly or indirectly due to the Project activities on the livelihoods, should be compensated.

IFC states that particular attention should be paid to the needs of vulnerable groups, especially those below poverty line, the landless, the elderly women and children.

This LRP was developed to support the PAPs to be better off or at least not worse than the Project and related economical displacement impacts are managed effectively, in keeping with national and international standards. In addition LRP will aim to provide the full restoration of the livelihoods, income, and quality of life for Project Affected People (PAPs) and Project Affected Communities (PACs), as part of the Social Impact Assessment (SIA) and other project documents.

With regards to outputs of the Gap Analysis Report and based on the data provided by TP-OTC, LRP survey was planned and the following methodology was applied during the social site survey.

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Desktop Study (Secondary Data)

Secondary data were obtained from National institutions and Project-specific documents such as EIA reports, to help reach a common understanding of the Project's social impact area and to form the basis for the social site survey.

In this context, the data base sources listed below were used.

- Zonguldak Governorship
- Çaycuma Municipality
- Turkstat
- Provincial Directorate of Environment and Urbanization
- Zonguldak Provincial Directorate of Agriculture and Forestry
- Western Black Sea Development Agency (BAKKA)
- Yersis.org
- Zonguldak Chamber of Industry and Commerce
- Zonguldak Employment Agency,

Fisheries Survey

Quantitative and qualitative data were collected from the fisheries in the AoI during the social site visit held in February 2022 by Golder. In total 24 fishers were surveyed in Filyos. The Filyos Fisher's Cooperative reported 36 commercial boats, approximately 200 amateur boats (as reported by the Cooperative Representative), 5 diving fishers and approximately 120 crews anticipated to be affected from the restrictions, in Filyos. Since the fishing activities are carried out for side income for the majority of the fishers, only 24 fishers were surveyed. Commercial fishers surveyed in Filyos, represent 10.17 % of the total commercial and amateur fishers in Filyos. The content of the questionnaire contains the following topics;

- Participants demographic characteristics
- Information on the Project
- Vulnerability
- Housing conditions
- Household assets
- Income sources
- Details on fishing activities (location, year, tools etc.)
- Type of boats, details of boats
- Season of fishing
- Connected Port
- Membership in the cooperative
- Type of fishing (seasonal, permanent)
- Number of crew

- Expenditures
- Satisfaction from fishing
- Types and amounts of fishes
- Marketing channels
- Problems of fishing
- Recommendations

ESIA Consultations

A meeting was held with the fishing cooperation on 22 November 2022 and approximately 20 fishers participated to the meeting. The outputs of the ESIA studies and the mitigations that will be implemented were shared with the fishers. The impacts of the NAVTEX restrictions and the construction phase impacts of the Project were discussed with the fishers.

Second Fishery Survey

As it was not possible to capture the actual impacts of the NAVTEX restrictions and the construction of the Project during the fishery survey held in February 2022, an additional survey and engagement with the fishers was scheduled. This survey focused on the impacts of NAVTEX restrictions. Project brochures and posters describing the restricted zone, duration and prohibited actions were distributed to fishers. The impacts of the restriction were more evident 10 months after the first announcements and in total 28 fishers have participated in the survey, comparing the main fishing indicators including, income, number of crew, the amount of fishes caught and their debts.

Site Observations

In addition to the field studies mentioned above, field observations were made by the social expert to assess current practices in the Project and in the Area of Influence, in terms of land use, visual impacts, local engagements, and community health and safety.

7.0 SOCIOECONOMIC PROFILE OF SETTLEMENT AFFECTED BY ETL

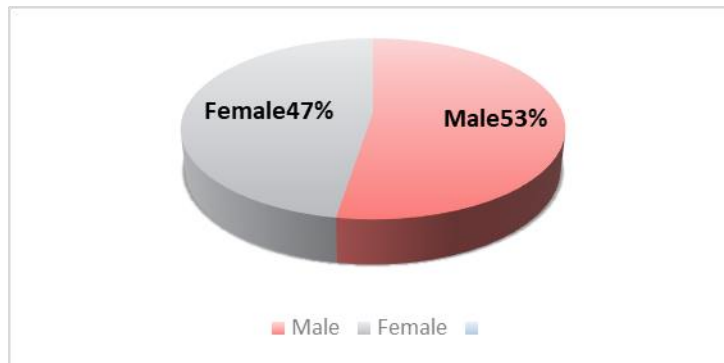
An in-depth interview was held with the Mukhtar of Aşağıihسانیye on February 18, 2022. According to the results of the interview, the village population is around 160 people, consists of 55 households in total. The average household size was determined as 2.7. During the summer period, the total population reaches up to 300 people. The main reason for this increase is temporary migration of the young people for the agricultural production who have lands in the village. It was stated that the population has been decreasing in the last five years due to the lack of job opportunities in the region. There is 1 person between the ages of 0-5, 11 people between the ages of 6-18, 5 people between the ages of 19-25, 58 people between the ages of 26-55, 50 people between the ages of 56-65, and 33 people between the ages of 65 and over.

According to TURKSTAT data, the total population of Aşağıihسانیye Village declined between 2007 and 2017, increased in 2017 but declined again after 2019.

Table 7-1 : Population Information of Aşağıhsaniye by Year

Year	Population of Aşağıhsaniye Village	Male Population	Female Population
2021	156	82	74
2020	156	84	72
2019	160	87	73
2018	163	89	74
2017	130	71	59
2016	165	91	74
2015	178	97	81
2014	179	95	84
2013	175	97	78
2012	177	93	84
2011	183	95	88
2010	188	96	92
2009	187	93	94
2008	197	98	99
2007	220	111	109

Source: TURKSTAT, 2021


Figure 7-1: Gender Distribution Aşağıhsaniye Village

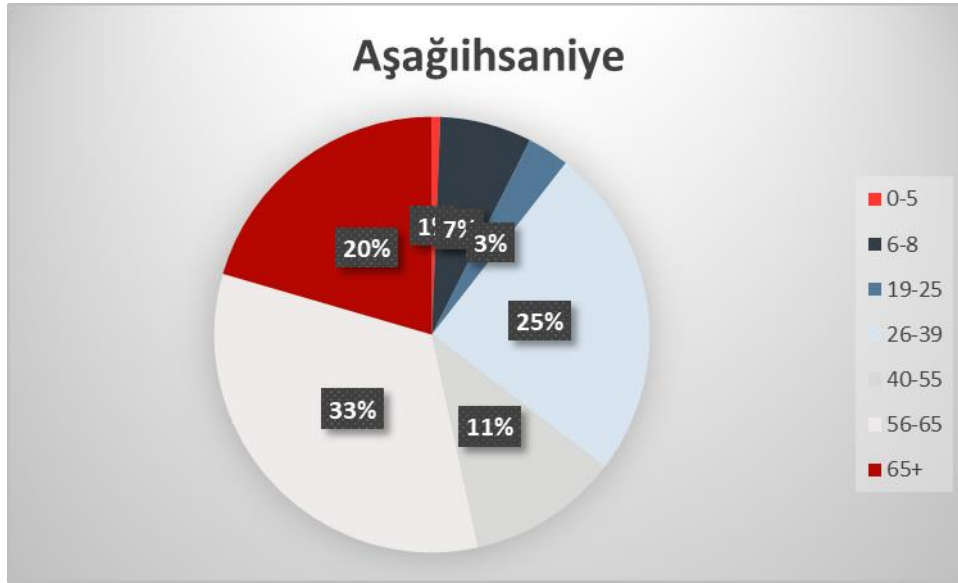


Figure 7-2: Age Distribution of Aşağıhsaniye Village

Aşağıhsaniye

- In Aşağıhsaniye village, the main sources of income are agriculture, beekeeping, animal husbandry, harvesting laurels from the forest, job opportunities in the surrounding works and pensions.
- An annual average of 100 tons of hazelnuts, 2 tons of honey, 470 tons of laurel is produced,
- There are approximately 180 cattle, 150 sheep and goats, and 700 beehives in the village.
- There are 20 salaried employees, 50 farmers, 2 business owners, 22 casual workers, 50 retired and 2 unemployed in the village.
- It has been stated that job opportunities in the village have increased in the last five years. The biggest reason for this is the industrial areas developing in the region.
- Average household income is around 3,500 TL.
- An increase has been observed in the average household income in the last five years in parallel with the developing industrial areas.

Table 7-2 Vulnerable Groups in Aşağıhsaniye

Vulnerable Groups	Aşağıhsaniye Village
Illiterate	4
Women household head	12
Cannot speak Turkish	0
Refugee	0
Living with the assistance of government	5
Living with the assistance of an association	0
At school age but do not continue to school	0

Vulnerable Groups	Aşağıhsaniye Village
Living with chronic diseases	1
Over 70 years old and living alone	5
Physically disabled	5
Mentally disabled	1

8.0 FISHING BACKGROUND IN THE REGION

According to the Report prepared by Ministry of Agriculture and Forests Directorate of Aquaculture Central Research Institute of Trabzon (2021), fishing in Filyos is not based on long years.

Filyos Fishing Cooperative was established in 2007 and the number of members of the cooperative is 36 as of December 2022. The president of the cooperative is Zeki ÇAKAR. Although the foundation of the Filyos fishing port was laid in 1996, it was completed in 2006. Before that, fishing boats were being pulled into the sand with the help of the capstans/woods. Before the 1980s, fishing in the Filyos settlement was almost non-existent. Low fish prices, small boats, and traditional and primitive fishing did not provide a suitable income and assurance for fishers. In addition, there were not enough number and quality fishers in the region. There was no significant increase in the number of fishers before the 2000s. The number of fishers did not exceed 5-6 in this period. The existence of coal mining activities in the region, brick factory in Filyos, SEKA, Bartın cement factory in Çaycuma, Ereğli, Karabük Demirçelik enterprises may have put fishing in the second place (Atış and Çelikoğlu, 2019).

As of today, the situation has changed slightly. The number of professional fishers has increased. However, it has been observed that those who fish depending on the Filyos fishing port maintain the local, small coastal fishing structure. Because in Filyos, there are no boats with large fishing characteristics such as drifters and seine fishing. The height distribution of professional fishing boats is 6-11 m and the engine power is in the range of 220-250 HP. 23 of these fishermen are engaged in coastal gill/dive in fishing. 7 fishermen also fish for winkle (*Rapana venosa*). There are also approximately 200 amateur fishers at the Filyos fishing shelter. It has been reported by coastal fishermen that the most fished fish species depending on the fishing season are turbot (*Psetta maxima*) (7 fishermen), red mullet (*Mullus barbatus*), haddock (*Merlangus merlangus euxinus*),

Only 6 of these fishermen who fish depending on the Filyos fishing shelter continue their lives with the income they earn directly from fishing. It has been determined that these 6 fishermen did not have a secondary income source. however the remaining 24 fishermen have additional income by working actively in the public or private sector other than fishing. However, more than 50% of the total earnings of those with additional earnings during the year come from fishing.

As of the period (April 30, 2021) in the coast of Filyos, Red mullet fishing is made intensively with bottom extension nets. In the observations made with the coastal fishermen returning to the port at the end of the Red mullet fishing operation, it has been determined that 40-50 kg of Red mullet has been fished per boat.

During this period, approximately 7-8 fishermen fish red mullets on a daily basis. The boat exit price of the Red mullet fish varies between 20-30 TL/kg on average. The fishes out of water is mostly shipped to large cities, especially Istanbul, through intermediaries .

Fishing has become increasingly important as an important professional activity in the coastal settlements of Filyos and its surroundings. Fish species with high economic value, especially bottom fish, such as red mullets, whiting, turbot, acorns, bluefish/young blue fish, are the indispensable food of the tables throughout the year in addition to the traditional nutritional culture (salting, brine, lacquer, etc.). However, it always continues to have an important place in daily social and cultural life.

Fishing in the region is mainly characterized by extension and drive in fishing. Extension and drive in nets established in the waters close to the shore are used in the fishing of seasonal migratory fish populations such as bluefish/young blue fish and acorn. It is the region between Akçakoca and Amasra along the western Black Sea coasts, where the two-way autumn-winter-spring migration of the bluefish and acorn is the most intense. The coast of Filyos is used by coastal fishers from other settlements in the region as well as their local fishers

From east to west, the main fishing settlements on the Amasya Zonguldak line and the number of fishermen actively fishing in these settlements are as follows: Amasra (35), Tarlaağzı (17), İnkum (20), Güzelhisar (3), Mugada (4), Kızılkum (1), Filyos (30), Kilimli (28). Fishermen settlements between Amasra in the east and Kilimli in the west also cast a net on the coast of Filyos.

The region is a very rich region in terms of nutrition due to the discharge of rivers such as Bartın river and Yenice River. This also increases the biodiversity of the benthic ecosystem. Among commercial fish species, close coastal waters are quite rich for fish populations with significant economic importance such as turbot and red mullets (Zengin et al, 2020). Yenice River or Yenice River is a stream that is collected and brought together by the streams coming from Koroğlu Mountains, Bolu Mountains and Ilgaz Mountains. This river system, which has a length of up to 228 kilometres, is poured into the Black Sea in Filyos town of Zonguldak. However, due to global warming, the water abundance in Yenice River has decreased to one third of the water abundance in the past. Yenice River suffers greatly due to environmental pollution and factory wastes. While the 'SEKA Paper Factory', which was established on the edge of the stream in 1970, caused great damage to the stream, the pollution problem of the factory was eliminated with the water treatment systems (Atlas, 2009; Atış and Çelikoğlu, 2019).



Figure 8-1 Sorting of the Red mullet fish, caught from bottom extension nets, on the vessels returning to the fishing port April 30, 2021 on the coast of Filyos.

8.1 MARINE ECOSYSTEM CHARACTERISTICS

The continental shelf along the Anatolian shores of the Black Sea is quite narrow. These sites account for 4% of the total surface area. In the south of the Black Sea, there are steep coasts and deep canyons. There are local-local continental shelves in Sakarya, Yeşilirmak and Kızılırmak river discharge areas. In regions other than this, the topography deepens with a very sharp base slope. As 10-20 km from the coast is opened, the depth exceeds 2000 m (Balkas et al, 1990).

Due to its physicochemical properties, the Black Sea shows anoxic characteristic at depths beyond 150-200 m. The presence of hydrogen sulfide gas at these depths and the rapid decrease in oxygen limit biological efficiency. For this reason, despite the rich nutritional feature of the Black Sea, especially benthic organisms are very poor in terms of species diversity (Balkas et al, 1990; Çelikkale, 1992). Therefore, there is no fishing activity in the Black Sea at depths below 100 m on average. The fact that the continental platform is narrow, the ground is uneven and fractured in the Central-Western Black Sea region, including the coast of Filyos.

The maritime topography in the Central-West Black Sea, which includes the coast of Filyos, is extremely narrow in terms of coastal shelf compared to Samsun and Sakarya Shelf Regions. The coastal region is deepening radically. Therefore, bottom trawl fishing has not developed in this region. Among the sub-geographic regions where trawling is carried out along the Black Sea coast, the weakest region in terms of fishing economy and fishing power is the region between Bartın/Amasra and Zonguldak/Merkez. As a matter of fact, in addition to trawl fishing, other fishing methods (seine, hydraulic mussel, sea snail/algarna) could not be developed in the fishing settlements in this region. Existing trawl fishing boats are also relatively weak technologically, thus in terms of capital accumulation. Fishing (turbot) and drive in (acorn/bluefish) are mostly carried out with seasonal extension in the region. The fishing areas in this region in the middle are under the pressure of both the trawl fishermen (bottom and pelagic trawl fishing) and the seine fishing fleet in Samsun Shelf area. The fishing of foreign boats in these localities causes the local fishermen in these areas to not be able to fish efficiently and satisfactorily. On the other hand, trawl fishermen from other settlements of the Black Sea, especially from Samsun region, who come to this region for seasonal fishing, cause intense field violations and, in short, illegal fishing. In order to reach daily satisfactory fishing, trawl and seine fishermen are directed to illegal fishing, especially in the fishing of Red mullet and bluefish; field violations and out-of-target fishing. However, since there was no coastal area prohibition (depth and distance) in seine fishing in the Western Black Sea until 2012, mackerel and anchovy seine boats could carry out fishing operations in coastal waters up to 10 fathoms. However, the implementation of the 24 m coastal depth ban by the Ministry of Agriculture and Rural Affairs since 2012 has been a positive development in terms of the future of especially bluefish and other benthopelagic macrofauna, which are distributed in the close coastal ecosystem or use these coasts for seasonal migration (Zengin et al, 2019).

On the other hand, not only commercial target species are harmed in the fishing of boats belonging to the large fishing fleet such as bottom trawl nets, but also all other creatures living in the benthic (bottom) and benthopelagic (demersal environment) and not economical, shelled, cartilage and bone-in. These species have a very important function in the food dynamics of the Black Sea beyond whether they are economical or not. In the commercial trawl operations carried out in the region, many species (such as tongue, brill, weever, Thracian, mendole, scorpionfish, rockfish, piper, sprat, silverside, shad, broad nose pipe fish, seahorse, shark, stingray, crab, shrimp) living in the nearby coastal waters and of vital importance in terms of biodiversity are selected from the catch taken on board and thrown back into the sea as dead.

8.2 STATUS OF COMMERCIAL FISH STOCKS

With the excessive support and incentives for fishing after the 1980s, the fishing power grew unlimitedly. As a result of the quantitative and qualitative increase in the fishing fleet, the stocks of the economic species in the fishing areas in the region have started to decrease gradually since the early 1990s. This decrease has led to a decrease not only in commercial fish species, but also in non-target/non-economic species. In addition to the incompatibility of the mesh openings used in the bag part of the bottom trawl nets, the long-term trawl

operations and illegal fishing in waters close to the shore have also been effective in this. In the shallow areas up to 10-15 m depth in very close coastal waters, seine nets up to 100-150 m depth have caused all living creatures to enter the net. This process has continued to increase since the 1990s. This vicious cycle continued until the 2000s. The catch in the unit effort obtained from the existing stocks for all types of fishermen fishing in the Black Sea since the early 2000s has started to not satisfy the fishermen chiefs. Fishing efficiency has gradually decreased and the populations of species such as turbot, red mullets, sturgeon, picarel, rock sea bass and sea robins have started to decrease. Therefore, many of these species have lost their economic importance. These dramatic results have been revealed by many academic studies conducted in the region since the early 1990s (Zengin et al, 1992; Atilgan et al, 2016; Zengin et al, 2019, Zengin et al, 2020).

The results of research on economic fish stocks in the Western Black Sea, which includes the coast of Zonguldak, confirm this dramatic decrease in fish stocks. Within the scope of the '*Estimation of Demersal Fish Stocks in the Western Black Sea Project*' carried out by the Istanbul University Faculty of Aquaculture and Trabzon Central Research Institute between 2011-2014, the stock and population structure of whiting, red mullet and turbot, which are three important economic demersal fish species, were examined in the region where Ereğli fishing areas are located. According to the results obtained, it was revealed that there was a significant decrease in the population amounts of all three species, that the individuals constituting the population consisted mostly of 0, 1 and 2 year old fry and young fish, and that the maternal individuals decreased significantly due to overfishing. This means that the stock of whiting in the Black Sea has been exposed to overfishing for many years. Red mullet stock is included in the group of potential '*unsustainable stocks*'. It can be said that sustainable fishing of turbot stocks in the region has not been possible in recent years and carries the risk of collapse in the remaining stock at sea (Zengin et al, 2020).

The findings obtained from the researches conducted by the same academic organizations on the samples taken from the bluefish fish, which was landed by fishing with different fishing devices (seine, bottom trawl, middle water trawl, drive in, extension of professional fishermen in the fishing settlements in the Western Black Sea, have been determined that there is a high level of fishing pressure on this important species, and yet young individuals such as blue fish and small blue fish are fished (Zengin, 2020). The vast majority (between 75% and 85%) of the bluefish fish is fished with seine nets. In addition, bottom trawl fishing have a rate of 10-15% in the Black Sea. Since all three fishing vehicles are not selective, fishing in the autumn-winter period is intensively carried out in the October-November-December period and there is an intense fishing pressure on young and young individuals in the 0 and 1 age group (Zengin, 2020).

The first breeding length of the blue fish population is 25 cm (Atilgan et al, 2016). The number and weight ratio of individuals 18 cm and below, which constitute the legal minimum fishing length limit currently applied, was found to be very high in all three fishing devices. Individuals under this height group consist of 0 and 1 year old blue fishes (Photo 5). In terms of the sustainability of the bluefish population in the Black Sea, the minimum size prohibition for the industrial fishing fleet (seine-pelagic trawl-bottom trawl) appears to be more logical/feasible, especially in grouper fishing (depth- distance from the shore) and temporal (time of seasonal fishing: in terms of reproduction), as well as the mesh opening regulations.

The most striking indicator of the collapse of commercial fishing resources is the shrinkage in the height distribution of important commercial target species such as whiting, red mullet and mackerel that are fished by bottom trawl fishermen in the region. In the studies conducted on these important species fished with bottom trawl nets, it has been determined that the fishing is largely below the minimum legal fishing size (the *lowest legal fishing size in the aquaculture circulars for all three species is 13 cm*) and is presented to the market in this way. According to the findings, the rate of non-target fishing was found to be 93.8% in whiting, 98% in Red mullet and 98.2% in laurel. Individuals in this height group consist of fish that have not yet reached sexual maturity in the 0 and 1 age group (Zengin, 2020). In this way, the population is under great fishing pressure before reaching the reproductive age/maturity. A large part of the discarded catch is thrown back as dead after being selected on the deck after the operation and is fed to seabirds/seagulls. In this way, a large bio-economic loss occurs on the target fish stocks with bottom trawl nets. In fact, the goal is to make changes

on the fishing device that will minimize these losses and to take serious operational measures (reducing the operation time to 1 hour instead of 2 hours, arranging fishing time in accordance with the vertical migration of the fish, seasonal ban instead of depth ban, etc.) (Zengin et al, 2019).

In the turbot fish fished with trawl nets, it was observed that very few individuals under 45 cm, which constitutes the minimum legal fishing size, were fished, while individuals 30-40 cm tall were publicly introduced to the market.

8.3 POSSIBLE IMPACTS OF NATURAL GAS ACTIVITIES ON THE ECOSYSTEM AND FISH POPULATIONS

Coastal and aquatic ecosystems are an ecological system consisting of microorganisms such as flora, fauna and plankton. The coasts allow various uses as a natural resource. The main ones are settlement, transportation, trade, industry, agriculture, waste material disposal, raw material supply, defence, recreation, tourism, health, energy, fishing and sports. It is essential to pay attention to the public interest in benefiting from the coast and coastlines. The coasts are of interest to various sectors with their cultural and historical values, especially the beauty of nature. In contrast to the natural-dynamic flow of natural areas, disruption or destruction can affect the functions of all biotic and abiotic compounds of that ecosystem without any return to sustainable living life in the long term. However, it is also possible to bring natural areas to any structuring or investment, ultimately to the economy, with a minimum impact or minimal loss.

The fastest changing regions on earth are coastal areas. Especially after the 1980s, the coast of Turkey entered under significant pressure, mainly due to urbanization and population growth, as well as very different activities. Fish stocks, which constitute the main natural source of fishing and thus of fishing, were the most affected sectors. On the other hand, industrial/technological investments are inevitable in order to take its place in the world globalizing in terms of industry, infrastructure and therefore in terms of economy in 21st century Turkey. However, negative effects can be minimized with all possible measures that can be taken for the natural environment during the construction, implementation and operation stages of any infrastructure programs in coastal/maritime areas. On the other hand, it is possible to activate development plans for the coasts that can be reclaimed or restored. In such projects, exhibiting a protective approach and taking alternative measures against possible negative effects can minimize the damage to the natural environment.

The offshore pipeline approaches the land from north west of the Filyos River estuary, and the landfall is east of the Filyos River. The distance of the litoral region in this location from the coast is approximately 1 km. Then, a sudden slope/steepness begins and the depth gradually increases. The fishing area in this part where the litoral region is quite narrow. In the region between Cide-Amasra-K Ereğli, in Western Black Sea, the continental shelf and the coastal shelf area suddenly deepen depending on the terrestrial extension, and the maximum depth of the macrofauna, which is 100-120 m, is located as a very narrow line. From the coast, the length of this area cannot even reach 1 mile. On the other hand, due to these characteristics, this region is prohibited from bottom trawl fishing. For industrial fishing boats (seine and medium water trawl), there is no significant risk in terms of the bottom structure as the bottom (benthic) will not be contacted due to the fishing method. Because with this fishing method, anchovy, mackerel, acorn and bluefish are fished in the first place, which make seasonal migration movements to the Black Sea.

At this point, the main importance is to keep the damage to the benthic ecosystem at a minimum level during the pipe laying activity. The pipes to be placed on the sea floor shall be buried in the trenches prepared by bottom scanning in advance in a manner that the pipelines and cords shall reach approximately 30 meters depth where the route line approaches the coast. Bottom scanning will be carried out in an area of approximately 150 m x 1000 m x 3 m. Screening materials will be temporarily stored in the approved dumping area near the project site and then used to close the trench opened after the pipelines and cable laying. The scanning process will be carried out in a single stage and the pipes to be laid in it will be laid and the opened ditch will be closed as soon as possible. It is known that natural balance can quickly regain its own dynamics in such one-time, short-term habitat uses. Since this operation is performed once, both the sediment dynamics

of the excavated benthic ecosystem and the macrobenthic organisms in the benthic ecosystem will be able to regenerate themselves in a short time. Similar marine habitat uses have been experienced during the Eastern Black Sea 'coastal highway' studies since the early 1990s. T-type breakwaters/spurs, which were fortified at short intervals in order to withstand the wave dynamics of the filling works along the coastline, were effective in the regeneration of coastal wet beaches after a while and the regions where the spurs were located formed protected micro habitats in terms of fish populations. In the studies conducted on fish populations in the new habitats formed by T spurs, it was reported that fish populations in these regions increased in this period about ten years before their construction, and that there was an increase in fish populations that liked rocky (*Sciaena umbra*), which were characteristic of the Eastern Black Sea (Erüz et al., 2010).

There are two alternative route lines from the port and pipeline exit point. These are descending from the canyon to the east or west (the two together form the 'Zonguldak Canyon'). It seems more appropriate to descend from the west to secure the pipeline. Because the route to the east suddenly deepens before reaching 1 km from the coast. There is no sufficient area to allow the ship to sit on the shore during the work in this line. If advanced from the west, the point of descent from about 40-50 m depth drops rapidly to 2.6 km offshore of the Filyos fishing port. In this case, the pipeline will start to descend from the offshore of 'Filyos (Yenice) Canyon' with a sudden deepening. As a result, no matter which route is followed, in either case, measures will be taken to protect the ecosystem in the nearby coastal area. Since the litoral region deepens radically after the near coast and does not distribute to the benthic macrophage at these depths, there is no possibility of any risk in terms of fishing interaction.

As discussed above, the area where the project construction activities (pipe laying, etc.) are carried out is quite narrow and it is thought that the sea creatures in this area will not be affected much during the construction period. Because, although the Red mullet and turbot populations are the leading economic species living in the benthic, these populations will migrate to safer neighbouring locations during construction activities. In this respect, the presence of the Filyos River discharge zone, which is close to the pipeline and especially rich in nutrient input, constitutes an alternative habitat for benthopelagic species. However, the peak period of reproduction of bottom fish, especially in turbot and Red mullet populations, is between May 1 and June 30. In this period, both species move to the nearby coastal waters and lay their eggs in the pelagic water section (Zengin, 2000; Aydın and Karadurmuş, 2013). Both species will not be directly affected by these activities as they live in the pelagic region during the larvae and offspring stage. Afterwards, this area will rehabilitate itself in a short time.

The industrial port area, which includes natural gas facilities, must be closed to fishing within a certain area. Because there is a risk that fishermen will damage these pipes during fishing operations, whereas the ecosystem may be exposed to pollution or biotic life may be interrupted by reconstruction activities, which will result less quality fishing for the fishermen. In addition, the high marine traffic will definitely cause a safety risk for the fishermen, referring to the above facts for no beneficial reason.. The prohibition of fishing in a certain area in the port area, including the area where the pipeline lands, will create an opportunity for the development of fish stocks in the region, especially benthopelagic species. Because these areas, which are closed to fishing and protected, will serve as shelter, nutrition and breeding reserves of broodstocks. The decrease in fishing pressure in this region may contribute to the proliferation of species that are not important both in terms of commercial species and economics but are important in terms of food dynamics. One of the most important issues on sustainable fisheries management since the beginning of the 21st century for the development of dwindling fish stocks in the Black Sea is the efforts to allocate 'Marine Conservation Areas'. Although there are many negative factors on the rapidly decreasing fish stocks in the seas of our country today, the most important factor is fishing pressure. Closure of this region to fishing will also be beneficial for the fisheries economy.

In conclusion, it is expected that during the activities to be carried out at the project site, in line with the procedures and principles laid out in the legislation based on the "Aquaculture Law No. 1380", no substances that harm aquatic product resources or the environment shall be spilled, measures are taken to protect the

aquatic products from the harmful effects of the aquatic production areas and biological diversity, and measures to take against the possible effects of the aquatic products on reproduction, nutrition, migration routes and living environments shall be included in the EIA Project File.

According to the 2021 records of the Ministry of Agriculture and Forestry, it is seen that there are approximately 2000 fishing vessels in the Western Black Sea region. It is seen that fishing vessels decreased in 2019 due to the bans imposed due to the pandemic. In 2020, the number of fishing vessels reached average figures again.

Table 8-1 Number of Fishing Vessels in West Black Sea

Years	Number of Fishing Vessels
2016	2036
2017	2018
2018	1953
2019	1882
2020	1957

Source: Ministry of Agriculture and Forestry, 2021

Types of the fishes in West Black Sea region according to the records of Ministry of Agriculture and Forestry is shown in Table below.

Table 8-2 Types of the Fishes in Black Sea According to Years

Type	2016	2017	2018	2019	2020
Leer Fish					
Albacore					
Baccalaureate					
European Hake	2.4	0.9		0.9	
Red Mullet	105.7	74.2	102.7	38	108.4
Goatfish			0.4		
Brisling	1440.2	171.5	1050.2	4547.7	2654.4
Sea Bream	3.8	0.5		0.1	
Other	42.3		0.1		2.1
Flounder	17.8		0.4		
Holibut					
John Doree	0.2				
Common Seabream					
Angler Fish					0.1
Rockling Fish					0.1

Type	2016	2017	2018	2019	2020
Smelt			0.4	0.1	19.4
European Anchovy	42791.3	26581	14412.1	20830.1	58925.4
Serranid					
European Barracuda					
Scorpion Fish	16.7	59.3	36.7	19	13.1
Annular Seabream					13
Horse Mackerel (Karagöz)	585.7	2046.1	3046.5	1515.2	
Horse Mackerel (Kraça)	1727.8	1414.5	2795	976.6	
Redfish (Sciaenops Ocellatus)			0.4		0.3
Butt	2.5	0.9	7.1	0.6	0.4
Shield	132.7	107.2	98.5	192	252
Black Bream					
Goby	4.9	1.3	2	0.8	0.4
Goby (Sachfish)					
Gray Mullet	92	63	124.1	27.3	27.4
Monk Fish					
Sword Fish					
Growler	4.1	3.2	2.4	1.4	0.8
Growler (Mazak)					
Chub Mackarel	20.1	0.1	69.2	36.1	64
Shark					
Oxeye	43.3	50			13.3
Bluefish	18.9	7.8	4.5	1.8	9
Rascasse					
Bluefish	6196	939.6	3500.2	360.8	3029.1
Saddled Bream					
Common Seabream	9				
Whiting	5332.9	3760.6	3063.9	4801.9	5810.8
Painted Eel					
Umbr	0.4	0.2	0.2		0.1

Type	2016	2017	2018	2019	2020
Tuna					
Orphan					
Acorn-Toric	14881.7	2199.8	8308.9	314.5	9398.7
Spotted Coral					
Halibut					
Sardine	778.5	417.7	231.7	119.9	525.8
Salema					
Pointed Karagoz					
Mullet	1931.1	1227.4	1872.3	1296.8	1817.7
Shad	335.5	298.7	510.5	259.1	633.5
Bullet Tuna	75				
Mackerel	6.5	1.7		0.1	
Stingray	9.5	10.3	6.7	1.5	
Written Tuna					
Garfish	15.3	15.7	24.3	13.2	30.7
Clarion					
Horse Mackerel (Kraça)					2666.2
Horse Mackerel (Karagöz)					1965.6
Octopus				0.2	
Mirror					
White Sand Mussel	20931.7	34941.1	44532.8	36612.5	21823.6
Hook					
Çalpara					
Jellyfish					
Sea Snail	2786	3137.1	2570.2	3403.3	2553.3
Other					
Male Shrimp				14.6	
Lobster					
Oyster					
Jumbo Shrimp					

Type	2016	2017	2018	2019	2020
Squid				0.1	1.6
Black Mussel	59.5	368.7	533.6	1155.2	1034.8
Shrimp					
Horse Mussel					3.2
Red Shrimp				7.2	
Mussel					
Squid		0.2			
Hermit	2.6	0.5	14	2.9	3.7
Pink Shrimp	1.2			6.4	5
Escallop					
Crab					
Sand Mussel					
Titfish					17.9
TOTAL	100404.8	77900.8	86922	76557.9	113424.9

The number of fishing vessels and licensed fisheries in Zonguldak province is presented below.

Table 8-3: Number of Fisheries and Vessels in Zonguldak

Years	Fisheries			Fishing Vessel		
	Total	Sea	Inland	Total	Sea	Inland
2016	3893	3893	0	447	447	0
2017	3674	3661	13	429	429	0
2018	3332	3303	29	413	413	0
2019	3105	3069	36	420	420	0
2020	3454	3395	59	421	421	0
2021	3613	3499	114	433	433	0

Source: Ministry of Agriculture and Forestry, 2021

Vessels: The length distribution of professional fishing are presented in **Table 12-3**.

Fishing Methods and Fishing Season: Members of Filyos Fishermen Port usually practice the activity in the coastal areas with netting techniques. Also, bottom fishing is in practice mostly in winter. Fishing is done for an average of 5 months per year, approximately 150 days. The fishers fish whiting and horse mackerel with trawl (çapara) to a depth of 30 m. There are also five divers in Filyos and mostly dive in August. There is an average fishing period of 30 days for divers. Haddock, horse mackerel and red mullet are the most commonly fishes (CNA Site Visit Interview, 2021). Also, according to the TAGEM report, the most fish species are shields, bean, haddock, gypsum, bluefish, sargan, acorns and lobster. It is stated that 15 tons of fish are caught annually.

Fishing Area: The fishing route of fishermen is the region between Zonguldak (Ereğli Port mouth) and Bartın. They fish up to 5 km (3 miles) offshore. The maximum fishing depth is 70 meters (Site Visit Interview, 2021).

Crew: There is a maximum of 6 crew on a vessel. There are approximately 120 crews in total in Filyos.

Fuel Consumption: The average fuel consumption per cruise is 50 litres per night and 70 litres for beam trawlers (algarna) (Site Visit Interview, 2021).

Income: The average annual income per boat in years with fish is 30-40 thousand TL. The owner receives half of the vessel income, and the other half is shared among the crew fish (Site Visit Interview, 2021).

Market Place: Caught fish is mostly shipped to big cities, especially Istanbul, via intermediaries (madrabaz). About half of the fishermen market their catch directly from the boat and nearby settlements and markets. Only two people are engaged in the fish trade. There is a free market, these intermediaries buy fish from fishermen. Since the caught fish are sold directly to the intermediaries, there is no cold storage. They purchase the nets from other centers and towns, but the fishermen do the fishing line and net repairs themselves (CNA Site Visit Interview, 2021).

9.0 OUTPUTS OF SOCIAL SURVEYS

9.1 DEMOGRAPHIC CHARACTERISTICS OF FISHERIES

Although there are a total of 36 boats connected to the shelter, during the second field study was carried out in December 2022, 28 of these boats are participated to the survey. According to the data obtained, all of the fishers are registered to the fishing's cooperative. It was determined that the neighbourhood where the fishermen live intensively is Öteyüz neighbourhood of Filyos. 75% of the participants live in Öteyüz, 21.4% in Hisarönü and 3.6% in Abacık neighbourhood.

Table 9-1: Residency of the Fishers

Neighbourhood	Frequency	Percent
Öteyüz Mah	21	75,0
Hisarönü Mah	6	21,4
Abacık	1	3,6
Total	28	100,0

According to the results of the surveys held in February 2022, it has been observed that majority of the fishers are 40 years of age or older. The primary reason of the density of the elderly population is in parallel with the retired fisheries. The table below summarizes the age distributions of the fishers in Filyos.

Table 9-2: Age Distribution of the Fishers

Age Groups	No of participants	%
19-25	1	4.2
26-39	6	25.0
40-55	10	41.7
56-65	7	29.2
Total	24	100.0

It has been observed that, 58.3% of the fishers are high school graduated followed by secondary school graduated and primary school graduated respectively. University graduates make up 12.5%.

Detailed education distribution of the participants are presented in the below table.

Table 9-3 Education Levels of the Fishers

Connected located port	Education Status	frequency	percent
Filyos	Primary School Graduated	2	8.3
	Secondary School Graduated	5	20.8
	High School or Equivalent School Graduated	14	58.3
	High School or University Graduated	3	12.5
	Total	24	100.0

Although there are very few women who help their families in the fishing cooperative it is seen that all fishers are men.

9.1.1 Project Information Level of Fisheries

Based on the February 2022 study, it has been observed that, 83.3% of the fishers in Filyos have information on the Project. During the surveys held in December 2022, the 100% of the fishers interviewed were informed of the Project.

Table 9-4: Information on the Project

Information	Frequency	Percent
Yes	20	83.3
No	4	16.7
Total	24	100.0

9.1.2 Income sources of the Fisheries

According to the results of the in-depth interviews in February 2022, it was seen that the fishing is the side income for Filyos and around 23-33% of the fishers' livelihoods are based only fishing. In December 2022, its seen that of the interviewed fishermen, 39.3 % stated that fishing was their only source of income, while 60.7 % stated that it was a second source of income. The additional income of fishers varies between 3500 and 15,000 TL according to the statements of the fishers.

Table 9-5: First Income Source Of The Fisheries

First Income Source	Frequency	Percent
Small Business Owner	1	4.2
State Officer	1	4.2
Retired	6	25.0
Paid / Salaried	7	29.2
Farming	1	4.2
Fishery	8	33.3

First Income Source	Frequency	Percent
Total	24	100.0

Income sources and the total income amount have been reported by the interviewed fishers. According to the fishers, in 2022, when compared to the previous year, their average income decreased by approximately 35% compared to the previous year.

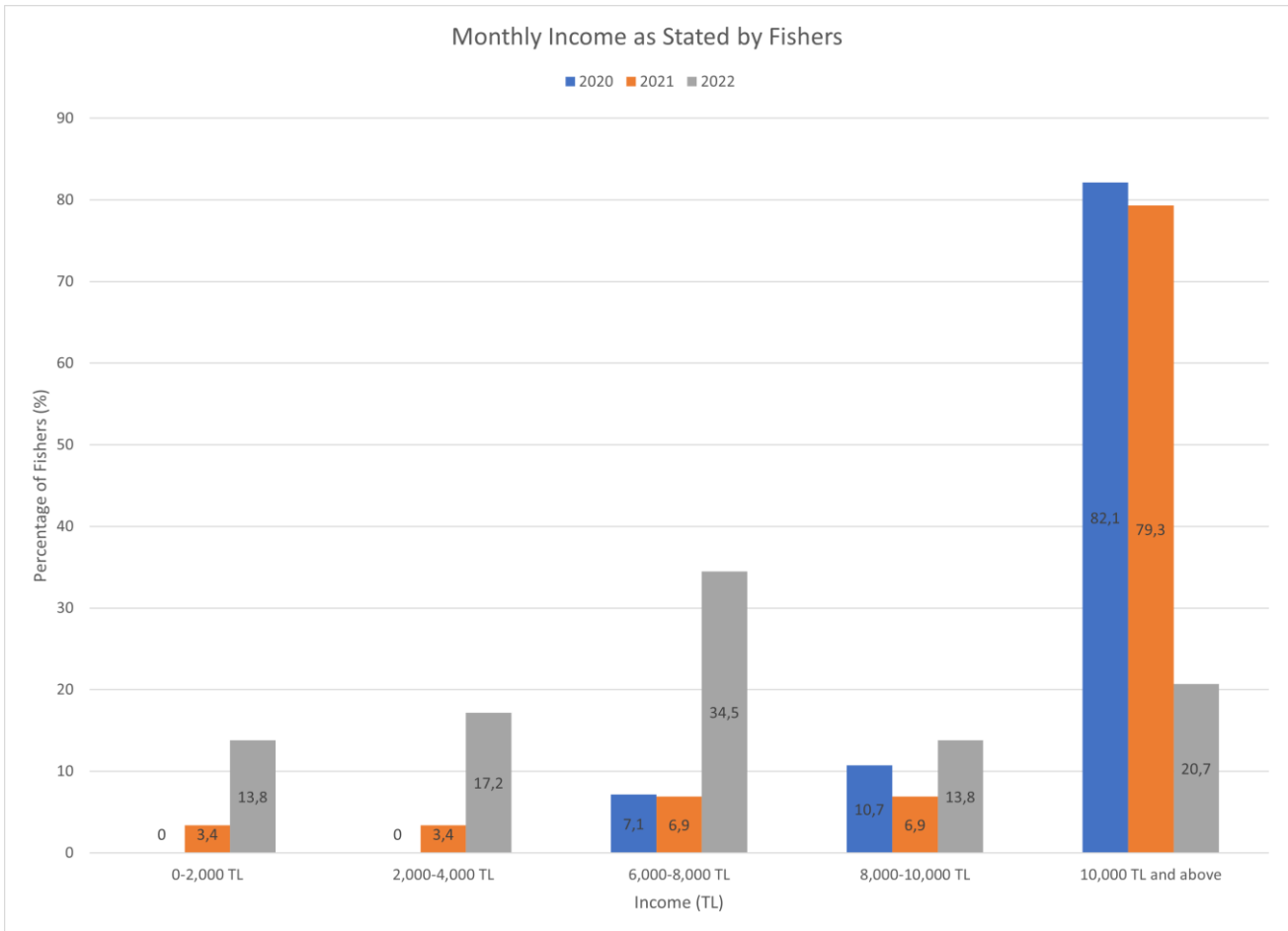


Figure 9-1 Monthly Income from Fishing in 2020, 2021, 2022, as stated by the fishers⁴

9.1.3 Fishing Areas

According to the results of the interviews it is seen that the fishers travel up to 3 miles from the coast of Zonguldak. The following map represents the fishing areas.

⁴ No factual reference could be obtained from the official sources, especially referring to the Personal Data Protection Law.

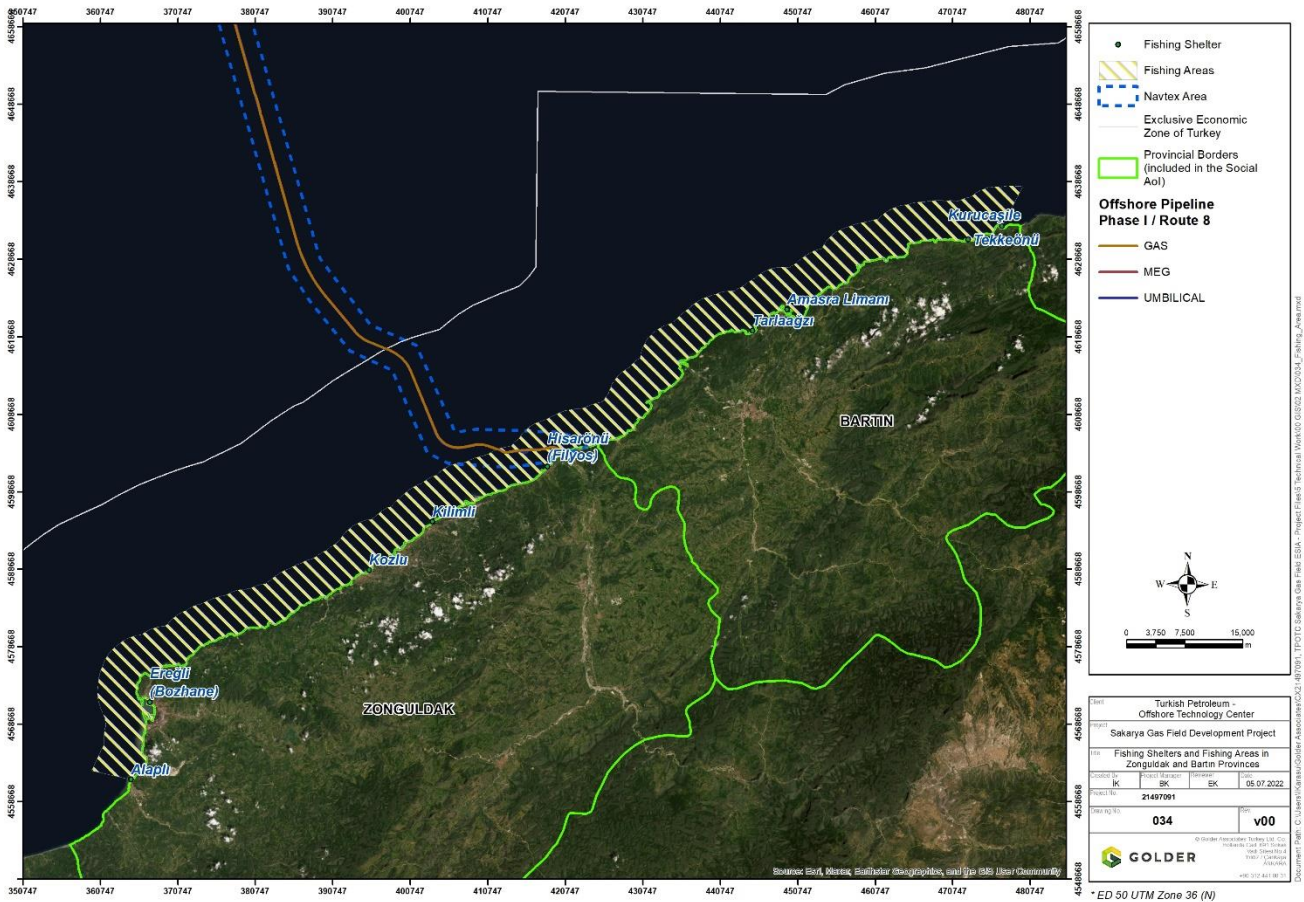


Figure 9-2 Fishing Areas

During the surveys in February 2022, 54% of the fishers in Filyos and 92% of the fishers in Amasra stated that the fishing areas are sufficient. On the other hand, more than 70% of the fishers in Bartın Creek think that the fishing areas are not sufficient.

Although 50% of the fishermen in Filyos and Amasra (district of Bartın) stated that there are alternative fishing areas, the fishermen in Bartın stated that there are no alternative fishing areas.

9.1.4 Type of Fishing

According to the results of the interviews with the fishers it has been observed that the most fishers have their own boats and only 20% of the fishers are employed as crew and 8% of the fishers are using their boats with their family members. 20% of the fishers in Filyos share the boat with their families.

Table 9-6: Type of Fishing Activities

Type of Fishing	No	%
Owned by the fisher	17	70.8
Shareholder with the family members	2	8.3
Crew of the boat	5	20.8
Total	24	100.0

According to the site observations and the outputs of the interviews it has been observed that 92% fishers uses small boats around 10 m length. Only 8% of the participants in Filyos port has boats over 10 m length. It should be noted that all boats are shorter than 12m in length.

It is seen that fishing is generally done seasonally. It has been observed that the rate of people fishing full time is 25% in Filyos.

Table 9-7: Fishing Type

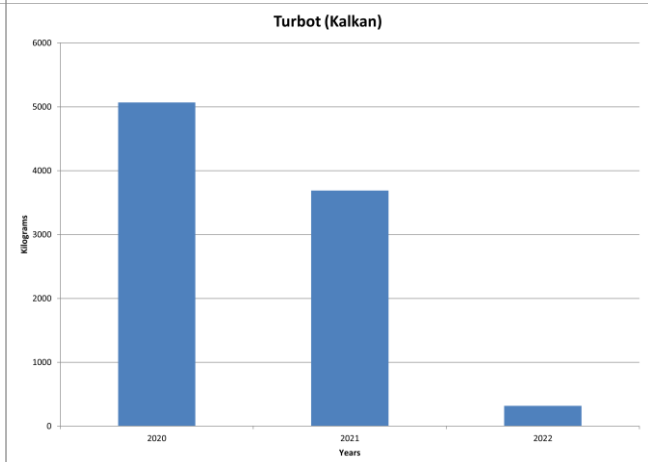
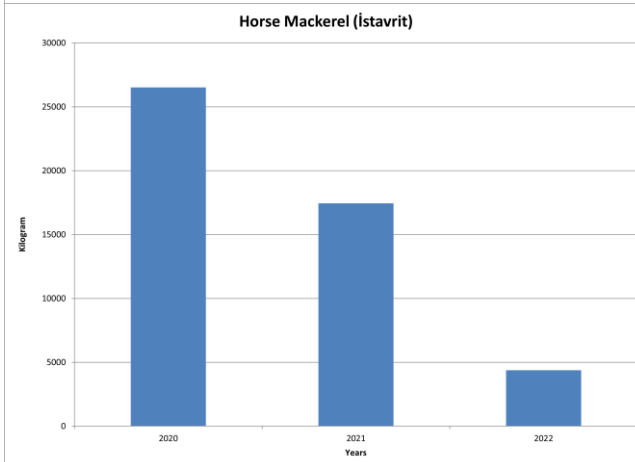
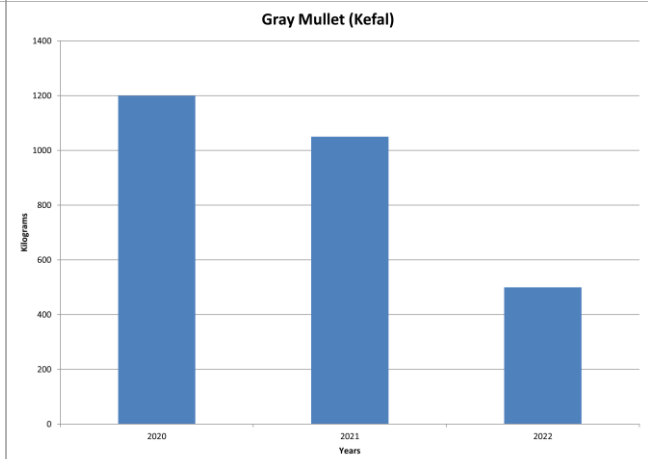
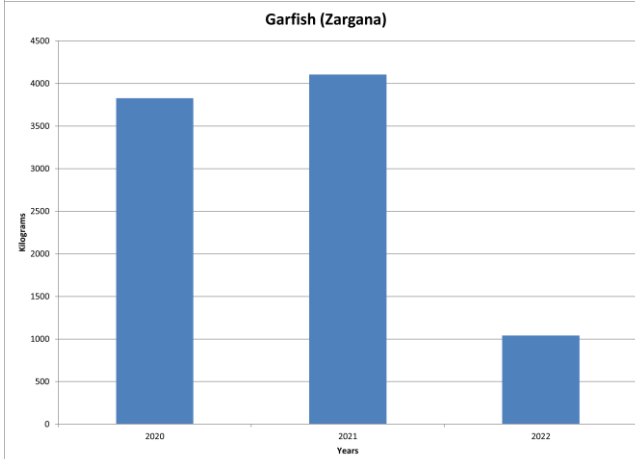
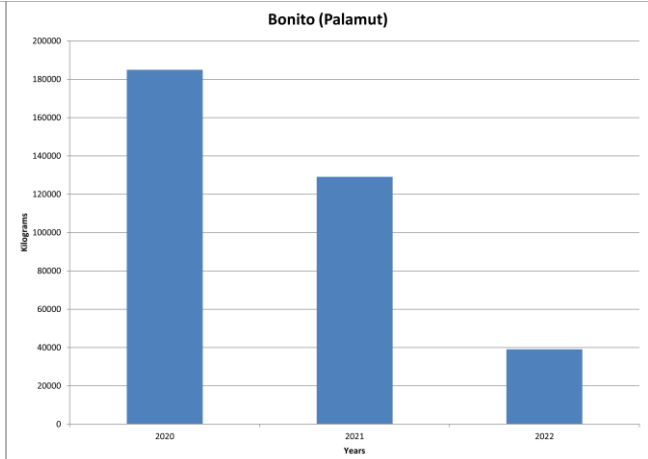
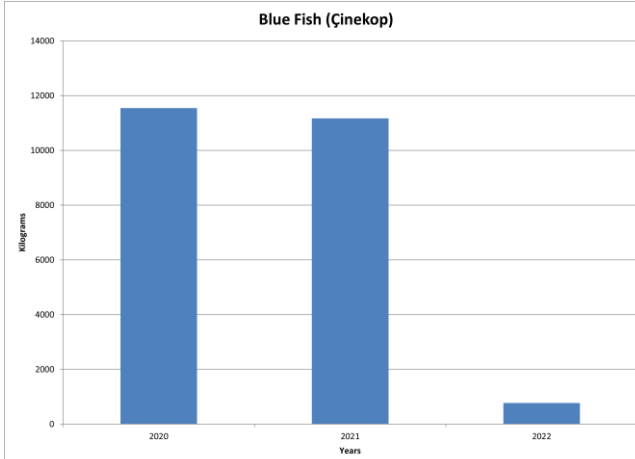
Fishing Type	Frequency	Percentage
Full Time	6	25.0
Seasonal	12	50.0
Half Time / Side Job Aspect	5	20.8
Irregular	1	4.2
Total	24	100.0

9.1.5 Interaction with Governmental Bodies

It has been observed that, all fishers including have been audited by the local authorities periodically and due the regulations 15% of the fishers receives cash penalty. The penalties are mostly on flag penalty, lack of documentation, insufficient waste management and fishing in the forbidden areas. The relevant authority for the auditing of the fishers is determined as Coast Guard Command.

9.1.6 Fishing Amounts According to Years

According to the results of the survey conducted in December 2022, it was stated by the fishers that there was a decrease in the amount of all fish species caught in the region by the fishers. It was attempted to verify these verbal statements with the District Directorate of Agriculture, however it is understood that there were no records to ensure the accuracy of the statements provided by the fishers. Since i) the statistical catch loss data cannot be calculated per boat, based on verbal statements and ii) there is no official data to confirm the catch loss, it has been decided to provide diesel support for extra milage that the fishers are required to travel. The distribution of the amount of fish in kilograms, caught according to years and species, as indicated during the interviews by the fishers, is shown below charts.



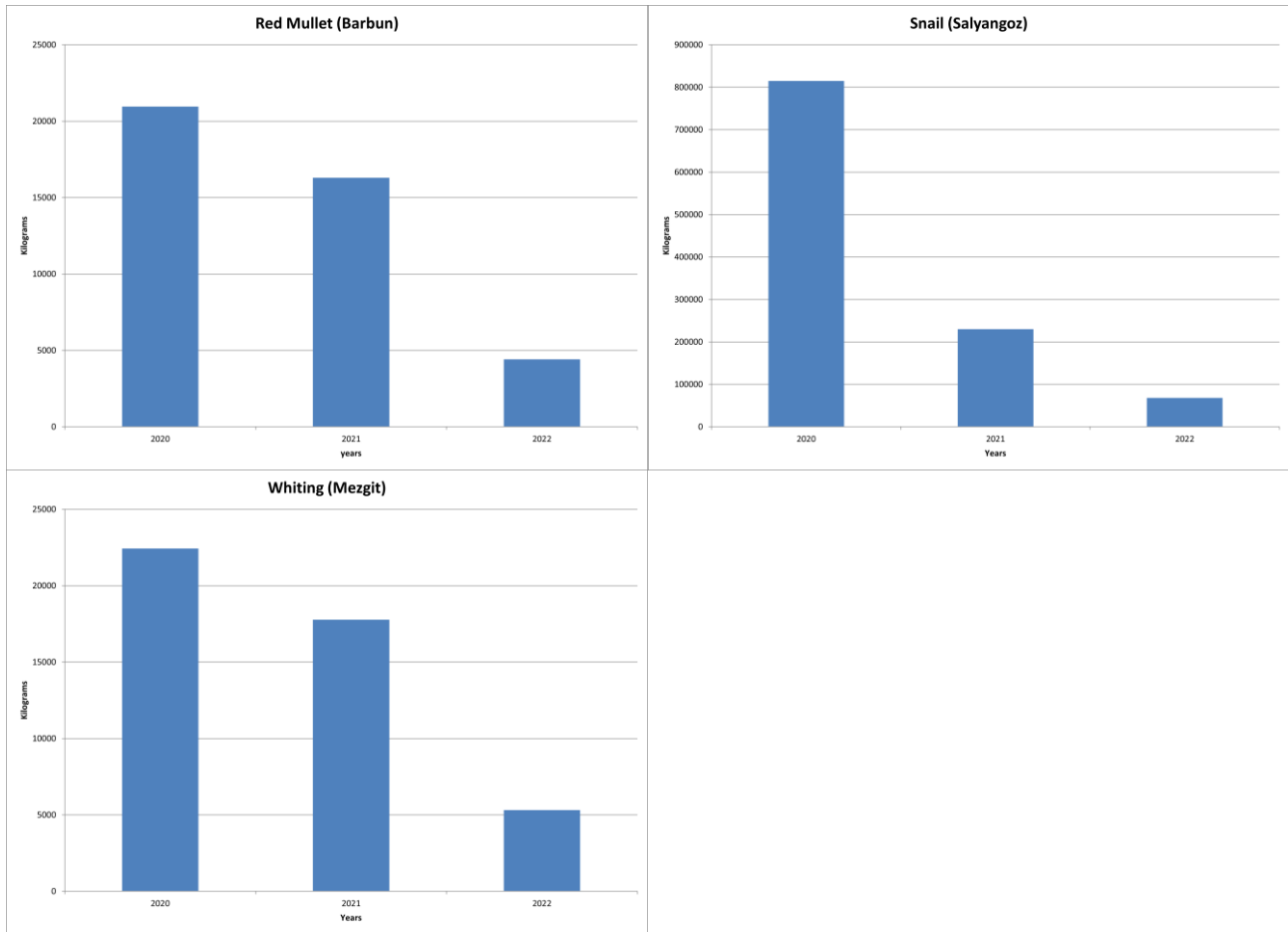


Figure 9-3 Fish Types Caught in 2020, 2021, 2022 as stated by the fishers

9.1.7 NAVTEX Impacts

NAVTEX impacts and other Project related impacts are discussed with the fishers in December 2022. According to the results of the surveys;

- 7.1% of the respondents stated that they have started to engage with additional sources of income after the NAXTEX restrictions.
- The fishers reported that their fishing area is approximately 5 km from the shore.
- 75% of the fishers interviewed think that the pasture areas have been narrowed down due to the restrictions imposed.
- 25% of the fishers interviewed stated that the light from the harbour impacts the fish and they are withdrawn from the area⁵.
- 82.1% of the participants stated that the communication between safety guards and the fishers is not adequate. Considering this, TP-OTC conducted additional consultations with the marine security indicated in Section 10.1.3.

⁵ It should be noted that the aim of the lighting of the port is to ensure the vessel operation activities in a safe manner according to the legal framework.

- During the December 2022 survey, 46.4% of the interviewed fishermen stated that they are thinking about quitting fishing, citing professional difficulties and decreasing fish quantities. The reasons stated by the fishers are listed as follows:
 - Increase in fuel costs,
 - Increased costs of purchasing, maintaining nets and hulls,
 - Reduction of hunting grounds,
 - Decrease in the amount of fish caught
 - Safety issues due to the marine traffic in the improved port
 - Decrease in fish species caught
 - Changes in fish routes due to increased vessel traffic
 - Light from the port
 - Degradation of fishing areas due to construction works
 - Pollution and noise due to construction works
 - Disruption of fish nests on the shore due to construction works

9.1.8 Recommendations / Requests from the Fishers

- Expansion of fishing area, support for fishers, prevention of light and vibration emitted by ships
- Restriction of the length of the pipeline shamrocks
- Increasing support, especially diesel support,
- Providing cheap diesel oil support from the state, increasing the support to coastal fishers
- Identification of the lines passing through the gas pipe, opening the restricted pastures for fishing areas,
- Providing job opportunities and financial support
- Opening the restricted fishing area, reducing environmental lighting, providing financial support
- Marking restricted areas properly

10.0 CONSULTATION AND DISCLOSURE

10.1 PREVIOUS DISCLOSURE ACTIVITIES

The Fishing Information Disclosure and Stakeholder Engagement Plan (FIDSEP prepared by Corpera Consulting, January 2022) aims to ensure all stakeholders related to marine activities in the project area are informed about the project activities and restrictions that will come to force with the offshore construction activities. The information disclosure plan has three phases. The first phase is informing the public via local newspapers. The second phase is information disclosure meetings and visits. The meetings and visits start before the restrictions are in force and continue throughout the construction activities. The third phase is written communication to share updates and to inform the stakeholders about the project progress and any updates regarding the offshore restrictions.

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10.1.1 Public Disclosure

The restrictions due to offshore activities of Sakarya Gas Field Development Project has been published by local newspapers on 13th of January 2022. The first information disclosure meetings and visits were conducted as scheduled at the first week of February 2022.

10.1.2 Disclosure Meetings and Visits

The information disclosure meetings were start before the restrictions come to force and will be repeated in case of the content, timeline, and location of the restrictions.

First Information Disclosure Meeting round was held on the first week of February 2022. The purpose of the disclosure meetings and visits are to share information on the restrictions introduced in the safety corridor throughout the offshore construction period and to define communication channels for future interactions, to listen existing concerns and questions and to discuss health & safety and impact mitigation measures.

The list of stakeholders to be met for the first round of information disclosure meetings are as follows:

- Zonguldak Governorship
- Çaycuma District Governorship
- Çaycuma Municipality
- Filyos Municipality
- T.C. Ministry of Agriculture and Forestry Zonguldak Provincial Agriculture and Fishing Directorate
- Zonguldak Gendarmerie Command
- Zonguldak Coast Guard Command
- Çaycuma Coast Guard Command
- Zonguldak Port Authority
- Bartın Port Authority
- Filyos Fishing Cooperative
- Bartın Fishing Cooperative
- Zonguldak Fishing Cooperative

Although the agenda of each meeting will include specific topics, the meetings aim to provide necessary information to the stakeholders regarding the project activities and restrictions introduced, to discuss the communication methods for further interactions and to discuss economic and social impact mitigation measures.

In this respect, the information to be shared with stakeholders are as follows:

- The location and coordinates of the offshore safety zone
- The start and end date of the restrictions
- The content of the offshore safety zone restrictions
- The rationale of the restrictions
- The precautions to if the restrictions are not respected

The other aim of the information disclosure meetings is to discuss engagement methods and to gather required information to define economic and social impact mitigation measures. The topic to be covered in the meetings are below:

- Defining dialogue channels for further engagements
- Defining social and economic impacts mitigation measures on fishing
- To reach mutual agreement to implement restrictions in order not to disrupt project timeline and to avoid creating health and safety risks.
- To discuss actions to be taken in order minimize the construction impacts on fishing and other marine activities during the restrictions are in place.
- And to discuss fair and applicable mechanism to compensate the losses of the stakeholders due to the restrictions

The time plan and agenda of the information disclosure meetings are given in the table in ANNEX 1. The disclosure activities include visits to public authorities, one-on-one meetings, and group meetings.

The information disclosure meeting participant team are suggested to comprise of following roles: Project Spokesman, Social Impact Specialist, CLO, Offshore Construction Technical Expert, Health and Safety, and Environmental Experts and Consultants, and Corporate Communications Coordinator. The team were formed specific to the meeting. The high-level public authority visits, senior team members may join to the team.

Three meeting techniques were used for the information disclosure activity. The first method is visit. The team visited high-level public authorities such as governorships to share the information and ask for their support for the implementation of the restrictions. The visits took 30 to 45 minutes.

As a second method, the meetings were held with impacted authorities and institutions such as port authorities and fishing cooperatives. The meetings a took around one hour. The information disclosure team aims to inform the stakeholder regarding the restrictions but also discuss topic such as defining valid and sustainable dialogue channel, social and financial impact mitigation measures and gather information required to find the fair and applicable compensation mechanism.

The last method is group meetings. The group meetings were held with fishers in Filyos. The meetings last one to two hours depends on the participants questions and the number of attendees. The participants were informed about the restrictions, the mitigation measures and information channels during the constructions. The fisher’s concerns were addressed, and their questions were responded. The team gathered information about their fishing techniques and their fishing grounds.

During the meetings and visits, an information leaflet prepared in Turkish were distributed to the participants.

10.1.3 Marine Health and Safety Awareness

10.1.3.1 Meeting with Guide Vessel Captains

A meeting was held with the captains of the fishing vessels (Guard Vessel) working for security purposes, for TP-OTC during maritime operations. The meeting was held in December 2022, to communicate the rules and methods to be followed when warning small fishing vessels. The outputs of the meeting as follows;

- The captain of the Guard Vessel "Orhan Karadeniz" said that there is no radio in small fishing boats. They have difficulty communicating; therefore it is necessary to approach them in order to warn them and during this approach, Hence, 82.1% of the participants stated that the communication between safety guards and the fishers is not adequate.

- Since the current Guard Vessel boat has a draft of 4 m, it cannot enter very shallow areas, so a smaller and faster boat can be used at regular intervals, in shallow areas close to seabed operations. It was also agreed that this additional measure will allow the Guard Vessel to respond promptly to prevent those who want to enter the Project site without authorisation.
- The Port Security instructed the captains to continue to warn the boats passing too close to Filyos Port or to any construction vessel.
- Some fishing boats do not use their warning lights in the evenings, which creates safety issues.
- TP-OTC presented the technical details and locations of the repositioned marker buoys.
- The coastal fishing can be continued outside the area with new marker buoys and the Filyos Port, which were decreased from 3+3 to 2+2 and then to 1+1 and 500m+500m in communication with the fishermen through the time. The boats can transit through the NAVTEX corridor.
- It was stated that no activity will be allowed in the marked area (NAVTEX corridor). Fishing is not allowed in this area. Dangers of fishing in this area was communicated. In case the fishers continue fishing in this area despite warnings, Guard Vessels will contact the Project Social Impact Specialist and the CLO.
- TP-OTC prepared the "Warnings to Seafarers" brochure which was shared at the meeting. Captains will distribute this information to teammates on other shifts.

10.1.3.2 Meeting with Fishers

In December 2022 a meeting was organized with the fishers. Information was provided by TP-OTC on actions taken in order not to affect the fishing activities, during the sea operations. The outputs of the meeting is provided in the below bullets:

- TP-OTC provided information on the new locations of the marker buoys, thus expanding the area where fishermen can fish. Coordinates and maps were shared.
- TP-OTC stated that the marker buoys have flashers to be visible at night and the distances between the buoys were positioned at 250-300m intervals in order for the fishermen to notice the buoys more easily.
- It was emphasized again that fishing activities should not be carried out in the area where NAVTEX corridor was announced.
- TP-OTC stated that fishing boats and other vessels can transit through the relevant area.
- TP-OTC stated that depending on the progress of the seabed pipe construction activities, the buoys will be moved from their new positions closer to the pipeline and a permanent and narrower NAVTEX corridor (1km+1km) will be declared. Thus, it was envisaged that fishing activities could continue under normal conditions.
- Within the scope of fishing activities, information on preparation of the LRP was provided.
- It was agreed to strengthen communication within the framework of cooperation and to prevent possible accidents and damages.
- A detailed presentation covering all the above-mentioned issues was made and the "Warning to Mariners" was distributed.
- TP-OTC informed the fishers that no activity (including fishing, research, commercial activities) is prohibited in the shallow sea area between the marker buoys and Filyos harbour.

- TP-OTC informed the fishers that the measures taken are in compliance with the international environmental and social impact legislation and that they are acting in accordance with these standards.

10.2 FUTURE STAKEHOLDER ENGAGEMENT ACTIVITIES

Information Disclosure activities will be followed with fishing stakeholder engagement process. The aims of the stakeholder engagement activities are;

- ensuring the restrictions are complied,
- the concerns and questions of fishermen is responded,
- the updates regarding the offshore constructions are shared with stakeholders,
- the social and financial impacts of the restrictions are mitigated and,
- the good relations with stakeholders are maintained.

The engagement activities will be led by engagement team consist of , Social Impact Specialist and CLO of the project. Offshore Construction Expert, Health and Safety Expert and other experts may contribute to the engagement process when required. The project Stakeholder Engagement Plan (SEP) describes the engagement methodology and process however due to the offshore restrictions, the fishing community and authorities related to the offshore activities needs a special attention. Therefore, fishing engagement activities will define additional activities on top of the project SEP. The engagement activities are as follows:

Periodic Interactions: The engagement team will meet Port Authorities and Fishing Cooperatives periodically. In this respect, the engagement team will meet,

- Zonguldak Port Authority when required
- Filyos Fishing Cooperative monthly,
- Zonguldak Gendarmerie Command, Zonguldak Coast Guard Command, Çaycuma Coast Guard Command and Bartın Port Authority when required,
- Bartın Fishing Cooperative and Zonguldak Fishing Cooperative quarterly

Direct Information Channels: In order to achieve the aims of the engagement program, a direct information channel between stakeholders and the project team. The information channel allows the stakeholders to reach project team in timely manner. The Social Impact Specialist and CLO will be the point of contact of the concerns, questions, recommendations and/or grievances of stakeholders. The grievances will also be entered to the project Grievance Mechanism.

Project Updates and Feedbacks: The engagement team will share updates regarding the content of the restrictions, the progress in the construction activities and receive instant feedbacks from the stakeholders. The restrictions and updates about the project will be sent to the stakeholders including public authorities and cooperatives in written format as well as via verbal communication.

11.0 PROJECT IMPACTS

11.1 EFFORTS TO MINIMIZE DISPLACEMENT

The pipeline route, which has a length of approximately 165 km, for the pipeline construction activities of the Project. In the first NAVTEX decision taken, the area of influence was 3 km from the pipeline centreline, towards each side. As a result of the consultations with the fishers operating in the region, the Project impact area was reduced to 2 km on each side, in consultation with the relevant institutions. The area for which the revision is requested is located on an area of approximately 1600 km², and the revised NAVTEX publication

was launched on 05.03.2022 at 06:00, and the restrictions will be lifted within 350 days under normal conditions, excluding weather conditions and technical failures of the ships. It is important that vessels under voyage and all other vessels pass at a distance of at least 2 km in all directions from the vessels in the working area. It is planned that the ships will use Zonguldak/Filyos, Zonguldak/Ereğli and Istanbul/Haydarpaşa ports throughout the project.

As of December 2022, the restriction zone is limited with 1 km on each side of the pipeline and its planned to eventually to reduce it to 500 m corridor according to results of the decision of the technical team.

11.2 TEMPORARY LOSS OF FISHING AREA

As part of offshore construction activities of Sakarya Gas Field Development Project, safety measures and restrictions are introduced in the Gas Field Exploration Areas (the restricted area is shown in the figure below). The restrictions and conditions for the safety corridor, is as follows:

- Anchoring is restricted;
- Marine activities including fishing (using trap nets and rods) and diving are restricted;
- Cruising distance from the Project vessels is 2 km.

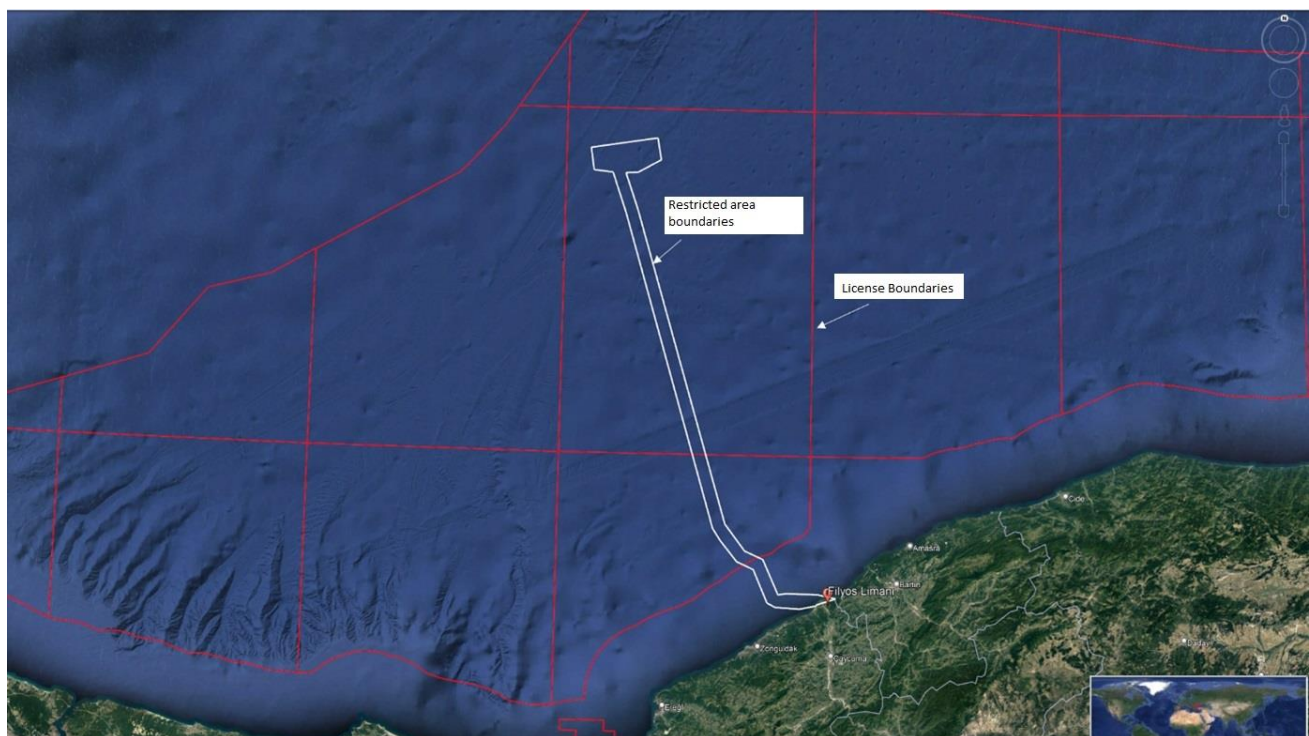


Figure 11-1 Restricted Area

12.0 ELIGIBILITY ENTITLEMENTS AND COMPENSATION

The aim of determining an eligibility matrix is to ensure that the PAPs who are affected by the economic displacement of the Project, that includes, commercial fishers, crews of the boats, owners, users and beneficiaries in different subcategories; loss of lands.

12.1 DEFINING PROJECT AFFECTED PEOPLE

Project-affected people (PAPs) are defined in according to IFC PS-5 refers to all who affected as a result of the implementation of a project, loses the right to own, use, or otherwise benefit from a built structure, land

(residential, agricultural, or pasture), annual or perennial crops and trees, or any other fixed or moveable asset, either in full or in part, permanently or temporarily. Eligible PAPs may be in any of the following situations:

- (I) have formal legal rights to the land/structure they occupy;
- (II) do not have formal legal rights to land, but have a claim to land that is recognized or recognizable under the national laws (e.g. ancestral, traditional lands);
- (III) are dependent on the impacted land for their livelihood by way of customary access to natural resources;
- (IV) have no recognizable legal right or claim to the land or structure they occupy; and/or
- (V) economically displaced persons who face loss of assets or access to assets.
- (VI) Vulnerable people

Table 12-1: Project Impacts

Topics	Details
Land Owners	<ul style="list-style-type: none"> ■ Owners of 8 parcels in Aşağıhsaniye Village
Crews	<ul style="list-style-type: none"> ■ Employment income (120 people)
Commercial fishers	<ul style="list-style-type: none"> ■ Income and side income from fishing (36 people)
Amateur fishers	<ul style="list-style-type: none"> ■ Fishing for sport and recreation or for household consumption (approximately 200 people, as reported by the Cooperative Representative)

12.2 ELIGIBILITY CRITERIA

12.2.1 Land Based

According to information obtained from Turkish Electricity Transmission Corporation (TEİAŞ) 29 parcels were affected from the construction of ETL consisting of 8 private parcels and 21 government owned lands.

Land base compensations are planned as sustainable supports that will allow the maintenance of agriculture and animal husbandry and are focused on eliminating the loss of livelihood / increase in expenses. For this reason, fertilizer, animal feed, which is the most expense item in the field study, was determined as land base compensation.

Table 12-2: Eligibility Matrix

Project Affected People	Compensation	Identified numbers-parcel	Responsible Party
Owners/shareholders are considered as fully compensated PAPs. However, *If loss of income is detected or the owner has any vulnerabilities or the household's livelihoods are limited, compensation will be provided.	Cash compensation was provided at replacement value. In addition to the cash compensation for the affected lands, payments for the trees were provided to 4 PAPs.	8 parcels	TEİAŞ – implementation TP-OTC Monitoring

12.2.2 Fisheries

Fisheries compensations have been planned and evaluated both as a support for the maintenance of livelihoods in the region and as a support for the sustainability of fisheries. Diesel support is planned to ensure the continuation of income sources not only for the boat owners but also for the crew of the boats.

Fisheries entitlement and compensation are planned within the AoI through directly affected vessels. The following data were obtained regarding the distribution of the boats defined as eligible.

The list of eligible registered commercial fishing boats, as of cut of date, considering the NAVTEX announcement (5 March 2022), as provided by the Fisheries Cooperative, is as follows:

Table 12-3 : Commercial Fishing Boats Register⁶

No	Boat Name	Plate No	HP	Width	Length	Crew Number	Boat Type
1	MACİROĞLU-1	67 D 1816	240	4	9,3	5	Beam trawl/Fishing
2	MACİR REİS	67 C 1876	270	4,3	10,4	6	Beam trawl/Fishing
3	MACİROĞLU-2	67 D 1983	144	1,8	6,4	4	Fishing
4	CINAR TURGUT	67 D 1901	13	1,75	6,2	4	Fishing
5	OZGEM	67 C 1869	135	3,5	10	4	Beam trawl/Fishing
6	BAHRİ KAPTAN	74 D 1488	70	3,5	9,35	3	Beam trawl/Fishing
7	ONUR 67	67 D 1207	56	2,7	7,25	3	Fishing
8	DERİNDENİZ 67	67 D 1295	27	1,8	4,92	2	Fishing
9	BURAK REİS-2	67 D 1174	32	1,8	6,1	5	Fishing
10	TUGAY REİS 67	67 D 1144	85	2,8	8,7	4	Beam trawl/Fishing
11	GİRAY-1	67 D 1487	86	2,82	8	4	Fishing
12	GİRAY-2	67 D 1812	55	2,1	5,85	3	Fishing
13	KUM-67	67 D 1912	120	2,31	6,6	5	Fishing
14	ALIDAYU	67 D 1980	90	3	7,5	5	Fishing
15	AKTÜRK KARDEŞLER	67 C 1011	90	3,6	10,2	4	Beam trawl/Fishing
16	BABA NAZİF	67 D 1546	105	2,3	7,2	5	Fishing
17	MELİHCAN	67 D 1027	21.5	1,8	6	3	Fishing
18	KARA ZEKİ	67 C 1951	270	3,9	10,8	5	Beam trawl/Fishing
19	İLKAY T	67 D 1742	84	3,1	8,7	4	Beam trawl/Fishing
20	AKGÜNLER A	67 D 1990	120	3,15	8,04	5	Fishing
21	BEKÇİ BABA	67 D 1956	140	4	9,3	4	Beam trawl/Fishing
22	BEYAZ GÜL 2	67 D 1839	90	3,7	7,6	4	Beam trawl/Fishing
23	ŞAFAK 1	67 D 1776	62	2,4	6,3	5	Fishing
24	ALPERİM	67 D 1585	17	1,9	6,14	4	Fishing
25	ŞEF	67 D 1977	82	2,8	8,05	3	Fishing

⁶ The table was verified on 14 October 2022.

26	DEMİR-02	67 D 1524	32	1,8	6,1	3	Fishing
27	AKSA-67	67 D 1611	120	3,35	7,8	5	Fishing
28	YİĞİT	67 D 1560	10	2,1	5,7	3	Fishing
29	SEZAI-2	67 D 1470	34.4	2,65	7,65	5	Fishing
30	KASAP-1	67 D 1543	135	3	8,3	5	Fishing
31	KASAP-2	67 D 1359	125	2,7	7,6	5	Fishing
32	KORKMAZ-A	67 D 1738	22	2,10	6,5	3	Fishing
33	ERCÜMENT	67 D 1574	120	2,45	6,6	4	Beam trawl/Fishing
34	TÜYLÜ-67	67 D 1900	110	2,8	6,3	2	Fishing
35	BEYBABA	67 D 1573	105	1,7	6,1	3	Fishing
36	KURT-67	67 D 1567	10	1,8	5	2	Beam trawl/Fishing

Based on the field data, it was also stated that the fishermen fished for a maximum of 3 hours a day. This information is important for calculating the daily fuel expenditure. This consumption time is used to determine the compensation amount, lower and upper limits. These values were taken into account in the compensation calculations.

Another point to be considered within the scope of fishing compensation supports; Although there is no fishing ban for coastal fishermen, they are subject to species bans.

The hunting periods of the species caught in the Black Sea are shown in the table below.

Table 12-4 The Hunting Periods of The Species Caught In The Black Sea

Spices	Hunting season											
	January											December
	1	2	3	4	5	6	7	8	9	10	11	12
Gray mullet												
Swallow												
Kofana												
Kidney bean												
Anchovy												
Horse mackerel												
Shield												
Spanish mackerel												
Sea bass												
Miniacope												
Tuna												
Bonito												
Tabby												
Tirsi												
Toric												
Bluefish												
Whiting												
Mackerel												
Garfish												

Table 12-5: Eligibility Matrix for Fishers

Project Affected People	Compensation	Identified numbers- parcel or boats	Estimated eligible PAPs number	Responsible Party
<p>Amateur Fishers: There is no amateur fisherman who can be specified within the vulnerable groups in LRP. The sale of all kinds of fish caught by amateur fishing is prohibited. The main reason for this prohibition is the risk of increasing uncontrolled pressure on the ecosystem services as a result of the amateur fishermen. In addition; Due to the definition of amateur fishing, it is a short-term activity with a narrow range of motion. Due to this feature, the activity will not be hindered due to the Project.</p>	<p>As per the baseline studies, there is no PAP identified, of which directly feeds the house based on amateur fishing and No compensation is required, considering the information provided by the Cooperative Representatives and according to the Article 13 of the <i>Regulation on Offshore Fisheries for Amateur (Sports) Purpose Circular No. 37/2</i>. (Please See Annex-6 for the detailed Circular translated to English) The amateur fishers use small rowing boats without engines, they fish in the immediate vicinity of the shore and are not affected by NAVTEX restrictions. This groups of fishers are also prohibited by law from selling the fish for income. Amateur fishers are excluded from the compensation considering the legal framework, to avoid creating pressure on the ecosystem services and as they are not affected by the NAVTEX restrictions.</p>	Approx. 200	None	TP-OTC
<p>Commercial Fishers: The small scale vessel is officially registered with the Filyos Fisher's Cooperative and reside in Filyos. The horse power from 10 to 270 HP. The details of the commercial boats are provided in 3. Total of 36 boats are registered with the Cooperative.</p>	Fuel support	36	36	TP-OTC
<p>Crews of the Boats It has been determined that 120 crew members are working on small and medium sized vessels in Aol. Crew members are not the beneficiary of the fisheries LRP supports. However, as PAPs of the Project living and/ working in the Aol, crews are the primary on the local employment opportunities. The reason why no support is planned for crew members is that the diesel support to be provided on a boat basis will enable the ships/boats to continue their fishing activities. In this way, the crew of the boats will continue to work. In other words, no income loss due to Project impacts is foreseen for the crew.</p>	<p>Since the compensation will be paid for per boat, their crews will remain employed. No compensation is considered to be required for the crews at the moment, but in case such application is received, retrospective livelihood impacts on the crews will be further evaluated by TPAO/TP-OTC, on a case by case basis.</p>	120	None	TP-OTC

Application form for the fisheries can be found in ANNEX-2.

13.0 LIVELIHOOD RESTORATION AND IMPROVEMENT

13.1 Rationale and Principles

The restrictions introduced in the safety corridor to eliminate disruption risks of the offshore construction activities and to ensure H&S risks are mitigated will have direct impact on fishing and diving activities. The impacts are expected to be financial and social. The scale of the impacts were identified in detailed during the ESIA study, but since the underwater topography and the climate limits the fishing ground around Filyos, the impacts is expected on fishermen operates around Filyos area. The definition of the social and financial impacts of the restrictions will be analysed further. However, Sakarya Gas Field Development project is committed to compensate its impacts on livelihood of the impacted areas and communities. The content and methodology of compensation mechanism can be updated on the engagement activities in the scope of Fishing Information Disclosure and Stakeholder Engagement and Livelihood Restoration Plan (Corpera, 2022) if required.

The approach to livelihood restoration approach will follow the principles below:

- To ensure the construction activities are not disrupted and completed according to timeline
- To mitigate the impacts of construction activities on fishing and diving
- To develop fair and transparent mechanism to support local communities
- To include impacted communities and institutions
- To include and pay extra attention to the disadvantage groups

In order to identify the fair compensation mechanism, it is crucial to define social and financial impacts of the restrictions. The reports produced in the ESIA process and additional research held in the SEP activities provides an understanding about fishing sector in Filyos. However, during the restriction process and the ongoing engagement activities with the fisheries alternative compensation mechanisms may be required to be developed and reflected to LRP.

13.2 Alternative Compensation Methods

13.2.1 Fishery Compensation Methods

To introduce a fair compensation mechanism requires a customized approach since all projects and their impacts are unique. International environmental and social standards and requirements provide a guidance, besides the standards, the critical issues to consider designing compensation mechanism for Sakarya Gas Field Development project are below.

- *To determine if the restrictions destroy fishing activities irreversibly.* Based on the existing findings, this is not the case in Sakarya Project.
- *To determine if the restrictions decrease the fishing related income substantially.* The following information is required while identifying the compensation method and budget; the location of fertile fishing ground for fishers, the percentage of their income from these fishing grounds the scale of intersection of these grounds and project safety corridor and whether the restrictions cover access to these pastures.
- To determine alternative fishing grounds where fishermen can use to meet a similar income. In that case, fuel subsidy can be identified as compensation tool. However, the time and increased maintenance and repair costs should be taken into account due to traveling to distant pastures. Safety and security risks should also be considered in this context.

- It should be taken into account that in addition to fishers, the crews will also experience a loss of income. Crews can be defined as a relatively disadvantaged group in the fishery sector and therefore, positive adjustment for the change in their income requires a special consideration.
- A decrease in fishery activities in the region due to restrictions would also have an impact on other sectors providing equipment and service to fishermen such as net repair, net production, fishing equipment sales, ice sales, fish transport business and similar support sectors. In the compensation process, the impacts of project impacts on these supporting sectors should also be considered.

Possible alternative tools for compensation are as follows identified in Livelihood Restoration Plan upon discussions with related stakeholders:

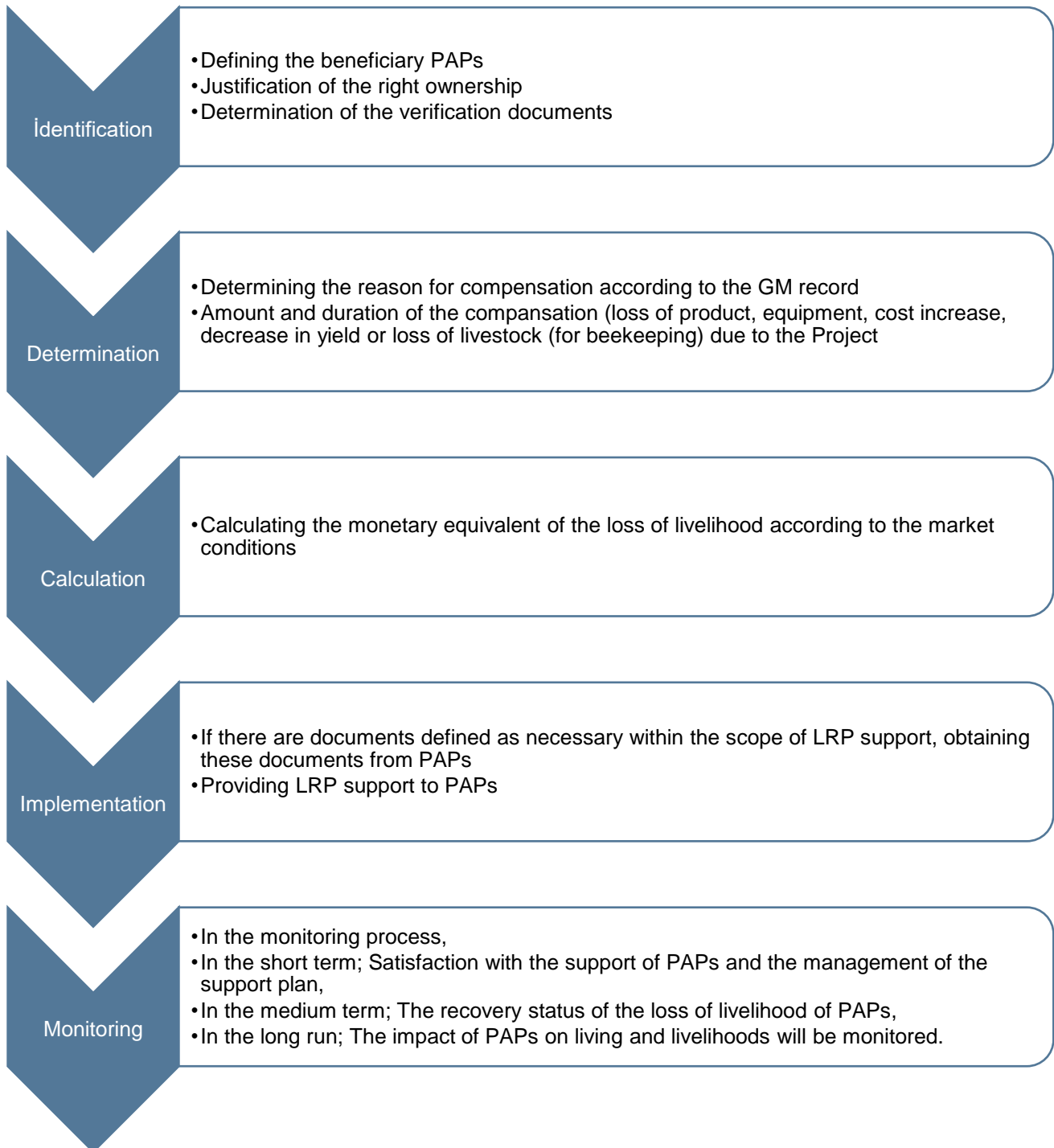
- i) **Conditional Diesel Support:** Although it varies depending on the boat size and engine power, according to the information received from the Fisheries Cooperative, a boat consumes 50 litres of diesel per day due to its fishing activities. Fishermen who cannot fish in the Project safety corridor, due to NAVTEX announcement, will fish at longer distances; reportedly requiring the fishers to sail for 1 extra hour a day. Therefore, the support in the amount of additional diesel to be determined in return for the day of sailing per boat.
- ii) **Equipment Support:** The third alternative is the renewal of fishermen's equipment and fishing equipment, meeting the needs of the vessels, etc., in order to make fishing activities more sustainable, effective and efficient, and to fish for longer distances and longer periods.
- iii) **Compensation for Loss of Income:** Providing cash support to vessel owners . The compensation amount should be calculated considering the proportion of the size and yield of the pasture that they cannot use due to the Project restrictions, taking into account the criteria such as boat engine power.

The compensation mechanism will not be limited to the alternatives mentioned above. Grievances that may be received from the fishers during the Project NAVTEX restriction, will be analysed and considered. A combination of more than one method can also be used in the compensation process.

13.3 Methodology of the LRP Supports

The key point of the methodology is that; the developed LRP supports are planned as in-kind supports but will be implemented by giving financially.

PAPs will be compensated by the following method:



13.4 Cut-off-date for Eligibility

Fishers

According to the official NAVTEX announcement, the fishing restrictions started on 05.03.2022 and in parallel with the scheduled construction period, restrictions will end 350 days later (19.02.2023) after the announcement. As the construction on the sea floor commenced following the NAVTEX announcement, fishing was stopped, in order not to adversely affect the operations in terms of OHS or technical aspects and to prevent harm to any of the fishermen. The announcement of the NAVTEX decision is considered as fisheries cut-off date, where the fishers that are registered at the time of the announcement will be eligible for compensation.

ETL

The date after which anyone who moves into / uses the ETL area is no longer entitled to compensation and assistance. The cut-off date is 25 March 2022, when GÜNGÖR ELEKTRİK filed to TEİAŞ for easement rights.

14.0 GRIEVANCE MECHANISM

The grievance mechanism has been prepared and is implemented to ensure that the Company is responsive to any concerns and complaints particularly from affected stakeholders and communities. Special care placed on the training of the designated staff involved in the management of the grievance mechanism. The grievance mechanism is open and accessible to all individuals and groups.

The Project has a transparent and unbiased grievance mechanism to:

- identify issues and concerns as early as possible to address them timely and proactively
- continuously improve Project performance
- demonstrate Project's commitment to meaningful stakeholder engagement, and respect for stakeholders' opinions and concerns.

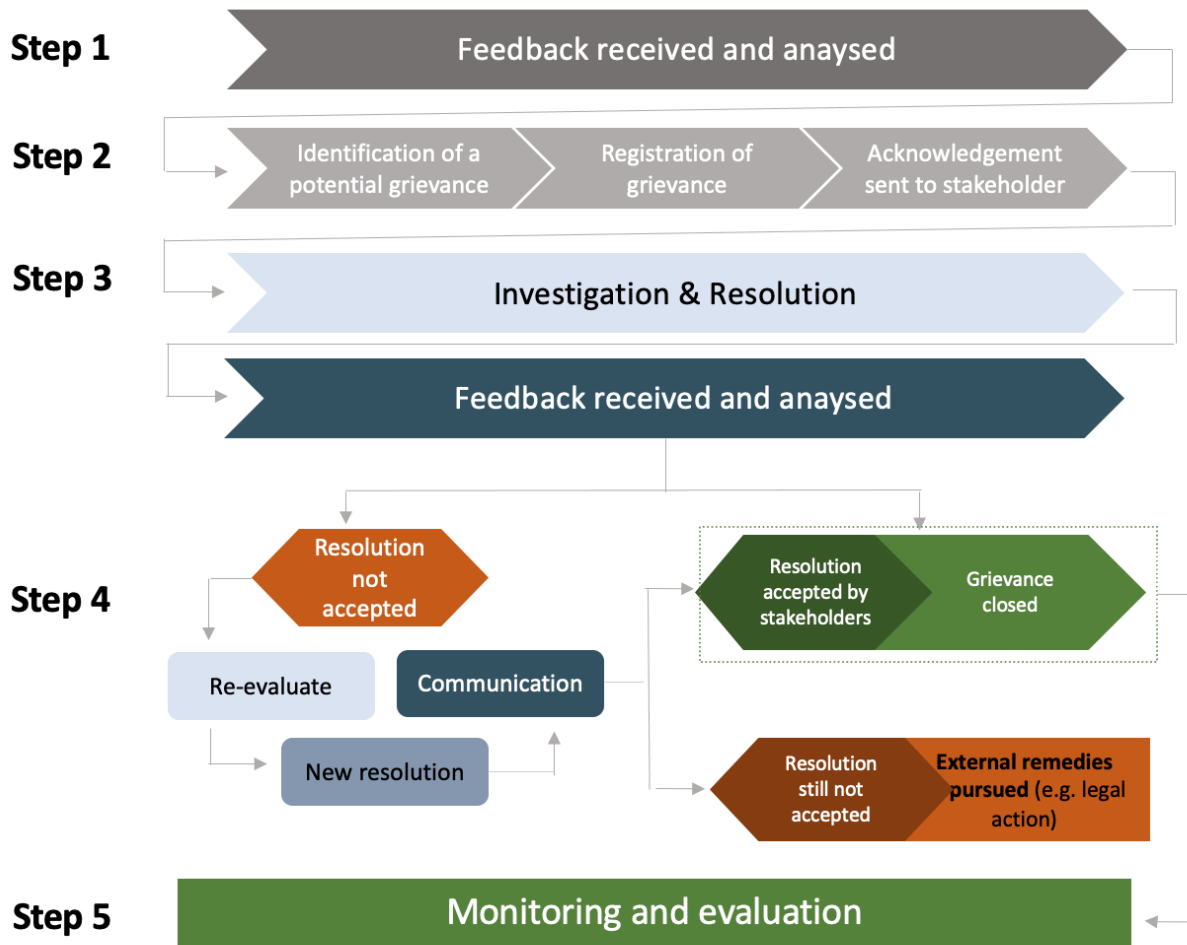
14.1 PRINCIPLES

The Project has a grievance procedure based on following key principles:

- Any person or organization can express concerns, complaints, and grievances at any time, without fear of retribution and retaliation.
- All grievances are treated in a fair and respectful manner.
- When a grievance is received, TPAO & TP-OTC will respond to the stakeholder to confirm its receipt within five (5) business days. At this time, the stakeholder will also be provided information about response times, next steps, and a contact within the team. The target is to resolve grievances within 30 calendar days.
- The process (receive, investigate and resolve) is consistent and transparent.
- Information about a grievance (and related investigations and decisions) is documented.
- Personal information about the affected stakeholders is treated as confidential. TPAO & TP-OTC respect other confidentiality requests as needed. Submission of anonymous grievances shall be allowed. The grievance mechanism also receives complaints related to gender-based violence, sexual harassment and sexual exploitation and abuse (GBV-SHSEA). The related to project activities, project management, TPAO&TP-OTC activities or contractor including sub-contractor activities can be submitted through grievance mechanism.

The steps that are followed for the resolution of grievances is shown in the diagram below.

Figure 14-1 GRM Diagram



A separate, but similar internal grievance procedure is implemented for workers, including Staff, employees of TPAO & TP-OTC, its contractors and sub-contractors, suppliers, and customers.

14.2 PROCESS

Social Impact Management Team is the main responsible for execution of Grievance Mechanism. Appeals Committee will oversee grievance management overall and will ensure that the grievances are resolved and monitored effectively. Grievances are managed through a software(SAP) by Social Impact Specialist and CLO to close communication with Investigation Team including TPAO & TP-OTC Engagement and Communication Senior Expert, CLO, TPAO & TP-OTC information office public relations staff who also acts as complaint registrar, TPAO & TP-OTC environmental expert, site management representatives (onshore and offshore), contractor and supplier management representatives. These core team conducts initial assessments and involve other technical staff for resolution and response. Social Impact Specialist is responsible for following up resolution and responses.

Employee grievances are separately managed and forwarded to human resources after registered in the software (SAP).

Step 1 – Feedback received: Stakeholders can convey their feedbacks related to the Project in many ways; verbally during a meeting, via website, email, call, or official correspondence etc. In either way, Social Management Team will ensure that it is documented, incorporated, and responded to as needed. In some

cases, this process may identify a grievance. If so, Step 2 is initiated. Social Management Team will response the enquiries in five (5) business days.

Step 2 - Grievance logged: When a grievance is identified, it is officially registered in the software and given a unique identification number. Grievance Form is filled out for each grievance (Annex 3). This form consists of complainants contact information and details of the complaint. It is categorized based on the type of complaint and its severity. The main complaint issue categories are as follows⁷:

- Social Impact
- Environmental Impact
- Compliance Impact
- Community Security
- Human Rights

List of grievances subcategories in the Annex-5.

Following the registration of the complaint, an initial response is sent to the person(s) who raised the grievance including the registration number for follow-up, acknowledging their feedback, and describing the next steps in the grievance process, time estimates for these steps and a contact person. Apart from the official mechanism, the complaints arising from the contacts are added to the log with a different code than the complaints received through the official mechanism. These complaints are also being made a part of the process with the same method.

Step 3 - Investigation and resolution: Investigation Team investigates grievances and their surrounding circumstances if necessary. These investigations are undertaken in a timely manner involving further staff and experts if necessary. The results of these investigations are reviewed, and a resolution is proposed. The development of the resolution may involve consultation with the person(s) involved and in some cases with an independent third party. Grievances regarding human rights violations, Gender Based Harassment, and wrong doings will be evaluated by Appeals Committee. The proposed resolution is then formally communicated to all parties. Social Management Team completes the process and respond to the complainant in 30 calendar days.

Step 4 - Resolution: If the resolution is accepted by all parties, it is implemented, and the grievance is closed using Grievance Closure Form (Annex 4). If the resolution is not accepted, it will be reconsidered, and a revised resolution may be proposed. The affected person(s) may choose to pursue external remedies at any time, including if an agreed resolution cannot be found.

Step 5 - Monitoring & Evaluation: After the resolution has been implemented, it is monitored, and its effectiveness will be evaluated. All parties are notified that the resolution has been implemented and have the opportunity to provide feedback on the grievance process and its implementation.

14.3 INSTITUTIONAL SET UP AND RESOURCES

Social Management Team composed by Social Impact Specialist and CLO. The team has the main responsibility of execution of this plan including delivery of activities and overall management of relations with stakeholders, grievance management and monitoring and evaluation. This core team will be supported by Investigation Team.

⁷ Categories are subject to update along the process.

Appeals Committee consisting of TPAO Corporate Communications Department, TP-OTC HSSE and HR management is responsible for ensuring Grievance Mechanism is effectively managed. Furthermore, the committee will directly investigate and respond grievances related to human rights violations, mobbing, Gender Based Harassment, and wrong doings (bribery, actions against business integrity principles) as well as grievances that are not closed when complainant refuses the corrective actions, or the actions are not closed on time.

Action Team

- HSSE Team
- Site Management Representatives
- Onshore Construction Team
- Contractor
- Supplier Management Representative

Appeals Committee

- Vice President
- HR Coordinator
- Corporate Communications Coordinator
- HSSE Coordinator
- Communications, Regulations & Reporting Specialist

Social Management Team

- Social Impact Specialist
- CLO

Contact Information:

Name of the Person and Title	Contact Information
Casim Can Hindioğlu Social Impact Specialist	0531 651 41 48 cchindioglu@tp-otc.com
Şeyma Yılmaz Community Liaison Officer	0531 886 46 82 seyilmaz@tp-otc.com

15.0 MONITORING AND EVALUATION

This section of the plan represents the input and output monitoring criteria and the completion audit requirements for all implementation phases of the LRP and TP-OTC will have the overall responsibility for the input monitoring of the LRP implementation

In general monitoring process will comprise of three stages:

- TP-OTC will monitor the performance internally and provide the results of the internal monitoring indicators monthly.
- The outcomes of the process will be monitored by the external consultant on the overall LRP implementation according to the output monitoring criteria every six months.
- An independent external consultant will do the completion audit following the completion process of the LRP.

The Company will procure the services of an external compliance auditor to review whether the LRP has been fully implemented and compliant with the IFC PS-5. The overall goal of the completion audit is to verify that the implementation of the LRP has been effective in restoring the standard of living and livelihoods of the PAPs.

The completion audit has the following objectives:

- Assess the effectiveness of measures to avoid and minimize economic displacement impacts on PAPs and fisheries.
- Verify that all entitlements and commitments described in the LRP have been delivered to affected people and Fisheries
- Control and verify if any claims or grievances have not been addressed.
- Identify the required corrective actions in meeting the LRP commitments.

The focus of the completion audit is on livelihood restoration. The evaluation methods will include quantitative surveys, which will be compared to baseline data to determine progress. The quantitative survey will be done for a sample of affected Fisheries.

The completion audit report will present the conclusions on livelihood restoration and the corrective measures required to complete the rehabilitation of affected fisheries. The audit will be carried out one year after completing the LRP implementation.

The table below represents the monitoring indicators that will be applied during the LRP implementation process.

Table 15-1: Monitoring Indicators

Indicators	Measure	Frequency
Input Indicators		
Number of client staff/ external associated dedicated to livelihood restoration	Members of the client implementation team Members of other departments and sectors Social workers Skill trainers	Monthly

Indicators	Measure	Frequency
	Fishery consultants.	
B-Output Indicators		
Number (and percentage) of fishers received compensation	The percentage should be calculated from the total number of affected fishers as identified by the census/survey.	Monthly
Number (and percentage) of fishers which compensation agreements were refused/are still pending number (and percentage) of fishers who refused to sign compensation agreements/ are still deliberating	If possible, a breakdown of reasons why compensation agreements have been declined (or have still not been accepted) should be provided	Monthly
Number (and percentage) of compensation agreements executed (compensation paid)	The percentage should be calculated from the number of compensation agreements signed.	Monthly
Outcome Indicators		
Number of newly received, open and closed grievances; any trends; and the average time for grievance processing	Measure the time interval between grievance registration and closure. The implementation team should review grievances to flag significant issues in implementation.	Biannually
Average time for payment of compensation	The average time between the determination of the eligibility and receiving compensation.	Biannually
How was the received cash compensation used/invested? (fuel)	Survey to determine what affected people used compensation for, such as: Other assets or investments or fuel	Biannually
Satisfaction with compensation	Conduct a survey to determine whether fishers are satisfied	Biannually
Re-establishment of incomes/ livelihoods	Have those people home livelihood/ income based on fishing managed to re-establish this source and level of livelihood/income?	Biannually
Re-establishment of businesses	Are fishing employees still working after NAVTEX? (If not, reasons why).	Biannually

Indicators	Measure	Frequency
	Survey of employees and their earnings and comparison with baseline data.	

When all activities from the plan have been completed, an external livelihood restoration completion audit will be conducted. This audit will assess whether the provisions of the LRP have been met in accordance with IFC PS 5 and whether corrective action is required. Once corrective measures have been implemented to the satisfaction of the lenders, resettlement is considered completed.

The Company will monitor, maintain, and regularly update a database on the owners/users of affected properties. The Company will prepare and submit Annual Reports on activities to the government. These reports will include the progress achieved in implementing the subsequent plan.

Indicators to be considered during the monitoring process are indicated in Table 15-2.

Table 15-2: Monitoring indicators

Indicator	Means of verification	Time of verification
The number of affected fishers and PAPs	Data collected during the survey process.	Before and after implementation of the plan
Nature of compensation for all the affected people and fisheries by the Project.	Data collected during the compensation calculation.	Before and after construction
Measures for improving livelihood standards of PAPs and fisheries	Data from on-site implementation and monitoring process.	After the implementation of the plan
The number of conflicts between PAPs and fisheries	Data received during the site monitoring process.	After the implementation of the plan
The number of conflicts between PAPs & fishers and workers before and during the restriction process	Data received during the site monitoring process.	After the implementation of the plan
The number of vulnerable PAPs and fishers faced with decreasing living standards.	Data received during the socio-economic survey and the site monitoring process.	Before and after implementation of the plan
The number of grievances registered through the grievance mechanism.	Data received from the Company.	After the implementation of the plan
The number of grievance cases addressed.	Data received from the Company.	After the implementation of the plan
Percentage of closed grievances where PAPs indicate their satisfaction with the grievance process.	Survey of PAPs.	Quarterly

Indicator	Means of verification	Time of verification
The number of persons engaged during the implementation of the Project focused on women PAPs and fishers (if any).	Data received from the Company.	After the implementation of the plan
Number of NGOs and Fishing Cooperatives involved during the implementation process.	Data received from the Company.	After the implementation of the plan
The number of beneficiaries from the livelihood improvement programmes	Data received from the Company.	After the implementation of the plan
The number of agreements signed with the PAP sand fishers	Data received from the Company.	After the implementation of the plan
The number of PAPs fishers received cash compensation for fuel in the period.	Data management system.	Monthly

15.1 REPORTING (Monitoring)

Both public and worker grievances will be reported according to the following criteria.

- Total number Grievances
- Breakdown the number of grievances:
- By status (open, in progress, resolved, closed for SAP)
- By complainant location
- By the location of the grievance
- By status of the complainant (Real Person / Institution / NGO / Anonymous etc.) in Public GRM
- By grievance issue main category and sub-category
- Complainant contact information
- Key word-based reporting

16.0 ROLES AND RESPONSIBILITIES FOR IMPLEMENTATION

The allocated community liaison officer (CLO) at site will supervise and implement the mitigation measures and fuel support compensation stated in this LRP, under the supervision of the TP-OTC Social Impact Specialist.

TP-OTC will actively monitor the execution of the Fisheries LRP and ensure that actions are applied in accordance. Detailed roles and responsibilities are presented in below table.

Table 16-1: Roles and Responsibilities

Roles	Responsibilities
CLO	<ul style="list-style-type: none"> ■ Organize meetings to inform PAPs/fishers of Filyos and Çaycuma ■ Provide information on NAVTEX restrictions ■ Prepare and distribute informative materials including leaflets, brochures

Roles	Responsibilities
	<ul style="list-style-type: none"> ■ Ensure all Fisheries/PAPs are informed about the implementation of LRP, SEP and GRM ■ Track all engagement activities and grievances ■ Deliver all fishing related grievances to the relevant Project departments
<p>Social Impact Specialist</p>	<ul style="list-style-type: none"> ■ Arranging a public meeting to inform owners of commercial boats about the specifics of the fuel support compensation program in coordination with Çaycuma District Directorate of Agriculture and Fishing Cooperative ■ Delivering educational materials while making sure they reach the appropriate recipients in coordination with Çaycuma district directorate of agriculture and Fishing cooperatives. ■ Processing applications for fuel assistance and determining whether they are eligible in coordination with Çaycuma District Directorate of Agriculture and Fishing Cooperative ■ Updating the completed list of eligible vessel owners when it has been finalized ■ Receiving further supporting documentation for payment, such as fuel books, fuel receipts for the current period, and bank account and other records in coordination with Çaycuma District Directorate of Agriculture and Fishing Cooperative ■ Reporting any complaints made by owners of small boats under the LRP Implementation ■ Leaping all documents pertaining to fuel assistance ■ Reporting regularly to upper management, on the state of affairs and progress ■ Monitor compensation strategies of TEIAS and BOTAS ■ Assist TEIAS and BOTAS for the stakeholder engagement activities
<p>HSSE Coordinator or equivalent related unit manager</p>	<ul style="list-style-type: none"> ■ Responsible of the effective implementation of LRP including the budget management. ■ Ensure allocation of adequate financial and human resources for effective implementation of LRP throughout the Project in line with the Project Standards. ■ Approve key stakeholder engagement strategies and local governmental stakeholders etc before LRP implementation. ■ Conduct periodic reviews of LRP implementation based on the financial and implementation monitoring reports.

Roles	Responsibilities
<p>TPAO & BOTAŞ Senior Management</p>	<ul style="list-style-type: none"> ■ Approve the LRP (after Lender's approval). ■ Establish a PIU to implement the Project. ■ Ensure sufficient budget for defined compensations and supports through national legislation and the LRP Fund. ■ Sign protocol between related institutions, if needed. ■ Provide written protocol that defines the roles, responsibilities and processes for the establishment and management of the LRP Fund. ■ Regularly monitor the LRP through the reports/ feedbacks provided from the Unit Manager.
<p>Evaluation Committee (Consisting of local Mukhtars, Cooperative representatives, TP-OTC CLO and one additional representative from TP-OTC)</p>	<ul style="list-style-type: none"> ■ Evaluation process, eligibility, and approval should assign “Evaluation Committee and the final budget will be approved by the Evaluation Committee ■ ensuring alignment between, project lenders, the Government, local leaders, land affected people and other community members and fisher; ■ overseeing ethics compliance and governance issues and ensuring that the livelihood restoration process is managed fairly and transparently and is free of corruption or bribery etc. ■ ensuring alignment of LRP with regional and local development plans and initiatives; ■ providing an advisory role on resolving internal and external livelihood restoration issues, monitoring the budget etc.; ■ reviewing monitoring report provided by the Project and ensuring that any issues are addressed in an efficient and effective manner; ■ instigating independent external livelihood restoration reviews, when necessary; ■ responding to implementation problems identified in internal and external monitoring reports; ■ ensuring adequate information sharing with the Project representatives and the PAPs

17.0 BUDGET

17.1 Budget for Fisheries

List of the eligible registered boats are presented in **Table 12-3**.

According to the consultations held with the cooperative representatives, 36 commercial boats with approximately 120 crew members, approximately 200 amateur boats, 5 amateur divers are affected from the restrictions. (see: Entitlement Matrix in Chapter 12.2). Summarized as follows:

Table 17-1: Fishers Impacted from the Restrictions

Fishers	Count
Number of commercial boats (licensed)	36
Number of amateur boats (approximate)	200
Number of amateur divers	5

As the amateur fishing encompasses sports fishing or fishing as a hobby, and it is not permitted to fish more than 6 kg, which cannot be sold commercially, only the commercial boats have been considered for the compensation and the calculations. The number of commercial boats registered with the Cooperative is 36 and the compensation calculations are presented below.

17.2 Compensation for Licensed Commercial Boats

According to the interviews with the cooperative and the fishers:

- daily hours spent for fishing is 3 hours;
- following the NAVTEX restrictions, an extra 1 hour is required to reach the alternative fishing area, as such the daily diesel consumption of the fishers has increased.

Thus, the commercial fishers will be compensated for the 1 hour of extra travel. Based on the interviews, all 36 commercial boats use diesel fuel. Distribution of boats according to their engine power is presented in Table 12-3.

The fishing ban in Black Sea was announced to start on 3 March 2022. The NAVTEX announcement was made on 5 March 2022. The fishing ban ended on 1 September 2022. The NAVTEX is scheduled last 350 days from the day of announcement and is expected to end on 18 February 2023. The fishing ban applies to boats above 12 meters⁸. As the boats are less than 12 meters in length, they are fish throughout the year. As such, they are impacted from full 350 days of NAVTEX.

The formula used by the Chamber of Shipping⁹, is used to calculate the extra fuel needed to reach the alternative fishing area. The formula takes the engine power of the boat and the fuel type into consideration. According to the calculation of fuel consumption capacities according to ship types, the limits of diesel supports are determined. The definitions of terms and units in the formula are as follows¹⁰:

Table 17-2: Calculation Formula¹¹

The original fuel consumption coefficient (K) is determined as the amount of fuel that the machine with one (1) BHP (horse power) power will burn in one (1) hour.

$$K \text{ (For Diesel)} = 118 \text{ ml/BHP.hour.}$$

$$\text{Consumption / hour} = K \times \text{HP}$$

According to the formula given above, diesel consumption per hour, for commercial boats) are calculated and presented below. The input for calculation is summarized as follows:

- 36 commercial diesel boats of various HPs (presented in Table 12-3) sail every day.
- The compensation is considered for 1 hour of extra travel time.

⁸ <https://mevzuat.gov.tr/anasayfa/MevzuatFihristDetay/frame?MevzuatTur=9&MevzuatNo=34823&MevzuatTertip=5>

⁹ <https://www.denizticaretodasi.org.tr/en>

¹⁰ <https://www.denizticaretodasi.org.tr/media/SharedDocuments/OTV/739-244.pdf>

¹¹ <https://www.denizticaretodasi.org.tr/media/SharedDocuments/OTV/739-244.pdf>

- The fishers will be impacted from the NAVTEX restrictions for 350 days.
- Monthly diesel fuel prices¹² have been used for calculation of fuel cost, the monthly cost for each month will be updated, at the end of the NAVTEX period to calculate the actual incurred compensation.

The estimated budget to be allocated for the compensation of 36 boats for 350 days, based on diesel prices published to date with 10% contingency, will be calculated according to the current exchange rate of that period. The calculations are provided for guidance only and the actuals will be updated monthly. The compensation will be calculated based on the fishers' applications with the form in Annex 2. The payments will be made on an as incurred basis at the end of the NAVTEX restrictions. The responsibility for the budget allocation for the fisheries will be under TP-OTC and will be paid on an as incurred basis.

17.3 Alternative Compensation Methodologies

The LRP approach targets including the restoring livelihoods and improving livelihoods through further community development initiatives.

The LRP approach targets including the restoring livelihoods and improving livelihoods through further community development initiatives. During the implementation process of LRP, following alternative compensation methodologies will be considered, according to the outputs of the engagement activities with PAPs:

- Partnership with fishing cooperative who will support project development and implementation through technical advice, accessing markets, providing assistance,
- Partnership with external stakeholders (including government) in order to meet specific project objectives
- Vocational training provided to fishers in corporation with Marine Branch of District Directorate of Agriculture,
- During the recruitment process for construction and operation, if requested, prioritization of fishers of Filyos and training as needed;
- Regular meetings with government authorities to establish how TP-OTC could assist with meeting the infrastructure requirements of Amateur Fishers, such as cold storage;
- One time equipment support to fishers, limited to extension net and fishing rod.
- Job opportunities to fishers¹³

Detailed budget for the alternative compensation will be determined during LRP implementation.

In addition, it should be noted that TP-OTC is engaging with the relevant governmental bodies, to provide alternative fishing areas to fishers, and after the determination of alternative fishing areas only retrospective compensation will be conducted.

¹² Karasu station at <https://www.und.org.tr/akaryakit-fiyatlari>

¹³ Currently two fishers are employed as a marine security guard.

ANNEX 1: The Time-plan and Content of the first Information Disclosure Visits and Meetings

Stakeholder	Date	Meeting content
Zonguldak Governorship	15 February 2022	Information Disclosure and ask support on application of the restrictions
Çaycuma District Governorship	17 February 2022	Information Disclosure and ask support on application of the restrictions
Çaycuma Municipality	17 February 2022	Information Disclosure, stakeholder engagement, further engagements and discussion on impact mitigation measures
Filyos Municipality	16 February 2022	Information Disclosure, stakeholder engagement, further engagements and discussion on impact mitigation measures
Zonguldak Provincial Agriculture and Fishing Directorate	15 February 2022	Information Disclosure and gather information on fishing activities in the region
Zonguldak Gendarmerie Command	15 February 2022	Information Disclosure and ask support on application of the restrictions
Zonguldak Coast Guard Command	15 February 2022	Information Disclosure, ask support on application of the restrictions and gather information on fishing activities in the region
Çaycuma Gendarmerie Command	15 February 2022	Information Disclosure and ask support on application of the restrictions
Zonguldak Port Authority	15 February 2022	Information Disclosure, stakeholder engagement, further engagements, gather information on fishing activities in the region and discussion on impact mitigation measures
Zonguldak General Directorate of Agriculture and Forestry -Fishery and Aquaculture Department	15 February 2022	Information Disclosure, stakeholder engagement, further engagements, gather information on fishing activities in the region and discussion on impact mitigation measures
Bartın Port Authority	18 February 2022	Information Disclosure, stakeholder engagement, further engagements, gather information on fishing activities in the region and discussion on impact mitigation measures

Bartın Port Authority	18 February 2022	Information Disclosure, stakeholder engagement, further engagements, gather information on fishing activities in the region and discussion on impact mitigation measures
Bartın Fishing Cooperative	18 February 2022	Information Disclosure, stakeholder engagement, further engagements, gather information on fishing activities in the region and discussion on impact mitigation measures
Zonguldak Fishing Cooperative	17 February 2022	Information Disclosure, stakeholder engagement, further engagements, gather information on fishing activities in the region and discussion on impact mitigation measures
Filyos Fishing Cooperative	16 February 2022	Information Disclosure, stakeholder engagement, further engagements, gather information on fishing activities in the region and discussion on impact mitigation measures
Filyos Fishermen	16 February 2022	Information Disclosure, stakeholder engagement, further engagements, gather information on fishing activities in the region and discussion on impact mitigation measures

ANNEX 2: Fisheries Application Form for Livelihood Restoration

Fisher's Name, Surname:			
Average Income (Please attach official evidence)			
Fisheries Licensing Permit for Real Persons			
Corporative Membership (Y/N) (Please attach official evidence)			
	Boat #1	Boat #2 (if any)	Boat #2 (if any)
Boat Name:			
Boat size (meter)			
Boat engine power			
Number of crew			
Average hour per day hunted			
Hours of hunting			
Average daily earnings			
Species hunted / months			
Specify		Month/ time range (as date)	



I declare and undertake that all the information I have stated above and the attached evidence documents are true and verifiable. I fully comply with all legal requirements related to fisheries and referring to the above application form and evidence documents I am requesting to benefit from the compensation for the period of construction fishing ban and asking your consent. I have been fully informed by TP-OTC Representatives regarding my rights on the compensation process, transparently. I am aware that, in case any back-up documents are missing, my application will not be eligible.

Name Surname

Signature

Documents to be submitted with the form	Submitted (Y/N)
Copy of Fishing License for Vessels (green license)	
Copy of fuel log book and/or copy of fuel receipt, if exist	
Copy of Fishing License for Real Persons of Owner of the Vessel	
Residency certificate form and/or Vessel registration form	

ANNEX 3: Grievance Form

 ŞİKAYET KAYIT FORMU 	Doküman No	GR.001
	Yayın Tarihi	
	Revizyon No	0
	Revizyon Tarihi	0
	Sayfa No	1
1- ŞİKAYETTE BULUNAN KİŞİYE İLİŞKİN BİLGİLER		
Ad Soyad: <small>Eğer isimiz olarak şikâyetle bulunmak istiyorsanız, lütfen ŞİMSİZ yazınız - Belirttiğiniz tüm görüşlerinizi dikkate alınacaktır.</small>	Tarih:	
İletişim Bilgisi	Şikâyet nasıl alındı?	
	<input type="checkbox"/> Şahsen	
	<input type="checkbox"/> Telefonla	
	<input type="checkbox"/> Dilekçe	
	<input type="checkbox"/> E-posta yoluyla	
<input type="checkbox"/> Diğer (Lütfen Belirtin)		
Adres:		
E-posta:	Telefon:	
2- ŞİKAYET HAKKINDA BİLGİ (Lütfen şikâyetiniz anlatınız)		
Şikâyet sahibi tarafından talep edilen çözümler		
Şikâyetin alındığı tarih ve Numarası Türü:		
Olay/Şikâyet Sıklığı	<input type="checkbox"/> Bir defa (şikâyet tarihi)	
	<input type="checkbox"/> Birden fazla (Kaç kez tekrarlandı?.....)	
	<input type="checkbox"/> Devam ediyor (Sorun hali hazırda sürüyor)	
Şikâyet Sahibinin Ad Soyad ve İmzası:		Kayıt Eden Kişinin Ad Soyad ve İmzası:

ANNEX 4: Grievance Closure Form

TÜRKİYE PETROLLERİ ANONİM ORTAKLIĞI		ŞİKAYET KAPANIŞ FORMU		TP OTC OFFSHORE TECHNOLOGY CENTER	
Doküman No		GR.001		Yayın Tarihi	
Resolüyon No		0		Revizyon Tarihi	
Sayfa No		1			
Şikayet Kayıt Numarası	GR-				
Tarih					
Şikâyetin / Talebin Özeti					
Talep edilen acil eylemleri belirtiniz					
Talep edilen uzun dönem eylemleri belirtiniz					
Tazminat talep edildi mi?	Evet () Hayır ()				
FAALİYETİN DOĞRULANMASI VE SONLANDIRILMASI					
Aşamalar		Sonlandırılma Tarihi		Sorumlu Bölüm	
1					
2					
3					
GRIEVANCE / REQUEST COMPLETION					
Notlar:					
Tarih :					
Şikayette Bulunan Kişinin; Ad, Soyad ve İmza			TPAO/TP-OTC adına; Ünvan, Ad, Soyad ve İmza		

Annex 5: Grievance Subcategories

Social Impact Sub Category	Environmental Sub Category	Compliance Impact Sub Category	Community Security Sub Category	Human Rights Sub Category
Livelihood	Natural hazards	Unauthorized clearing	Violence on site	Employee misconduct
Resettlement	Contamination - water	Third party risks	Breach of Human Rights	Vulnerability
Stakeholder engagement	Contamination - soil	Noncompliance with lender requirements	Company guards on site	Gender
Cultural heritage	Noise and dust			
Community health and safety	Landscape			
Employment	Poaching			
Workers' Health and Safety	Wildlife disturbance			
Community trust	Water quantity			
Procurement opportunities				
Damage to Animal				
Damage to House				
Damage to Land &Crop				
Access to the Lands and Resources				
Expropriation				
Damage to Infrastructure (Road etc.)				

Annex 6: Translation of relevant sections of the “Circular No. 37/2 Regulating Fishing for Amateur (Sports) Purposes in Seas and Inland Waters”**Circular No. 37/2 Regulating Fishing for Amateur (Sports) Purposes in Seas and Inland Waters****Regulating Amateur (sportive) Fishing in Seas and Inland Waters 2006-Annex on the Amendment to the Circular No. 37/2 for the 2008 Hunting Period Circular**

Published in the Official Newspaper: 23.05.2007/26530

SECOND PART**Turkish citizens engaged in amateur fishing****ARTICLE 3-**

1. Real persons who are citizens of the Republic of Turkey may engage in amateur fishing provided that they comply with the prohibitions, limitations and responsibilities introduced by this circular. In case of application to these persons, an "Amateur Fisherman's Certificate" is issued by the provincial and district directorates, valid for two years from the date of issue. It is not obligatory to obtain this document or to keep it while fishing.
2. Volunteer amateur fishing organizations can collectively get their members to obtain certificates.
3. The Amateur Fisherman's Certificate is valid wherever amateur fishing is allowed within the borders of the Republic of Turkey. In case of loss of the document, a new one is given upon declaration.
4. Amateur Fisherman's Certificate is issued in accordance with the form below.

ARTICLE 4-

1. Foreign nationals permanently residing in our country, official guests or temporarily on duty can fish with the "Guest Amateur Fisherman Certificate". These persons are given a Guest Amateur Fisherman's Certificate, valid for two years, by the provincial directorates for a fee of 150 YTL, provided that they document their status. Guest Amateur Fisherman Certificate is issued in accordance with the form below.
2. Foreign tourist amateur fishermen;
 - a) By those who have an amateur fishing tourism permit, by obtaining hunting stamps, by boat in our inland waters and seas,
 - b) Free of charge, without obtaining a permit or document, within the scope of sportive fishing competitions of amateur fishing associations,
 - c) Free of charge, without obtaining a permit or document, provided that it is only on land in our seas and complies with the rules in the circular,
 - d) they can hunt.

Amateur fishing tourism permit**ARTICLE 5-**

1. Real and legal persons who will engage in amateur fishing tourism activities are granted an amateur fishing tourism permit by the provincial directorates, valid for 2 years from the date of receipt. Real or legal persons holding this certificate are responsible for hunting amateur fishermen in accordance with the rules specified in the circular. The certificates of those who catch fish in violation of the rules determined by the circular and do not take the measures to prevent their fishing will be seized and cancelled. No new certificate is issued for a period of 2 (two) years.
2. Amateur Fishing Tourism Permit is issued in accordance

T.C. TARIM VE KÖYİŞLERİ BAKANLIĞI İl Müdürlüğü AMATÖR BALIKÇILIK TURİZM İZİNİ İzin No:	
Belge Sahibinin Adı Soyadı	
Ticari Unvanı (Şirketler için)	
Vergi Dairesi ve Vergi Kimlik No.	
Ticaret Sicil No (Şirketler İçin)	
TC Kimlik No. (Gerçek Kişiler İçin)	
Bu belge, Tarım ve Köyişleri Bakanlığı'na yayımlanan Amatör (Sportif) Su Ürünleri Avcılığını Düzenleyen Sirküler hükümleri gereğince, amatör avcılık yapılabilecek tüm alanlarda geçerli olmak üzere verilmiştir. Düzenlendiği tarihten itibaren iki yıl geçerlidir...	
...../...../20...	
Adı Soyadı Unvan-İmza-Mühür	

Hunting stamp
ARTICLE 6-

- Those who have an amateur fishing tourism permit, province or district
- 15 TL for each foreign amateur fisherman who will attend each fishing party from the directorates. they have to get hunting stamps in return.
- The hunting stamp is valid for 3 days from the day it is issued.
- Hunting Stamp is issued in accordance with the following form:

Figure-4 Hunting Stamp

	T.C. TARIM VE KÖYİŞLERİ BAKANLIĞI İlçe Müdürlüğü AVLANMA PULU
	Pul No:
Amatör Balıkçılık Turizmi İzni Sahibinin	
Adı	
Belge Numarası ve Tarihi	
Alındığı Yer	
Avlanma Yeri	
Avın Başlangıç Tarihi	
Bu avlanma pulu Amatör Balıkçılık Turizmi kapsamında avın başlangıç tarihinden itibaren üç gün süre ile geçerli olmak üzere verilmiştir.	

THIRD PART
Prohibitions and Limitations about the Species
Species and times that can be fished in inland waters
ARTICLE 7-

- The daily limit information that can be caught by amateur fishermen in inland waters is given in table-4 and time restrictions are given in table-5.

Table-4 Inland Fishes

Species	Latin Name	Height Limit (Least)	Quantity Limit (Maximum)****	Season
Natural trout (All species)		20 cm.	3 pieces	01 October-31 March
rainbow trout	<i>O. mykiss</i>	no	10 pieces	*
Carp	<i>C. carpio</i>	30 cm.	10 pieces	**
Tinca	<i>tinca tinca</i>	22 cm.	10 pieces	**
Zander	<i>S. lucioperca</i>	22 cm	10 pieces	15 March - 30 April
freshwater perch	<i>P. fluviatilis</i>	18 cm.	kg	15 March - 30 April
Freshwater Chub	<i>Leuciscus cephalus</i>	20 cm.	kg	***
Shiraz	<i>capoeta.sp</i>	20 cm.	kg	**
Pike	<i>Esox Lucius</i>	40 cm.	10 pieces	December 15-March 31
Catfish	<i>Silurus glanis</i>	70 cm.	1 pc	**
other species	----	no	kg	**

5% small sizes fish are allowed. For the types with limits in terms of units, the limits in terms of kg are not considered. For species with a limit in kg,

the hunted species cannot exceed 5 kg, whether one type or mixed.

* The same closed season as the natural species is applied in forest waters. Other than that, there is no closed season in inland waters.

**In the time prohibition for these species, the prohibited periods given for the provincial groups in Table-5 are applied.

*** Except in forest waters, there is no closed season in rivers. For inland waters other than rivers, the prohibited periods in table-5 are applied.

**** The quantity is not the amount that each species can be caught separately, but the total number of fish that can be caught during the day. In cases where more than one species is caught, subject to the number restriction, the fish caught are considered as a single species. In this case, the total number of fish caught cannot exceed 10.

In case of mixed hunting of species subject to quantity and Kg restrictions, the number of
If the number of the species subject to the restriction is less than the number that can be caught, the kg limit is taken as a basis for all fish caught.

Table-5 Time Bans in Inland Waters

PROVINCES	FORBIDDEN PERIOD
Adana, Adıyaman, Antalya, Aydın, Batman, Denizli, Diyarbakır, Gaziantep, Hatay, İzmir, Kahramanmaraş, Kilis, Manisa, Mardin, Mersin, Muğla, Osmaniye, Siirt, Şanlıurfa, Şırnak	March 15 – 15 June
Afyon, Aksaray, Amasya, Ankara, Balıkesir, Bartın, Bilecik, Bolu, Burdur, Bursa, Canakkale, Cankiri, Corum, Düzce, Edirne, Eskişehir, Isparta, İstanbul, Karabük, Karaman, Kastamonu, Kırıkkale, Kirklareli, Kirsehir, Kocaeli, Konya, Kütahya, Nevşehir, Niğde, Sakarya, Samsun, Sinop, Tekirdag, Usak, Yalova, Zonguldak	April 1–June 30
Artvin, Bingöl, Elazığ, Erzincan, Giresun, Gumushane, Kayseri, Malatya, Ordu, Rize, Sivas, Tokat, Trabzon, Tunceli, Yozgat	April 15– 15 July
Ağrı, Ardahan, Bayburt, Bitlis, Erzurum, Hakkari, Iğdır, Kars, Muş, Van	May 15 – 15 August

Species that can be hunted in the seas

ARTICLE 8-(1) Information on some species that can be caught by amateur fishermen in the seas is given in the table below:

Table-6 Marine Fishes

Species	Latin name	Height limit (cm) (least)	Quantity limit (max more)
leer	<i>lichia amia</i>	30	3 pieces
Kidney Beans - Tabby	<i>Mullus sp.</i>	13	kg
sea bream	<i>Sparus aurata</i>	15	kg
sea crane	<i>Scomberesox</i>	60	1 pc
Gobene (Chubby)	<i>auxis thazard</i>	40	3 pieces
Horse mackerel	<i>Trachurus</i>	13	kg
Shield	<i>Scophthalmus sp.</i>	40	2 pieces
Karagoz	<i>Diplodus vulgaris</i>	15	kg
Gray mullet	<i>Mugil sp.</i>	20	kg

Sword	<i>xiphias gladius</i>	130	1 pc
Spanish mackerel	<i>Scomber japonicus</i>	18	kg
Lagos	<i>Epinephelus aeneus</i>	30	3 pieces
Sea bass	<i>Dicentrarchus labrax</i>	18	kg
bluefish	<i>Pomatomus saltatrix</i>	14	kg
Coral	<i>Pagellus erythrinus</i>	15	kg
grouper	<i>Epinephelus gigas</i>	40	3 pieces
Tuna (Tons)	<i>Thunnus thynnus</i>	90	1 pc
Acorn -Toric	<i>sarda sarda</i>	25	kg
Kitty	<i>Pleuronectes in the harbor</i>	20	kg
synagrite	<i>dentex dentex</i>	20	kg
Mackerel	<i>Scomber scombrus</i>	20	kg
long wing tuna	<i>Thunnus alalunga</i>	60	1 pc
written tuna	<i>Euthynnus alletteratus</i>	45	2 pieces
Amendment RG 23.05.2007-26530 issue			
other species	-----	no	kg

5% small sizes are allowed.

For the types with limits in terms of units, the limits in terms of kg are not considered. For species with a limit in kg, the hunted species cannot exceed 5 kg, whether single or mixed.

If a single individual exceeds 5 kg in the species that are restricted in terms of kg, this individual is considered within the legal limits.

The quantity is not the amount that each species can be caught separately, but the total number of fish that can be caught during the day. In cases where more than one species is caught subject to the number restriction, the fish caught are considered as a single species. In this case, the total number of fish caught cannot exceed 3.

In case of mixed hunting of species subject to quantity and Kg restrictions, the number of

If the number of the species subject to the restriction is less than the number that can be caught, the kg limit is taken as a basis for all fish caught.

Protected species

ARTICLE 9-(1) Information on the species whose hunting is prohibited in seas and inland waters is given in the table below:

Table-7 Species that are Prohibited to Hunt

Latin name	Species	Latin name
<i>Cyprinion macrostamus</i>	Sturgeons	<i>acipenser sturio</i>
<i>Carcharhinus plumbeus</i>		<i>Acipenser ruthenus</i>
		<i>Acipenser nudiventris</i>
<i>Salmo trutta labrax</i>		<i>Acipenser Guldenstaedti</i>
<i>hippocampus hippocampus</i>	Minaret	-
<i>caretta caretta,</i>	musk octopus	<i>Elodone moschata</i>
<i>dolium galea</i>	seals	<i>Lamellaridae</i>
<i>chelonion mydas</i>	grass carp	<i>Ctenopharyngodon idella</i>
<i>Haliotis lamellosa</i>	propeller fish	<i>break break</i>
<i>Posidonia oceanica</i>	pina	<i>pinna nobilis</i>

<i>Zostera nolti</i>	devil's minaret	<i>Gourmya yulgata</i>
<i>Hypophthalmichthys molitrix</i>	black coral	<i>Gerardia savaglia</i>
<i>Spongia agaricina</i>	Triton	<i>Charonia lampas</i>
<i>monachus monachus</i>	commercial sea sponges	<i>Spongia officinalis</i>
<i>Cetorhinus maximus</i>		<i>Spongia agaricina</i>
		<i>hippospongia communis</i>
<i>Elodone cirrhosa</i>	oily fish	<i>garra rufa</i>
<i>Corallium rubrum</i>	Dolphin	<i>delphinus delphis</i>
<i>Asterina pancerii</i>		<i>phocoena phocoena</i>
<i>Coryphaena hippurus</i>		<i>Tursiops truncatus</i>
<i>maia squinado</i>		

CHAPTER FOUR

Method and Limitations Amateur fishing in inland waters

ARTICLE 10-(1) Amateur fishing can be done in inland waters with all kinds of fishing line and nets except longline. Fishing by attaching a net (crown, parachute, etc.) to the tip of the fishing line is prohibited due to the damage on the nature.

- (2) An amateur fisherman can hunt with a maximum of 4 fishing line. The number of hooks per fishing line cannot exceed 6 pieces. However, no more than two fishing tackles can be used in trout fishing, and each fishing gear may have two hooks.
- (3) Fishing is prohibited during the period in inland waters where hunting is prohibited in Annex-1 and inland waters in Annex-2 where hunting is partially prohibited.
- (4) It is forbidden to use all kinds of nets (such as stretching, lengthening, rubbing, spreading, pintering, turning, crowing) in amateur hunting, except for the manger extension net. The length of the manger extension net cannot be more than 5 meters, its height is 1.5 meters, and the mesh opening cannot be larger than 28 mm.
- (5) The use of stunners, drugs, lethal chemicals, all kinds of explosives, carbide, quicklime, fish grass, etc. in amateur hunting and hunting of these materials on-site is prohibited
 - (6) It is forbidden to use electric current, electroshock, bottled gas and air pressure methods in amateur hunting.
 - (7) Underwater rifle, all kinds of harpoons, pitchforks, sledgehammers, etc. It is not allowed to hunt using tools.
- (8) All kinds of artificial, natural and manufactured natural bait in trout fishing, excluding bloodworms, bone worms, carrion worms, fly larvae, live or dead inland water and sea fish can be used.
- (9) Amateur fishing is prohibited with boats over 7.5 meters in length.
- (10) It is forbidden to hunt with motorized or non-motorized boats and boats in lakes and ponds smaller than 1 km².
- (11) In inland waters, there is no restriction on hunting hours during the day, except for places where special hunting permits are not required.
- (12) During the periods when hunting is free in the leased production areas, amateur fishing is allowed with a fishing tackle with a maximum of 6 hooks per person on public holidays. The areas to be opened for amateur hunting in these places are determined by the provincial directorates of the Ministry. If the leased production area is a dam lake, the opinion of the local institution of the General Directorate of State Hydraulic Works is also sought for the area to be reserved for amateur fishing. It is dangerous and prohibited to hunt in the safety area specified by State Water Works.

Amateur fishing in the seas

ARTICLE 11-

1. Amateur fishing in the seas is not subject to the time ban. There is no limitation of fishing hours during the day, except for places where special fishing permits are not required in the seas.
2. Amateur fishing in the seas can be done with all kinds of fishing line, spreader and manger nets and underwater rifles. The length of the feeder extension net cannot be more than 5 meters, its height is 1.5 meters, and the mesh opening cannot be larger than 28 mm.
3. An amateur can use a maximum of 4 fishing line. The number of hooks in a fishing tackle of an amateur cannot exceed 6, excluding the hook.
4. Fishing by attaching a net (crown, parachute, etc.) to the tip of the fishing line is prohibited due to the damage it causes to nature.
5. When the scattering net to be used is closed, its height from the ground cannot exceed 3 meters and the mesh opening cannot be less than 28 mm.
6. It is not allowed to hunt with harpoons and underwater rifles at night in the seas. Light source, artificial air source excluding snorkel, tube, hookah, all kinds of breathing in hunting with underwater rifle device and backup air supply cannot be used.
7. Grouper and Lagos fishing cannot be done with an underwater rifle.
8. It is forbidden to fish with all kinds of nets and all kinds of explosive, lethal, anaesthetic, anaesthetising, anaesthetising, stimulant chemicals, carbide, quicklime, fish grass, etc., and to keep these substances on ships and in fishing areas.
9. It is forbidden to use electric current, electroshock, bottled gas and air pressure methods in amateur hunting.

10. All kinds of natural bait, manufactured natural bait and artificial bait other than the species under protection are allowed to be used in amateur fishing in the seas.

Other prohibitions

ARTICLE 13-(1) It is forbidden to hunt by changing the beds of streams, lakes and ponds and to dry or dam some of them, or to collect fish with grills.

- (2) The sale of all kinds of fish caught by amateur fishing is prohibited.
- (3) It is forbidden to buy and sell embalmed specimens of the protected species specified in the circular and their shells, etc., and to keep and display them for trading in markets and workplaces.
- (4) All kinds of amateur fishing competitions to be held in our sea and inland waters are subject to the permission of the Ministry.
- (5) Those who will engage in amateur fishing in forest waters are required to obtain a "Permit Fishing Permit for Fishing in Forest Waters for the Period" or "Daily Fishing Slip" from the local organization of the Ministry of Environment and Forestry.
- (6) It is forbidden to keep prohibited hunting tools and equipment in the hunting area.
- (7) It is forbidden to engage in amateur hunting in the drive-in areas determined by the provincial directorates of the Ministry and notified to the relevant institutions and organizations.
- (8) In inland waters where cage fishing is carried out, it is forbidden to hunt less than 100 meters from the cages.

(9) Fishing outside the tenant is prohibited during the lease term in all sea and inland water areas authorized by the Ministry on the basis of the project to fish for commercial fisheries. The principles and procedures regarding the production to be made in these prohibited areas are determined by the Ministry.

CHAPTER SIX**Legal process****Penalties**

ARTICLE 14-(1) Those who act contrary to the provisions of this Circular, Fisheries Law No. 1380 and related articles of Law No. 3288 and 4950 amending it shall apply.

Those responsible with protection and control

Article 15-(1) (Law on Fisheries Products-Article 33) Personnel assigned with the protection and control of fishery products, sea and inland waters in the Ministry of Agriculture and Rural Affairs and in the fisheries-related organizations affiliated to the Ministry, and members of security, gendarmerie, coast guard, customs and forest protection organizations, municipal police chiefs and members, guards, guards and guards affiliated to public legal entities, and village headman and members of the council of elders in places where there is no security and gendarmerie organization, to keep record of crimes within the scope of this Law, due to the prohibitions imposed by this Law and pursuant to this Law, to seize the used production vehicles and the fishery products obtained and to deliver them to the judicial authorities, provided that the provision of Article 34 is reserved; They are in charge and authorized to impose administrative fines within the framework of the provisions in additional annex-3.

Actions to be taken for captured fishery products and means of production

ARTICLE 16-(1) (Law on Fisheries-Article 34) The following actions are taken regarding the captured fishery products and their means of production.

a) Among the captured non-living fishery products, those that are possible to be used for human consumption or in industry, but cannot be preserved until the conclusion of the judgment, shall be examined by a veterinarian, government, municipality or health center physicians working in the nearest Ministry laboratory or public institutions.

The ones that are not considered objectionable to be consumed or used are immediately sold by auction by the municipality or the council of elders in places where there is no financial organization, by the largest financial officer of the locality.

A record of the sale is drawn up, and the sale price is deposited in trust to the finance cashier, at the disposal of the judicial authorities, until the conclusion of the investigation. In case the defendant's conviction is finalized, the sales price is sent to the relevant cashier.

Among those who cannot be sold or who cannot find a buyer at an approximate price, those that can be used for human consumption are donated to social aid institutions determined by the Ministry.

b) Among the seized means of production, those whose owners are known are kept in trusteeship until the conclusion of the trial.

Among the seized production vehicles, those that are not owned and used in hunting are sold at the end of the ten-day period by the largest financial officer of the region. Those that cannot be sold and those that are deemed objectionable to be used in hunting are donated to scientific organizations.

- c) Undonated fishery products and means of production are destroyed. The same procedure is applied to the fishery products that are deemed undesirable to be used for human consumption, that cannot be used as raw materials in the industry, or that cannot be sold although it is possible to use them.
- d) The return of the live fisheries seized due to this Law and the prohibitions made pursuant to this Law to the sea and inland waters or other actions to be taken for them shall be regulated by a regulation.

CHAPTER SEVEN

General provisions

Prohibition decisions

ARTICLE 17-(1) The Ministry is authorized to determine and announce the prohibitions, limitations and obligations set forth in this Circular. Local administrations, other Ministries and relevant public institutions, private and legal persons cannot lift the prohibitions specified in this Circular, except for natural disasters (drought, flood, fire, health, etc.), They cannot take or announce a new prohibition decision contrary to these prohibitions.