GENERAL DIRECTORATE OF ANTALYA WATER AND WASTEWATER ADMINISTRATION

(ASAT)

ANTALYA SUSTAINABLE WATER AND WASTEWATER MANAGEMENT PROJECT

REVISED 2- ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN-I FOR WASTEWATER PROJECTS OF DÖŞEMEALTI, AKSU, KUNDU, KEPEZ REGIONS AND NORTH ANTALYA WATER SUPPLY PROJECT




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INTRODUCTION

Antalya Water and Wastewater Administration (ASAT) General Directorate has been established as a separate institutional structure of Antalya Metropolitan Municipality, for the execution of water and wastewater services, with the decision of Council of Ministers No. 94/6516 in the framework of the law numbered 2560.The related decision has been published in the Official Gazette numbered 22206 in 18/02/1995. General Directorate of ASAT, established in accordance with the Law No. 2560, is an independent institution with independent budget and public legal entity of the Antalya Metropolitan Municipality.

Duties and Responsibilities of ASAT within the framework of Law No. 2560 and Law of Metropolitan Municipality No. 5216:

To provide drinking and industrial water from all kinds of underground and surface resources and to distribute them, carrying out all necessary survey and design studies of the facilities for supplying water to the subscribers, establishing facilities regarding to the projects, taking over, and operating of the established facilities, carrying out necessary maintenance, repair works and renewals,

For the collection of wastewater and storm water, removal from the settlement areas and safely transferring to discharge place or reuse of water, commissioning the survey and design studies of all facilities starting from the subscribers to discharge point; establishing the facilities according to these projects when necessary; taking over and operating of the established facilities, making maintenance-repair works and renewals,

To prevent pollution of water resources in the region, such as lake, river shores and underground waters with waste waters and industrial wastes, to prevent the establishment of facilities and activities which may cause loss of water from these sources and to take all kind of technical, administrative, and legal precautions on these issues,

To carry out the duties assigned to the municipalities for water and sewage services and to use the authorities in these circumstances,

To purchase and rent all kinds of movable and immovable properties, to sell vehicles and equipments that are not economically worthy, to establish and operate facilities related to ASAT services directly or indirectly with other public or private establishments, to participate the facilities which have been established for this purpose,

According to Article 7 / r of the Law No. 5216 of the Metropolitan Municipality, it can be summarized as, “to carry out water and sewerage services, to establish and operate the necessary dams and other facilities for this purpose; rehabilitate the streams; to market waters from water resources or produced water at the end of the treatment ".

Within the scope of the duties and responsibilities mentioned above; ASAT realize the infrastructure investments with both own resources and foreign finance resources.

Till this time, under "Antalya Water and Wastewater Project", 163 million USD project financed by the World Bank and the European Investment Bank and under "Municipality Services Project", 148 million Euros project financed by the World Bank - International Bank for Reconstruction and Development.

ASAT intends to continue its investments with the World Bank financed Sustainable Cities Project. The investments which will be realized under the project, will be in accordance with the Republic of Turkey Environmental Legislation and World Bank Environmental Protection Policy.

Within this scope, " Environmental and Social Management Report (ESMP)" of collector and wastewater network constructions for city center under "ASAT3 / W1 Lot1 "Construction of Collector and Wastewater Network in Döşemealtı District","ASAT3 / W1-Lot 2 "Construction of Collector and Wastewater Network in Aksu and Kundu District", "ASAT3 / W3 "Construction of Wastewater Network in Kepez District" and ASAT3 / W8 "North Antalya Water Supply Project" and ASAT3/W10 "Construction of Wastewater Network in Dösemealtı Region" regarding to "Antalya Sustainable Water and Wastewater Management Project" has been prepared and the necessary measures for the environmental and social effects mentioned in this report will be taken into account during the execution of the projects.

1.PURPOSE OF ENVIRONMENT AND SOCIAL MANAGEMENT PLAN

The main objective of the Sustainable Cities Project (SCP) is to enhance more the environmental, financial / economic, and social sustainability of the contract packages that the General Directorate of ASAT will implement under the project. According to the subjects stated in the document of the Environmental and Social Management Framework prepared within the scope of the SCP, it is necessary to prepare the Environmental and Social Management Plan (ESMP) considering the World Bank's Environmental and Social Protection Prevention Policies.

The aim of this ESMP document is to determine and to take precautions regarding to the social and environmental impacts that may occur during the construction of the contracts for sewerage, collector and parcel connection ASAT3 / W1-Lot1 (Construction of Collector and Wastewater Network in Döşemealtı District), ASAT3 / W1-Lot 2 (Construction of Collector and Wastewater Network in Aksu and Kundu Districts), ASAT3 / W3 (Construction of Wastewater Network in Kepez Districts), ASAT3 / W8 (North Antalya Water Supply Project) and during the operating period following the completion of these construction works.

Hereby ESMP Revision; it was revised upon the addition of the sewerage line (ASAT3/W10 -Construction of Wastewater Network in Döşemealtı Region) planned to be constructed in Döşemealtı District to the Procurement Plan within the Sustainable Cities Project II.

During this revision period, ASAT3/W1 Lot 1 and ASAT3/W1-Lot 2 contracts, which are the projects included in the existing document, were completed and the final acceptance procedures were completed for Lot 1 on 23 November 2021 and for Lot 2 on 28 December 2021.100% physical progress has been achieved for ASAT3/W3 contract and the contract has been completed as of March 17, 2023. ASAT3/W8 contract was signed on 1 August 2022 and no physical progress has been occured yet.

Within the scope of the report, information about the construction works planning to be done within the the contract packages, the methodologies to be applied and the data regarding to the work sites are given and the social and environmental effects that can occur during construction and operation have been determined. The effects that could occur during all phases of the execution of the contract packages have been defined, and measures have been set up to prevent and / or minimize the harmful effect. Responsible project stakeholders have been identified for the prevention and minimization of the effects described in this report and it has been aimed to monitor and control the effects identified in the ESMP during the implementation of the project.

Considering the monitoring parameters determined within the scope of the ESMP document, it is aimed that the supervision organization will control the quality of construction during the construction period and monitor the work and measures carried out in the field related to these parameters. Arrangements on the site, measures and situations are submitted as a quarterly report by the contractor to the supervision teamand for the newly added ASAT3/W10 contract, these quarterly reports will be submitted by the prospective contractor. These monthly monitoring reports will be reviewed by the supervision team by taking into account the work done on the field and monitoring reports will be presented quarterly periods to the Administration and the İlBank. Ilbank will compile these environmental and social monitoring reports and present them to the World Bank as biannual environmental and social monitoring reports. In operation phase, the social and environmental effects will be evaluated and presented to the World Bank and İlbank Inc. in six months period.

2.ENVIRONMENTAL POLICIES AND LEGISLATION

2.1 National Legislation

2.1.1. Regulation of Environmental Impact Assessment

The purpose of this regulation is to arrage the administrative and technical procedures and principles to be complied with during the environmental impact assessment process.

Environmental impact assessment covers; determining the positive and negative effects that the projects planned to be realized may have on the environment, preventing the negative effects or measures to be taken for reducing the minimum amount that will not harm the environment, evaluation of the selected location and technology alternatives, and monitoring and control of the implementation of the projects.

The authority to give decisions on "EIA positive", "EIA negative," EIA required " or “EIA is not required” are subject to the Ministry's responsibility for the projects subject to this directive. However, when the Ministry deems it necessary, it may transfer its authority to the governorships on the basis of authority width, determining the "EIA is required" or "EIA is not necessary" decision.

According to the directive, EIA report is compulsory for the projects listed in Annex 1, the projects that the “EIA is required” decision, in case of capacity expansion and expansion of the projects in Annex 2, Projects with a threshold or above the sum of the capacity of the existing project and the capacity increase sum in Annex 1, Capacity increase to be made on projects with positive EIA decision or The sum of the capacity increases is based on the threshold values in Annex 1 and above, If the capacity increase and / or extension of the projects planned within the scope of this regulation and which are outside the scope of the regulation due to the threshold value but below the threshold value.

Within the scope of EIA, informing the public about the investment, participation meetings of the people are held by authorized ministries and organizations with the participation of the project owner on the date determined by the Ministry and at the place and time determined by the governorship.

Activities of ASAT3 / W1 Lot-1 and Lot-2, ASAT3 / W3 and ASAT3 / W8 and ASAT3/W10 contract packages within the scope of Antalya Sustainable Cities Project are not included in Annex-1 and Annex-2 according to Turkish EIA legislation, it is considered out of scope.

2.1.2 Other National Environmental Legislations

Regulations and related standards, within the framework of Turkey’s EU integration is largely attuned with EU legislation, assessments on this subject are given in Section 3.2.1.

The Regulations for National Environmental Legislation are listed below:

- Packages Waste Control Regulation
- Regulation on Control of Waste Electrical and Electronic Items
- Regulation on Control of Waste Batteries and Accumulators
- Regulation on Waste Oil Management
- Regulation on Waste Management Regulation Regular Storage of Waste
- Regulation on Wastewater Collection and Removal Systems
- Regulation on Environmental Auditing
- Regulation on Environmental Permission and License
- Regulation on Environmental Noise Control
- Regulation of Exhaust Gas Emission Control
- Regulation on Excavation, Construction, Ruin Waste Control
- Legislation on Ambient Air Quality Assessment and Management
- Regulation on Control of Air Pollution Resulting from Warming
- Regulation on the Inventory and Control of Chemicals
- Regulation on Urban Wastewater Treatment
- Regulation on Control of Odor-forming Emissions
- Implementing Regulation on the Reduction of Ozone Layer Inspection Material
- Implementing Regulation on the Control of Vehicles with a Lifetime Completion
- Regulation on Control of end-of-life-tire
- Regulation on the Principles of Establishment of Environmental Protection Projects by the Presidency of Special Environmental Protection Agency
- Industrial Air Pollution Control Regulation
- Regulation on Monitoring of Greenhouse Gas Causes
- Strategic Environmental Assessment Regulation
- Water Pollution Control Regulation
- Water Construction Audit Services Regulation
- Regulation on Control of Medical Wastes
- Regulation on Control of Soil Pollution and Contaminated Soil
- Implementing Regulation on the Establishment and Management of the National Geographic Information System
- Regulation on the Protection of Groundwater from Pollution and Degradation
- Regulation on Aboveground Water Quality Regulation on the Control of Water Losses in Drinking Water Supply and Distribution Systems
- Regulation on the Quality and Treatment of Drinking Water Supply
- Regulation on Waters for Human Consumption

2.2 International Legislation

2.2.1 World Bank Environmental and Social Policies

It is necessary for the ASAT General Directorate to prepare the Environmental and Social Management Report for the investments defined in the Antalya Sustainable Water and

Wastewater Management Project and for the World Bank's Environmental Assessment Operational Policy (OP 4.01).

The operational policies listed below are within the framework of the ESMP;

- Natural Habitats (OP 4.04);
- Physical Cultural Resources (OP 4.11);
- International Waterways (OP 7.50);
- Involuntary Resettlement (OP 4.12)
- Indigenous Peoples (OP 4.10);
- Physical Cultural and other World Bank Safeguards.

In the course of preparation of the Environmental and Social Management Plan, the operating policies listed above were determined taking into consideration for the nature of the sewerage network and collector lines construction project and the geographical, natural and demographic structure of the region. It was seen that there was no trigger to cause the project category to rise.

Within the scope of the Voluntary Resettlement Policy (OP 4.12), the Land Acquisition and Resettlement Policy Framework (LARPF) document which will be implemented in the second series of the Sustainable Cities Project, has been prepared by İlbank A.Ş. and approved by the World Bank. This document is published on IlBank's web page. During the implementation of the Antalya Sustainable Water and Wastewater Management Project, the Administration shall consider the matters specified in this document.

Environmental Monitoring System will be included following items:

- General Enviroment
- Air Emmissions
- Soil
- Above ground and underground water
- Biological Diversity
- Noise and dust emmisions
- Social Monitoring

It is anticipated that the projects under the scope of Antalya Sustainable Water and Wastewater Management Project will have investments related to "Wastewater" and "Water".

Within the Sustainable Cities Project-II, Environmental and Social Management Framework dated March 2018, the mentioned investments are defined as follows:

Investment related to water supply: Development, rehabilitation, and expansion of water supply systems together with urban growth and reconstruction.

Investment related to wastewater: Expansion and rehabilitation of collection networks to provide wastewater services to developing urban areas; separation of wastewater and rainwater drainage networks when appropriate; investment in new wastewater treatment capacity, including sludge removal management in line with environmental policy objectives.

In consultation with the World Bank, İlbank A.Ş. will classify the projects as Category A, Category B or Category C by conducting a screening of the subprojects. İlbank A.Ş. if one of the evaluated criteria is found to be at high risk, it shall classify that subproject as Category A. If none of the criteria are high risk, but at least one is found to carry a "moderate" risk, that sub-project will be classified as Category B. If all criteria of the subproject are found to be "too small or zero risk", that subproject shall be classified as Category C.

Differences between World Bank Environmental Policy and National Legislation has ben described in Table 1.

Table 1.Comparison Between World Bank Environmental Policy and National Legislation

Steps	**Turkish Regulation on EIA**	**World Bank O.P.4.0.1**
Screening	The EIA Regulation classifies the proposed projects into two categories as; 1. Annex I Projects: The projects that have significant potential impacts. 2. Annex II Projects: The projects that may or may not have significant effects on the environment.	Under the O.P. 4.0.1, the proposed projects are classified under three categories as; 1. Category A: These types of projects would have significant adverse environmental impacts that are sensitive, diverse or unprecedented. 2. Category B: These types of projects might have some adverse environmental impacts, but less adverse than those of Category A projects. i) Category B projects divides in two within its structure as B and B+ projects. Category B+ projects have relatively more impacts and mitigation measures comparing to Category B projects, yet the impacts and mitigation measures are not significant enough to be recognized as Category A projects.

		3. Category C: These types of projects are likely to have minimal or no adverse environmental impacts. When a WB-funded project involves a series of subprojects which are selected and funded by a Financial Intermediary (FI) using WB loan proceeds, the project is classified as Category FI.
Public Consultation Meeting	For projects that require the preparation of an EIA, the Governorate is required to inform the public that a project application has been submitted in a specified locality, that the EIA process has begun and that the public may submit its comments and suggestions to the Governorate or MoEUCC.	For all Category A and B subprojects proposed for WB financing, during the EA process, the borrower consults subproject-affected groups and NGOs about the subproject's environmental aspects and takes their views into account.
Scope of Environmental Assessment	The project proponent presents a Project Introduction File (PIF) for Annex II projects and the PIF outline for Annex I projects to a commission which comprises representatives of MoEUCC and relevant organizations as identified by MoEUCC. Based on the information submitted, the commission determines the scope of the EIA of the proposed project.	For Category A subprojects the borrower is required to prepare an EIA which examines the subproject's potential negative and positive environmental impacts, compares them with those of feasible alternatives, and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. For Category B projects, this information may be contained in an Environmental and Social Management Plan (ESMP) only unless there are site-specific issues which necessitating a site-specific assessment in addition to the ESMP. If the project is recognized as B+, then partial EA document or partial Environmental and Social Impact Assessment (ESIA) is required to satisfy the expected requirements.

Review and Approval of the EA	The commission reviews the draft version of the EIA report. The final EIA report which incorporates the commission's assessments is then submitted to the MoEUCC for final review. MoEUCC determines whether the "EIA is positive" in which case the project proponent may implement the project or "EIA is negative" in which case the project may not go any forward.	In FI projects, the responsibility to ensure that OP 4.01 requirements are met rests with the FI. The EA process should normally be completed prior to the FI's approval of a subproject for financing with a WB loan.
Disclosure	The draft EIA report is made available to the public for comments at Central MoEUCC or provincial directorate. After MoEUCC's final evaluation of the EIA report, the Governorate announces to the public MoEUCC's decision together with its justifications. Disclosure of the final EIA document is not foreseen in the EIA Regulation.	For Category A subprojects the FI must make the draft EIA report available at a public place accessible to subproject-affected groups and local NGOs. After the EIA of a Category A subproject is finalized, the FI transmits to WB an English language copy of the final report including an English language executive summary. The WB distributes the executive summary to its executive directors and makes the report available through its InfoShop. In case of Category B subprojects, the FI transmits to WB the final English language Category B EA report and WB makes it available through its InfoShop.
Implementation, Monitoring and Inspection	According to the EIA Regulation, MoEUCC monitors and inspects projects that were assessed either "not to need an EIA" or "to have a positive EIA" based on provisions specified in the PIF or the EIA, respectively. Furthermore, the project proponent is obliged to submit monitoring reports to MoEUCC which transmits them to the Governorate for disclosure to the public	During subproject implementation, the FI reports to WB on (a) compliance with measures agreed with the Bank on the basis of the findings and results of the EA, including implementation of the ESMP; and (b) the findings of monitoring programs. The Bank bases supervision of the project's environmental aspects on the findings and recommendations of the EA, including measures set out in the legal agreements, any ESMP, and other project documents.

The effect assessment of ASAT3/W1 Lot1-Lot2, ASAT3/W3, ASAT3/W8 and ASAT3/W10 Contract Packages within the scope of Antalya Sustainable Water and Wastewater Management Project 2 was classified as Category B. During the Environmental evaluation period, The Borrower consult and take into consideration the opinion of the groups effected by the project regarding the environmental effects of the sub-project for both A and B categories sub-projects proposed for WB financing. In this circumtaces, it was reached the consultation to prepare the Environmental and Social Management Plan and to make the public participation meeting on the porpose of envirenmental evaluation related to mentioned contract packages.

2.2.2 EU Environmental Legislation

The EU Environmental Policy is a dynamic policy area that provides an integrated management understanding with the objectives of many policy areas, primarily in the protection of the environment, prevention of the problem at the source, efficient and sustainable use of natural resources, guarantee of human health and the highest standard of living. The EU encourages the implementation of this policy not only within the EU but also through collaborations with other countries.

The development of this policy area has been accelerated by the Environmental Action Programs (EPE), which best offers the EU's integrated environmental management approach and has been prepared since 1973. The last phase of the EPE, which allows more effective solutions to solve global problems, covers the 2014-2020 years with the Seventh Program.The Environmental Action Programs, which have been prepared in 1973, have been quite effective in the development of the European Union's environmental policy:

In 1973 ,1st Environmental Action Program

In 1977, 2nd Environmental Action Program

3rd Environmental Action Program

4th Environmental Action Program

5th Environmental Action Program

6th Environmental Action Program period has been completed in 2012.

7th Environmental Action Plan Based On: EU's environmental target within 10 years has been put forth. The main targets of the "Environment 2020: Our Future, Our Choice" programme is:

- Climate Change
- Nature and Biodiversity
- Environment and Health

- Natural Resources and Wastes

We can explain these four titles as follows:

Climate Change: EU member states have undergone a program to reduce greenhouse gas emissions by 8% between 2013-2020.

Nature and Biodiversity: Protection of different living species and prevention of industrial accidents.

Environment and Health: To prevent the adverse effects of air, water, noise pollution on human health.

Natural Resources and Wastes: Solving the waste problem by ensuring that resources are used correctly, and wastes are properly separated and recycled.

Basic Application Areas in EU Environmental Policy

Horizontal Legislation

Includes the subjects below:

- Environmental Impact Assessment (EIA) (EIA Directive 2011/92 / EC)
- Strategic Environmental Assessment (SEA) (Strategic Environmental Assessment Directive 2001/42 / EC)
- Environmental Information Access (Directive 2003/4/EC on Environmental Information Access)

Air Quality

The Air Quality Framework Directive 2008/50 / EC includes regulations for emission reduction of ozone depleting substances, emissions related with volatile organic compounds (VOC) and fuel quality.

Waste Management

Basic regulation is the Waste Framework Directive 2008/98 / EC. According to the waste management hierarchy set out in the Framework Directive, waste management strategies should focus primarily on preventing the formation of wastes.

Water Quality

Directives are formed related to the Water Framework Directive 2000/60 / EC, which is the priority for harmonization for this sector. The Water Framework Directive is the basic legal framework that envisages the protection and improvement of all water bodies in the European Union in terms of quality and quantity, based on the principle of integrated watershed management and participation of people in decision-making processes.

Nature Protection

In the EU acquis, Bird 2009/147 / EC and Habitat Directives 92/43 / EEC are important and have priority. These directives include the provisions for the identification of protected areas - in particular Natura 2000 areas - and the priority safeguard measures to be considered in all sectors.

Industrial Pollution Control and Risk Management

- Integrated Pollution Prevention and Control (IPPC) Directive 2008/1/EC
- Large Incineration Facilities Directive 2001/80 / EC
- Industrial Emissions Directive 2010/075 / EC

Chemicals

Regulation 1272/2008 / EC contains arrangements for the classification, packaging and labeling of substances and mixtures.

Another important regulation in the chemicals is REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) Regulation 1907/2006 / EC.

Climate Change

There are EU Regulations related to greenhouse gas emission monitoring, emission trading system, reduction of greenhouse gas emissions from sectors other than the emission trading system (Effort Sharing Decision 406/2009 / EC), carbon trapping and storage, control of F-gases and protection of the ozone layer.

Noise

There is Environmental Noise Directive 2002/49 / EC on the assessment and management of environmental noise. In accordance with the Directive, preparation of the strategic noise maps and the creation of noise action plans are required for the residential areas with a population of more than 250,000 inhabitants, main roads with more than 6 million vehicles per year, main railways with more than 60.000 km of trains per year, and airports with movement more than 50,000 per year.

Compliance with the EU Environmental Acquisition

EU Integrated Environmental Strategy (2007-2023) in Turkey, which is a prerequisite for accession to the EU, includes detailed information on required technical and institutional infrastructure, obligatory environmental improvements, and regulations to ensure compliance with the EU environmental legislation and implementation of the regulations in an effective way.

In the scope of EU Integrated Environmental Strategy, particularly in Turkey, aim, target, strategy, and planning activities have been introduced for the environmental priorities as of water, waste, air, industrial pollution control, conservation of nature and horizontal sector.

3.PROJECT DESCRIPTION

In this section, the scope and manufacturing of ASAT3 / W1 Lot1 "Construction of Collector and Wastewater Network in Döşemealtı District",ASAT3/W1 Lot 2 "Construction of Collector and Wastewater Network in Aksu and Kundu Districts", ASAT3 / W3 "Construction of Wastewater Network in Kepez District" and ASAT3 / W8 "North Antalya Water Supply Project " and ASAT 3/W10 " Construction of Wastewater Network in Dösemealtı Region "contract packages within the scope of revised ESMP has been defined and information about the current status of the contracts have been provided.

Within the scope of **ASAT3/W1-Lot1 "Construction of Collector and Wastewater Network in Döşemealtı District",** it is planned that construction of collector line with network and domestic connection in Bahçeyaka-Kuzeykent regions.

With the mentioned above investment, it was predicted that 6.608 nos subscriber connections and approximately 26.500 P.E. will be provided services.

Construction of wastewater network line with diameter Ø200-Ø1000 mm, wastewater manholes with diameter Ø1200-Ø1600 mm, house connections with diameter Ø200 mm pipeline and services manholes with diameter Ø800 mm are included in the scope of contract package.

The Contract has been completed in the period of the Revised ESMP Document and its Temporary Acceptance has been completed as of November 23, 2020, and Final Acceptance has beencompleted as of November 23, 2021. Within the contract, total of 35.8 km of sewerage lines, including 27.9 km of network line and 7.9 km of collector line have been constructed. In addition, 961 parcels with a length of 5.1 km have been constructed, and 2 nos package manhole type underground wastewater pumping stations have been constructed.

The financial expenditure under the contract and the final contract amount was 3,773,735.33 €.

With the scope of **ASAT3/W1-Lot2 "Construction of Collector and Wastewater Network in Aksu and Kundu Districts",** the main collector and collection lines of the Aksu district center and the construction of the network lines in accordance with the construction are planned**.** Furthermore, wastewater network in Kundu-Turism Region located in boundary of Aksu is included in contract package. Constraction of wastewater network line with diameter Ø200-Ø1200 mm, wastewater manholes with diameter Ø1200-Ø1600 mm, house connections with diameter Ø200 mm pipeline and services manholes with diameter Ø800 mm are included in the scope of contract package.

It is planned to provide wastewater service to approximately 9,500 people with 2,360 subscriber connections in the region.

The Contract has been completed in the process of the revised ESMP Document and its Provisional Acceptance has been made as of December 28, 2020, and Final Acceptance has been made as of December 28, 2021. Within the scope of the contract, total of 18.4 km of sewerage lines, including 15.6 km network line and 3.8 km collector line, were manufactured, and 437 parcel connections were manufactured with a length of 3 km.

The financial expenditure under the contract and the final contract amount was € 2,451,159.49.

With the scope of **ASAT3/W3 "Construction of Wastewater Network in Kepez District"** it is being planned that construction of wastewater network line with diameter Ø200-Ø500 mm, wastewater manholes with diameter Ø1200-Ø1600 mm, domestic connections with diameter Ø200 mm pipeline and sevices manholes with diameter Ø800 mm in Kepez Region where the construction is rapidly developing and expanding ; Şelale, Göçerler, Sinan Neighborhoods in Altınova and Karşıyaka, Çankaya, Fevzi Çakmak Neighborhoods in Varsak.

It is planned to provide wastewater service to approximately 118.000 people with 29.500 subscriber connections in the region.

Within the scope of the contract, 117 km of sewerage network lines have been and 2,737 parcel connections with a length of 15.5 km have been constructed. As of March 17, 2023, the contract has been completed.

Current contract amount is 46,573,365,00 TL and the amount of financial expenditure is 7,116,824.43 €.

With the scope of **ASAT3/W8 "North Antalya Water Supply Project"**, it is planning, construction of 19 km Ø1200 doctile pipe drinking water transmission line, electro-mechanical procurement, and installation of the existing well site, construction of well collection lines up to the transmission line, construction of water collection tank with chlorination unit, rainwater drainage line belonging to the well region, turning the well area, and landscaping operations.

The subject of the project, definition of the investment, its characteristics, physical life, service purposes, importance and necessity are explained below.

It is planned to realize the project in the well area on the road of Kovanlık Neighborhood, Döşemaltı District of Antalya Province by the General Directorate of Antalya Water and Wastewater Administration (ASAT).

With the project subject, it is planned to draw water and transmit it to the network with a total capacity of 2 m^3/sec from the Kovanlık Neighborhood in Döşemealtı

District.Antalya is one of the most populated provinces in recent years. The drinking water required is already from Antalya's underground water resources; Duraliler 3.2 m^3/sec, Boğaçay 0.7 m^3/sec, Termesos 2.1 m^3/sec, above ground water resources; Gürkavak 0.1 m^3/sec and Yemişpınar, Değermengözü and other resources 7.1 m^3/sec, water is supplied from the water resources of Antalya.

It is aimed to reduce the amount of water from the Duraliler well area, which is close to the coastal zone, with the activation of the Kovanlık wells. During the period until the implementation of the Karacaören Projects which planned by DSI, 2 m^3/sec capacity planned Kovanlık drinking water wells will meet the additional water need considering the population projection of Antalya. Within the scope of the project, additional wells will not to be drilled and electro-mechanical equipment procurement, assembly and field piping of existing wells will be performed.

The contract was signed on 1 August 2022 and the contract amount is 9.740.000,00USD + VAT.

Within the scope of **ASAT3/W10 "Construction of Wastewater Network in Dösemealtı Region**" contract, it is planning to construct approximately 63 km sewerage network line and 13 km house connection, construction of package manhole type wastewater pumping station with 480 m force main in Yeniköy, Bahçeyaka, Altınkale and Çıplaklı Neighborhoods.

Within the scope of the contract, the construction works to be executed in Yeniköy and Bahçeyaka Districts are partially related to the construction works in Bahçeyaka District under the completed ASAT3/W1 Lot1 contract. Some part of the Yeniköy Neighborhood wastewater is connected to the network line constructed within the scope of ASAT3/W1 Lot 1 and to the Ø500 mm diameter collector line, and the network line in Bahçeyaka District, which was constructed within the scope of Lot 1, is being expanded according to the urban development and related infrastructure requirements in the region.

It is foreseen that the mentioned investment will provide wastewater service to approximately 96,000 people with 24,000 subscriber connections in the region.

Within the scope of the contract package, Ø200-Ø600 mm sewerage line Ø160 mm diameter pumping line, Ø1200-Ø1600 mm diameter sewerage manholes Ø200 mm parcel line Ø800 mm diameter parcel manholes will be constructed in Antalya Province Dösemealtı District.

4.ENVIRONMENTAL AND SOCIAL BACKGROUND OF PROJECT SITE

4.1Geographical Position

In the scope of the ESMP, the construction works in the Döşemealtı Region within the scope of ASAT3/W1 Lot-1 contract and the construction work in the Aksu Region within the scope of ASAT3/W1 Lot-2 contract have been completed. Within the scope of the ASAT3/W3 contract, the temporary acceptance of construction works in Kepez Region are ongoing. It is planning to start the construction works within the scope of the ASAT3/W8 contract and for the ASAT3/W10 contract package, the construction works are planned to be carried out in Döşemealtı Region.

Figure 1: General View of Project Areas in Scope of ESMP

Döşemealtı Region

The Döşemealtı district is geographically located 12 km from the center of the western Mediterranean region, north of Antalya city center, between 360 north latitude and 300 east longitudes. To the north of Döşemealtı district is Bucak district of Burdur, Konyaalti to the south, Kepez to the east, and Korkuteli district to the west. The surface area is 673,1 km^2. The average height of the district center is 300 m. The western and northern part of the province is surrounded by small extensions of the Western Taurus. In general, the region has a slightly rugged terrain called Döşemealtı Plain. There is a difference in climate due to the high altitude of the Döşemealtı district compared to Antalya city center. Even if it is not exactly a plateau, it has a plateau weather like the Dağbeli and Bademağacı. The most important water source in the district is Kırkgöz water supply. The water in Kırkgöz Lake passes through the canal district center constructed by DSİ and feeds the Kepez Power Plant. In addition, small irrigation channels from Kırkgöz can irrigate different areas of the province.

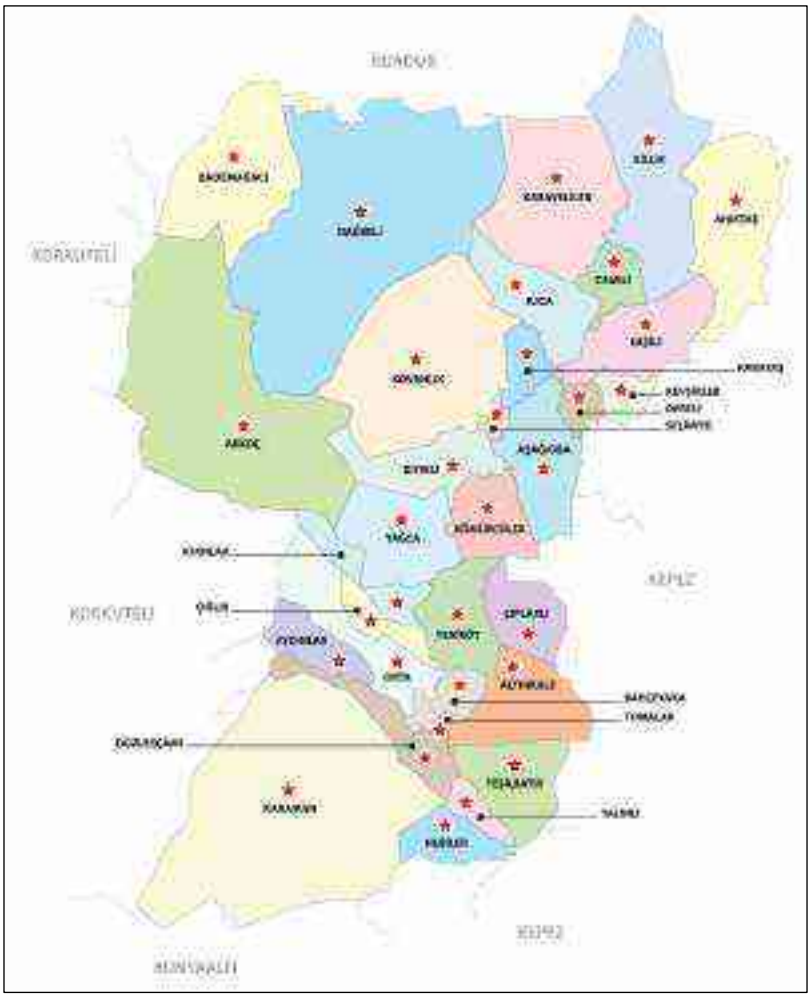


Figure 2. Döşemealtı District Geographical Location

The town has a forested area surrounded by pine forests on all four sides of the plant. For this reason, the city center of Antalya is the lungs. The forest areas in the "Düzlerçamı and Termossos" Region are in the status of National Park. The region has the most interesting and richest wooded areas of our province in terms of richness of plants and trees and wildlife. In Döşemealtı, the Mediterranean climate, which is hot in summer and rainy and mild in winter, prevails. According to the city center of Antalya, it has a slightly cooler air and low humidity level due to the temperature difference of 4-5 degrees. In the province, which receives heavy rainfall in winter and spring months, snowfall is observed in less than 10 years on average except for the high cuts.

Kovanlık Region

Kovanlık is district of Döşemealtı, and its geographical structure is like Döşemealtı Region. It's located at 37.140640 latitude and 30.586906 longitude. The region is on the Antalya – Burdur highway, 35 km from the center of Antalya and 15 km from Döşemealtı town center. The land is about 10.000 acres.

Kovanlık has taken its name from the natural honeycomb apiculture made in ancient times, and its economy based on agriculture and animal husbandry. District is famous for carpet weaving.

The altitude of Kovanlık is higher than the center of Antalya. Therefore, climate difference arises. The region has a Mediterranean climate. Summer – winter temperature differences are low. The summers here have a good deal of rainfall, while the winters have very little.

2.5 - 3 km northeast of Kovanlık is the Döşemealtı Antique Road, which is named after Döşemealtı, 2.5 - 3 m wide, made by pavement stones made by the Romans from the Roman Period, where the plain is finished, and the first elevations of the Taurus Mountains begin.

Figure 3.Geological Location of Kovanlık Region

Aksu Region

The fertile lands of the district range from the western Toros Mountains in the north to the Mediterranean coasts surrounding the district from the south. Aksu River sets the western and Köprüçay sets the eastern border of the province. The northern part of the province is surrounded by Kuyucak Mountain. In the higher parts of this mountains, there are tabelands which are important for animal husbandry.

Figure 4. Aksu District Geographical Location

A part of the lands is covered with forests of red brick, cedar, and black pine. The fertile water coming from this region are collected in Aksu and Köprüçay rivers and poured into the Mediterranean. These rivers partly form the natural border of the district in the east and west. There are streams and lakes feeding the water resources of the district. In our day some of these lakes are dry and these lands are used as agricultural land.

Aksu River, the most important surface water of the province, is fed with Göksu in Gebiz sub-district, Kırkgeçit, Küçük Aksu, Bulanık in Melli sub-district, Karacaören and Kovacık streams along its route from Egirdir Lake to the Antalya border. At last, incorporates with Sarısu stream and pours into the sea near Boztepe Kumköy.

Kepez Region

Kepez District, which is Established in accordance with the law numbered 5747 "Law on the Establishment of the District within the Borders of the Metropolitan Municipality and Amendments to Some Laws" published in the Official Gazette dated 22 March 2008 and numbered 26.824, has 1 Central District and 66 neighborhoods. Aksu District is located at the east, Muratpaşa District at the south, Konyaaltı District at the southwest and Döşemealtı District at the north and north-west of Kepez.

The Mediterranean climate prevails in the Kepez District. Summers are hot and dry, and winters are warm and rainy. In summer, the temperature is high. The drought makes itself felt. The maximum rainfall falls in the winter, the lowest in summer. And in winter, the temperature does not decrease excessively.

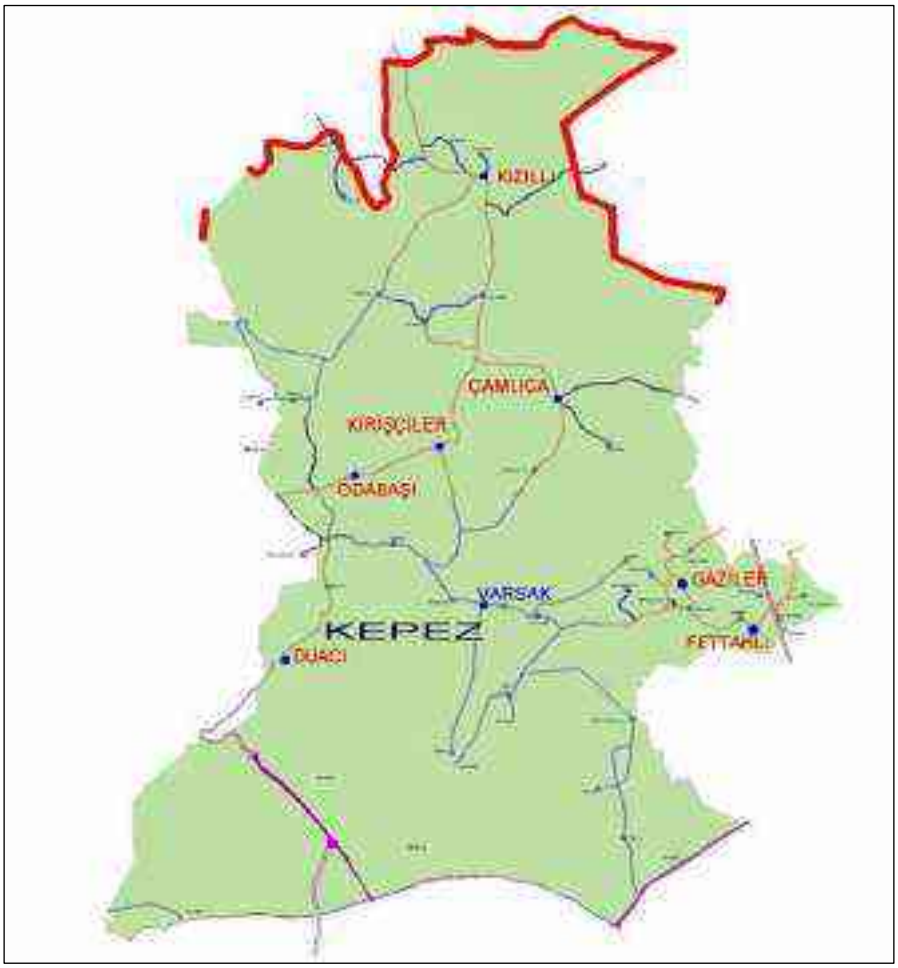


Figure 5. Kepez District Geographical Location

Snow and frost are rarely seen. The precipitation seen in the winter is the frontal origin. Because of the high winter temperature, greenhousing is being carried out. The water resources of the district are important in meeting the water needs andirrigation activities of Antalya. In this context, Kırkgöz water resources coming from the Toros mountains reach to the Mediterranean Sea as Gökdere and Düden streams after being used in Kepez Electric Power Plants. Characteristic plant cover is maquis shrubland .

4.1.1 Population

Antalya has a population of 2,688,004 according to 2022 Address Based Population Registration System results. An average of 6.2% annual increase in the city population between 1985-2000 has been experienced in Antalya, and although this increase has slowed down since 2000, average annual population growth rate for the period of 2017-2022 is over 2.83%. In addition, it receives more than 1% net migration every year, and it is one of the most domestic- foreign migrated cities in our country.

Table 2. Antalya Population by Provinces (TURKSTAT,2022)

Year	District	District Population	Male Population	Women Population	Population Percentage
2022	Kepez	608.675	309.805	298.870	%22,64
2022	Muratpaşa	526.293	256.492	269.801	%19,58
2022	Alanya	364.180	184.024	180.156	%13,55
2022	Manavgat	252.941	129.834	123.107	%9,41
2022	Konyaaltı	204.795	97.985	106.810	%7,62
2022	Serik	134.545	71.036	68.509	%5,19
2022	Aksu	77,623	39.784	37.839	%2,89
2022	Kumluca	73.496	37.090	36.406	%2,73
2022	Kaş	62.866	32.443	30.423	%2,34
2022	Döşemealtı	79.495	41.185	38.310	%2,96
2022	Korkuteli	56.285	28.226	28.059	%2,09
2022	Gazipaşa	53.702	27.283	26.419	%2,00
2022	Finike	49.720	24.924	24.796	%1,85
2022	Kemer	49.383	25.616	23.767	%1,84
2022	Elmalı	40.774	21.384	19.390	%1,52
2022	Demre	27.691	14.245	13.446	%1,03
2022	Akseki	10.477	5.317	5.160	%0,39
2022	Gündoğmuş	7.188	3.564	3.624	%0,27
2022	İbradı	2.875	1.465	1.410	%0,11

The weight of the young population in Antalya is remarkable. 37% of the province's population is under 25 years old. 56% of the total population is between the ages of 25-65 and 7% is over the age of 65 years. The average number of households is 3.26. The number of households that differ in terms of districts is 3,54 in Kepez, 3,35 in Döşemealtı and 3,60 in Aksu. Population density has exceeded the average of Turkey as of 2015, and the population density by the year 2022 has reached to 129 people/ km^2. The surface area of Antalya is 20,909 km^2.

Table 3. Population Density and Population Increase by Years in Antalya (TURKSTAT,2022)

Year	Antalya General Population	Population Density	Annual Population Growth %
2022	2.688.004	129 /km^2	2,60
2021	2.619.832	125 /km^2	2,81
2020	2.548.308	122 /km^2	1,46
2019	2.511.700	120/km2	3,52
2018	2.426.356	116 /km^2	2,62
2017	2.364.396	113 /km^2	1,54
2016	2.328.555	111 /km^2	1,75
2015	2.288.456	109 /km^2	2,96
2014	2.222.562	106 /km^2	2,98
2013	2.158.265	103 /km^2	3,14
2012	2.092.537	100 /km^2	2,40

Population Projection (between 2019-2049) The data of ADNKS (Address Based Population Registration System) and Projection Methods, which are frequently used in population projections such as Derived Method, Geometric Method, Iller Bank Method, were used at the population projections.

Data Scope

The scope of this study is the same as the Population included in the Adress based Population Registration System. In ABPRS, resident in the territory of the country Turkey citizens and all foreign nationals are covered.

Province of previous years, District Population and other data required Turkey Statistical Institute (TSI) was obtained from the web page.

Table 4. Population Calculations by Geometric Method

YEAR	ANTALYA GENERAL POPULATION	POPULATION OF DÖŞEMEALTI	POPULATION OF KEPEZ	POPULATION OF AKSU
2019	2.491.814	66.038	548.641	73.291
2020	2.559.037	69.018	566.208	74.976
2021	2.628.074	72.132	584.338	76.701
2022	2.698.973	75.388	603.048	78.465
2023	2.771.785	78.790	622.358	80.269
2024	2.846.562	82.346	642.286	82.115
2025	2.923.355	86.062	662.851	84.004
2026	3.002.221	89.946	684.076	85.936
2027	3.083.214	94.005	705.980	87.912
2028	3.166.391	98.247	728.585	89.934
2029	3.251.813	102.681	751.914	92.002
2030	3.339.540	107.315	775.990	94.118
2031	3.429.633	112.158	800.837	96.283
2032	3.522.156	117.220	826.480	98.497
2033	3.617.176	122.510	852.943	100.762
2034	3.714.759	128.039	880.254	103.080
2035	3.814.974	133.817	908.440	105.451
2036	3.917.893	139.856	937.528	107.876
2037	4.023.589	146.167	967.547	110.357
2038	4.132.136	152.764	998.528	112.895
2039	4.243.611	159.658	1.030.500	115.491
2040	4.358.094	166.863	1.063.497	118.147
2041	4.475.665	174.394	1.097.550	120.865
2042	4.596.408	182.264	1.132.693	123.644
2043	4.720.409	190.489	1.168.961	126.488
2044	4.847.754	199.086	1.206.391	129.397
2045	4.978.536	208.071	1.245.019	132.373
2046	5.112.845	217.461	1.284.885	135.417
2047	5.250.777	227.275	1.326.026	138.532
2048	5.392.431	237.531	1.368.485	141.718
2049	5.537.906	248.251	1.412.304	144.977

Table 5. Population Calculations by İller Bank Method

YEAR	TOTAL POPULATION OF ANTALYA	POPULATION OF DÖŞEMEALTI	POPULATION OF KEPEZ	POPULATION OF AKSU
2019	2.492.767	65.082	547.568	73.284
2020	2.560.995	67.034	563.995	74.962
2021	2.631.091	69.045	580.914	76.678
2022	2.703.106	71.116	598.342	78.434
2023	2.777.091	73.250	616.292	80.231
2024	2.853.102	75.447	634.781	82.068
2025	2.931.193	77.711	653.824	83.947
2026	3.011.422	80.042	673.439	85.870
2027	3.093.846	82.443	693.642	87.836
2028	3.178.526	84.917	714.451	89.847
2029	3.265.525	87.464	735.885	91.905
2030	3.354.904	90.088	757.962	94.010
2031	3.446.730	92.791	780.700	96.162
2032	3.541.069	95.574	804.121	98.364
2033	3.637.990	98.442	828.245	100.617
2034	3.737.564	101.395	853.092	102.921
2035	3.839.863	104.437	878.685	105.278
2036	3.944.962	107.570	905.046	107.689
2037	4.052.938	110.797	932.197	110.155
2038	4.163.870	114.121	960.163	112.678
2039	4.277.837	117.545	988.968	115.258
2040	4.394.924	121.071	1.018.637	117.897
2041	4.515.216	124.703	1.049.196	120.597
2042	4.638.800	128.444	1.080.672	123.359
2043	4.765.767	132.297	1.113.092	126.184
2044	4.896.208	136.266	1.146.485	129.073
2045	5.030.220	140.354	1.180.879	132.029
2046	5.167.901	144.565	1.216.306	135.053
2047	5.309.349	148.902	1.252.795	138.145
2048	5.454.669	153.369	1.290.379	141.309
2049	5.603.967	157.970	1.329.090	144.545

Table 6. Population Calculations by Projection / Derived Method

YEAR	TOTAL POPULATION OF ANTALYA	POPULATION OF DÖŞEMEALTI	POPULATION OF KEPEZ	POPULATION OF AKSU
2019	2.492.290	65.560	548.104	73.287
2020	2.560.016	68.026	565.101	74.969
2021	2.629.583	70.589	582.626	76.690
2022	2.701.040	73.252	600.695	78.449
2023	2.774.438	76.020	619.325	80.250
2024	2.849.832	78.897	638.533	82.092
2025	2.927.274	81.886	658.338	83.975
2026	3.006.821	84.994	678.757	85.903
2027	3.088.530	88.224	699.811	87.874
2028	3.172.459	91.582	721.518	89.891
2029	3.258.669	95.073	743.899	91.954
2030	3.347.222	98.702	766.976	94.064
2031	3.438.181	102.474	790.769	96.223
2032	3.531.612	106.397	815.300	98.431
2033	3.627.583	110.476	840.594	100.690
2034	3.726.161	114.717	866.673	103.001
2035	3.827.419	119.127	893.562	105.364
2036	3.931.428	123.713	921.287	107.782
2037	4.038.264	128.482	949.872	110.256
2038	4.148.003	133.442	979.345	112.786
2039	4.260.724	138.601	1.009.734	115.375
2040	4.376.509	143.967	1.041.067	118.022
2041	4.495.441	149.548	1.073.373	120.731
2042	4.617.604	155.354	1.106.682	123.501
2043	4.743.088	161.393	1.141.027	126.336
2044	4.871.981	167.676	1.176.438	129.235
2045	5.004.378	174.212	1.212.949	132.201
2046	5.140.373	181.013	1.250.595	135.235
2047	5.280.063	188.088	1.289.411	138.338
2048	5.423.550	195.450	1.329.432	141.513
2049	5.570.936	203.110	1.370.697	144.761

4.2 Social-Economical Situation

Döşemealtı Region - Kovanlık Region

Döşemealtı district is located 18 km away from the city center of Antalya and has highway transportation in the district. Antalya, Burdur, Ankara and Antalya-Denizli roads pass through the district boundaries. The infrastructure of the district has been completed at 60%, and the works are continuing at full speed.

Döşemealtı, one of the central districts, is one of the fastest growing provinces of Antalya. With the investments made within the scope of the Municipal Services Project, the sewage collector line of the county has been connected to the treatment plant and sewerage service has started to be provided to the region. Wastewater lines are designed and manufactured in line with the needs of the region where rapid construction and development are taking place.

Kepez Region

20.9% of Antalya population live in Kepez. The total area of the province is 397.869 decares; there are 86.211 decares of farming. This amount constitutes about 22% of the total area.

Mediterranean climate prevails in Kepez district. Summers are hot and dry; The winters are warm and abundant. In summer the temperature is high. Drought makes you feel. The maximum rainfall falls in the winter, the lowest in summer. In the winter months, the temperature does not fall excessively. Snowfall and frost are very rare. The precipitation seen in the winter is the frontal origin. Due to the high winter temperature, the greenhouse activities are carried out in the district. In addition, animal and animal crop production in the region, crop production activities are active.

There are Mediterranean Industry Site, Green Mediterranean Industrial Site, and chrome factory in the district. In addition, a significant part of Antalya's energy (150 million kWh) needs is met by Kepez hydroelectric power plant located within the district boundaries.

Aksu Region

Aksu, which is 18 km away from the city center of Antalya, has attained district status with the merger of 4 municipalities in 2009. (Pınarlı, Yurtpınar, Çalkaya and Aksu). As of April 1, 2014, with the inclusion of the Karaöz Municipality, there have been 35 districts according to the latest TÜIK data. And getting immigration quickly. The borders are based on the Mediterranean on the South and Burdur on the North.
Aksu is one of the most beautiful regions of Antalya with its historical and natural riches. It has a colorful culture with its geographical and social distribution. The ancient cities of Perge and the hotels in Kundu Region are world famous.

It is located within the transportation network with Antalya Airport and D400 Highway. Kurşunlu waterfall and the Aksu river, which gives its name to the town, has important water resources. Aksu, where many vegetables and fruit varieties are produced; is an

important center where industrial plants are grown. Modern farming practices are common in Aksu, where the greenhouse develops. A large part of the county population is engaged in agriculture. Aksu has about 35 thousand acres of greenhouses and 32 thousand acres of fruit gardens. The open field vegetable crops are made in the field of about 100 thousand acres. A major seedling production center, 700 acres of ornamental ornamental plants growing in the province, is a supplier of fruits and vegetables for four seasons.

Tourism has developed in Aksu, which is a coast to the Mediterranean. Tourism investments, which make a great contribution to the economy of the county and country, have an important place. Every year, the world-famous hotels that host millions of tourists, provide employment for thousands of people. Buildings and trade around the tourist facilities are growing and developing day by day.

General Evaluation

It is seen that the activities of all four regions where the socio-economic status have been mentioned in the ESMP, will continue their activities in the district centers. In areas where construction activities are to be carried out:

- For the projects, no land acqusition and easement subject has been occurred.
- Since agricultural activities are not carried out on the project area and its immediate surroundings, there is no temporary/permanent damage to any product.
- The protected areas such as National Park, Natural and Archaeological Sites are not included in the regions where the project packages will be implemented.
- In the light of the studies, it is anticipated that there will be no need for the provision of temporary new roads during the execution of the construction activities. During the construction stage, it is envisaged to use different street alternatives by short distance traffic routing.
- The materials to be used within the scope of Construction Contracts are provided by the Contractors and will be stored in the places which will be rented by the Contractor. The excess materials from the excavations will be transferred to the areas which has been determined by the decision of Metropolitan Municipality of Antalya. This has been described in detail in the Technical Specifications for the Contract packages.

Together with these:

During construction in the study areas, it is considered that for the unskilled workers short-term employment during the construction period, medium/long-term employment for skilled workers can be achieved. Along with the wastewater lines to be constructed, natural groundwater sources and/or marine and/or natural environment will be prevented from being contaminated in case of the possibility of existing phospoletic leakage and the residents' problems related to the sewerage infrastructure will be solved. Besides possible threats against tourism activities will be removed.

4.3 Project Area

Sewerage network and collector lines are indicated by green lines on aerial photographs. The ASAT3/W1 Lot 1 Contract Package has been realized in the Döşemealti central Bahçeyaka, L type prison, Palmcity regions.

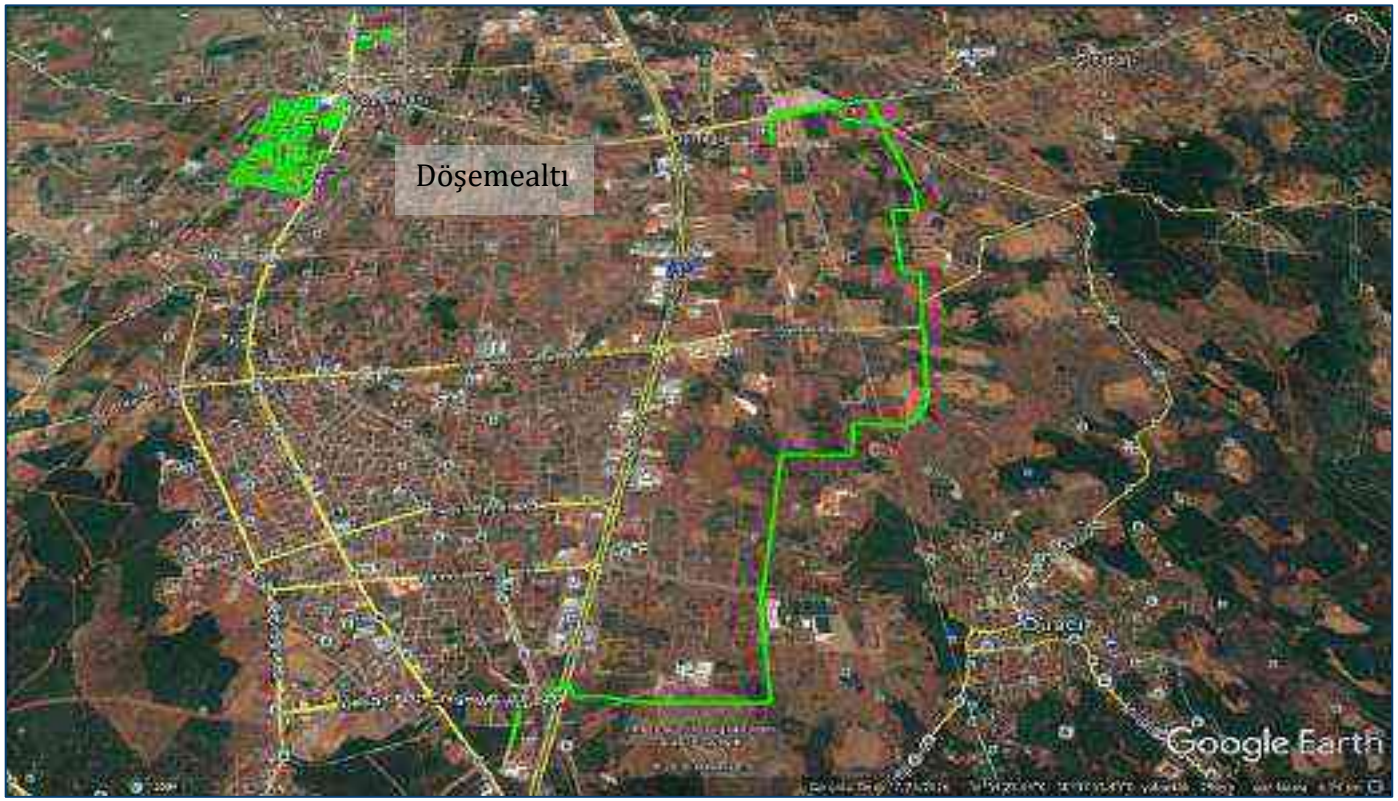


Figure 6.: ASAT3/W1 –Lot1 Döşemealtı Project Site Line Routes

ASAT3/W1- Lot2 Contract Package Collector and network manufacturing at Aksu Center.

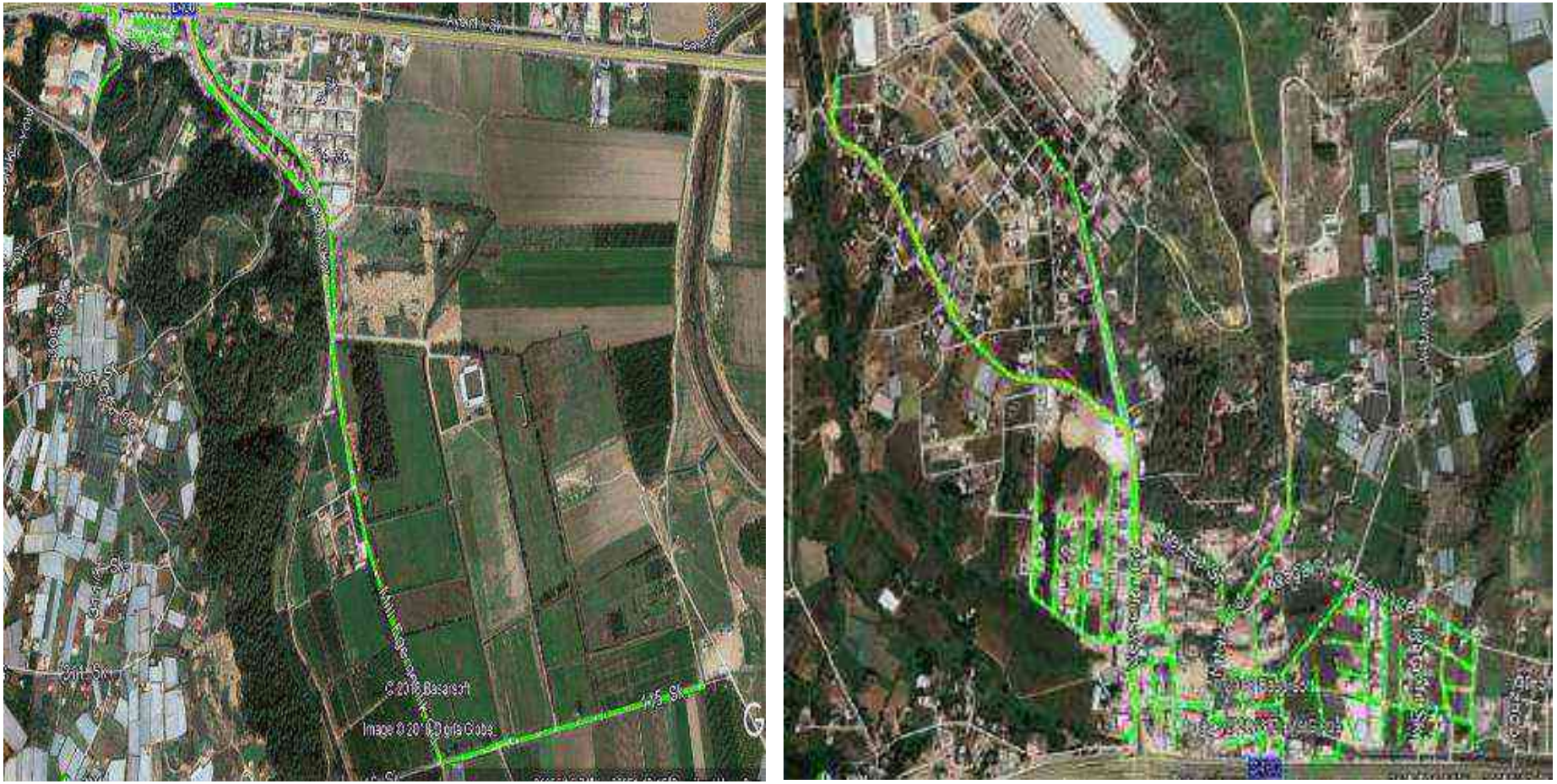


Figure 7. ASAT3/W1-Lot2 Aksu Project Site Line Routes (Serik Road North and Serik Road South)

ASAT3/W3 contract has been realized in Kepez District Hüsnü Karakaş, Habibler, Baraj, Şelale, Düdenbaşı, Göksu, Menderes, Karışıyaka, Çankaya, Gazi and Fevzi Çakmak Neighborhoods.

Figure 8.: ASAT3/W3- Construction of Wastewater Network Line Routes in Kepez District

ASAT3/W8 contract will be realized between Dösemealtı Kovanlık District, Kovanlık Wells – Duacı Water Tank.

Figure 9:Kovanlık – Duacı Line

Figure 10:Kovanlık – Wells Area

ASAT3/W10 Contract Package will be realized in Döşemealtı District, Yeniköy, Bahçeyaka, Altınkale and Çıplaklı regions.

Figure 11: ASAT3/W10 Dosemealti Region Project Site and Construction Routes

5. TECHNICAL SPECIFICATIONS OF THE PROJECT

ASAT3/W1 Lot-1 and Lot-2 (Dösemealtı and Aksu Regions), ASAT3/W3 (Kepez Region) and ASAT3/W10(Dösemealtı Region) contract packages collectively include wastewater collectors, network lines and parcel connections, and ASAT3/W8 (Kovanlık Region) contract include drinking water supply lines. Within this scope, as a common methodology in the contract packages, providing of material, excavation, filling, compacting, coating works will be carried out and the technical definitions related to these manufacturing are described in this section.

5.1 Wastewater Works

Material Certification and Documentation

The Contractor shall provide the necessary documents related to quality, production and tests of the equipment and materials to be used within the scope of the project from the manufacturer and submit the copies to the Project Manager of the Supervision Organization.

Material Testing

Records of the relevant standards and test results of the manufacturers of the equipment and materials procured under the project should be kept.

It should perform all the tests necessary to verify the qualities and specifications of the material, its dimensional tolerances.

Documents containing test results should be prepared at the intervals specified in the standards.

If there is a conflict in the test results, the test can be repeated again by a different testing organization deemed appropriate by the Employer and the Project Manager.

It is anticipated that the materials to be used in construction will be procured from local suppliers. It is thought that this will contribute the local economy.

Excavation Works

The definition of ditch excavation is all kind of excavations made with hand, machine, crusher, compressor etc.

Before the pipe-laying work, more ditches will not be excavated. The maximum open ditch length in any application line in construction will be 200 meters. The excavations will be carried out by taking precautions so as not to disrupt the daily life, the local governments and the public will be informed about the time planning of the excavations. The excavated

material will be removed from the site and will never be used as backfill. Sufficient width will be created for and encasing.

Only for Ø 800 and Ø 1000 Collector lines and manholes in Döşemealtı Region within the scope of ASAT3 / W1-Lot 1 Contract (between the Kirişçiler Road and Döşemealtı Connection Point); the excaveted material has been allowed to be used as backfill material. Within the scope of the ASAT3/W10; it will be allowed to use excavated materials as backfilling in case of having suitable gradition with crusher etc. Backfill materials will be produced from the excavated materials removed from the vegetative soil, vegetation surplus etc… (Crushed stone material will be used as bedding ang covering material.)

With the decision of UKOME General Assembly dated 07.06.2017 and numbered 2017 / 06-372, fitting of GPS (vehicle tracking system) device and damper cover sensor to the excavation trucks to be integrated into the existing system in Antalya Metropolitan Municipality has become mandatory and excavation wastes should be transferred to the determined field of Antalya Metropolitan Municipality.

In this circumstances;

- In the scope of Antalya Metropolitan Municipality Excavation Waste Management Plan, excavation waste vehicles used in the field should be adapted.
- Receiving "Waste Transportation Permit Certificate" from Antalya Metropolitan Municipality,
- All excavated land, construction and demolition wastes must be disposed for a fee in the excavation storage areas and/or recreation areas determined by Antalya Metropolitan Munucipality.

Trench excavations will be carried out with enough work to allow for pipe placement, bedding and covering.

The route of each trench or channel and grade elevation and similar measures shall be determined and determined at the witness points.

The horizontal and vertical route and the maximum pipe decking and deflection used in conjunction with it shall comply with the requirements in the specification encasing pipe installation.

Depth and width of the trench will be opened in accordance with the application projects.

Trench widths will not be reduced or increased unless pile-plank is required due to deep excavation or ground improvement or other infrastructure on the excavated route or for any other reason without permission from the Project Director. The excavation widths and diameters given are arranged taking such situations into account and in the actual case the

Contractor is expected to work within the given values. If the Contractor damages the roadways outside the specified widths, it will restore the damage given.

The excavation will be arranged on the trench so that the equal distance between the right and left sides of the pipe to be laid will be equal and in each case the measurements given in the project drawings will be provided.

During the trench excavation, the Contractor shall take the necessary safety precautions; pile-plank, etc. in areas where soil improvement is required by taking precautions to ensure the safety of work and workers.

In the excavations of the chambers and chimneys to be made on the pipeline routes, maximum 50 cm working allowance place will be left from the outer surface of the structure. However, the Contractor shall provide work and worker safety provided revetment it if necessary.

In the scope of the studies, it is foreseen that there will be no need for provisional of new access roads during the execution of the construction activities. During the construction, it is envisaged to form short distance traffic routing with different street alternatives.

The Contractor shall comply with all the requirements and recommendations of the Municipality, the Traffic Supervision Branch Directorate and the Highways Administration on road traffic regulations and road safety precautions. The contractor will submit traffic recommendations (if necessary) and permissions from the Traffic Supervision Branch Directorate and the Highways Administration to the approval of the Project Manager before starting the activity on the site.

All of the sewerage lines within the scope of the contract are planned to be constructed on the cadastral roads, and there will not be any construction on public/private land.

Compaction of Fills and Backfills

After the cleaning and scratch process is completed, on all surfaces with a compacted filler on it, at least 15 cm of scratch shall be done and the fill shall be laid and compressed. Before compression, as required by the Project Manager, the surface moisture content, is too dry or too watery ilst drying process will be conducted.

Compaction works will be controlled by soil compaction tests in accordance with Turkish Standarts Institute

Pipe Bedding-Covering and Backfill

If not shown otherwise in the drawings, the floor shall be prepared for digging with a minimum of 20 cm depth from the bottom of the pipe, leveling the floor and embedment and encasing with the material given in the following table. Sub-depositing material will be

embedment down as wide as the trench. When the tests on pipes laid on the bedding material give positive results and after the Project Manager's approval is obtained the bedding andcovering material shall be placed around the pipe to the design height and compacted. Upon completion of the pipe encasing process the backfill materials shall be placed, compacted and tested

Properties of Materials for Bedding, Covering and Backfilling

In sewerage works, pipe bedding and covering and backfilling materials with the specifications given below and supplied from the approved quarries by the the Project Manager shall be used. 0-4,76 mm material (crushed aggregate, pebble) will be used for bedding ang covering materials which are indicated distribution and well graded and 0-38,1 mm materaial will be used for backfilling.

Table 7. Grain Properties of Materials to be Used for Corrugated / Concrete / Reinforced Concrete Pipes

<table>
<tr><th></th><th>HDPE Corrugated Pipes</th><th>Reinforced Concrete /Concrete Pipes</th></tr>
<tr><td>Bedding and Covering</td><td>0-4,76 mm sand (crushed stone or well graded)</td><td>11,2-22,4mm material (crushed stone or well graded)
(Gradation will be regulated by the Project Manager according to type of the ground and pipe diameter)</td></tr>
<tr><td>Backfilling</td><td colspan="2">0-38,1 mm material
<table><tr><th>Dia of sieve</th><th>Passing through the sieve (%)</th></tr><tr><td>38,1 mm (1/2 inch)</td><td>100</td></tr><tr><td>31,5mm (1/4 inch)</td><td>85-100</td></tr><tr><td>25,4mm (1 inch)</td><td>75-97</td></tr><tr><td>19,01 mm (3/4 inch)</td><td>65-90</td></tr><tr><td>12,54 mm (1/2 inch)</td><td>55-80</td></tr><tr><td>9,52 mm (3/8 inch)</td><td>40-65</td></tr><tr><td>4,76 mm (No.4)</td><td>30-50</td></tr><tr><td>2,36 mm (No.8)</td><td>22-40</td></tr><tr><td>1,18 mm (No.16)</td><td>10-30</td></tr><tr><td>0,59 mm (No.30)</td><td>0-18</td></tr><tr><td>0,295 mm (No.50)</td><td>0-10</td></tr><tr><td>0,149 mm (No.100)</td><td>Pan</td></tr><tr><td></td><td></td></tr></table></td></tr>
</table>

Distiribution of the bedding and covering material for HDPE Pipes shall be aproximately same with the Table 7.

Due care and attention shall be paid to backfilling. None of the pipes shall be embedded and encased without the Project Manager's permission. Materials of specified quality shall be used by taking all related permissions.
The trench back fill material shall be placed in max. 30 cm-thick layers and each layer shall be levelled and compacted using tamping rods or any other equipment suitable to the purpose and after watering using water in appropriate amount. A second layer of material shall not be placed unless each layer is properly compacted.
Manager for approval before they are used in the Works, and any materials which are not approved by the Project Manager shall not be used.
Bedding and covering material shall not contain any such material as ash and slag which may cause corrosion of the pipe.
Bedding and covering materials both below and above the bottom of the pipe, and placement and compaction of bedding materials shall conform to the requirements shown on the contractual requirements.

Tests

All tests to ensure that bedding, covering and backfill materials and their placement comply with specified requirements and all additional tests required by the Project Manager shall be made by the Contractor and at the expense of the Contractor. The following tests will be required.
Two moisture-density (Proctor) tests or two relative density tests for each type of embedment fill, or backfill material proposed, except for granular embedment material. Required Tests will be done for every 300 m length of the pipelines and/or requested locations by the Project Manager.

Pavements

It consists of the following main items shown in the project drawings and defined in the specifications.

- Repair of roads that have been damaged before,
- Repairs of roads damaged due to infrastructure activities,
- Repair of previously damaged pedestrian pavements,
- Asphalt pavements work,

The above shall be started without delay after completion of network and parcel related productions.

Manhole Type Package Pumping Station

Within the scope of ASAT3/W1-Lot 1, package type underground wastewater pumping stations in Bahçeyaka and Çankaya Neighborhoods were constructed within the park area and will also be constructed in the park area determined by the Municipality within the scope of ASAT3/W10. There will not any expropriation, and/or land allocation for the mentioned pumping station. We have not received any complaints regarding environmental and social (odour, etc.) issues for the other underground pumping stations which were previously constructed and being operated by the Administration and as well as the pumping stations constructed within the scope of ASAT3/W1-Lot 1.

Flow rate of the wastewater pumping station in Çankaya District is 43.2 m^3/hour, and the capacity of flow rate of the wastewater pumping station in Bahçeyaka District is 23.2 m^3/hour which were completed within ASAT3/W1-Lot1 contract.

Within the scope of ASAT3/W10 contract, it is planned to construct a wastewater pumping station with a capacity of 12 l/sec.

Package type pumping stations with pump chamber, valve chamber, valves, level sensors, safety grids, discharge lines, collector, guide pipes for pumps, ladders will be prepared and delivered to the constrcution site.

The outer surface of pumping stations can be produced from HDPE or FRP material with high strength, easy to repair and light weight. The bottom of the package pumping station is designed with a conical structure to prevent the accumulation of sludge.

Because of the FRP/HDPE material used in the outer surface of pump and valve, it prevents the underground water from entering the tank, preventing unnecessary activation of the pumps and has an important role in reducing energy costs. Also, due to its leakproof structure, it helps to prevent environmental pollution.

With the grinder system and/or basket screen system in accordance with the wastewater inlet structure, solid wastes are prevented from reaching the pump and possible blockages are prevented.

Project images for typical desings of package pumping stations are given as below:

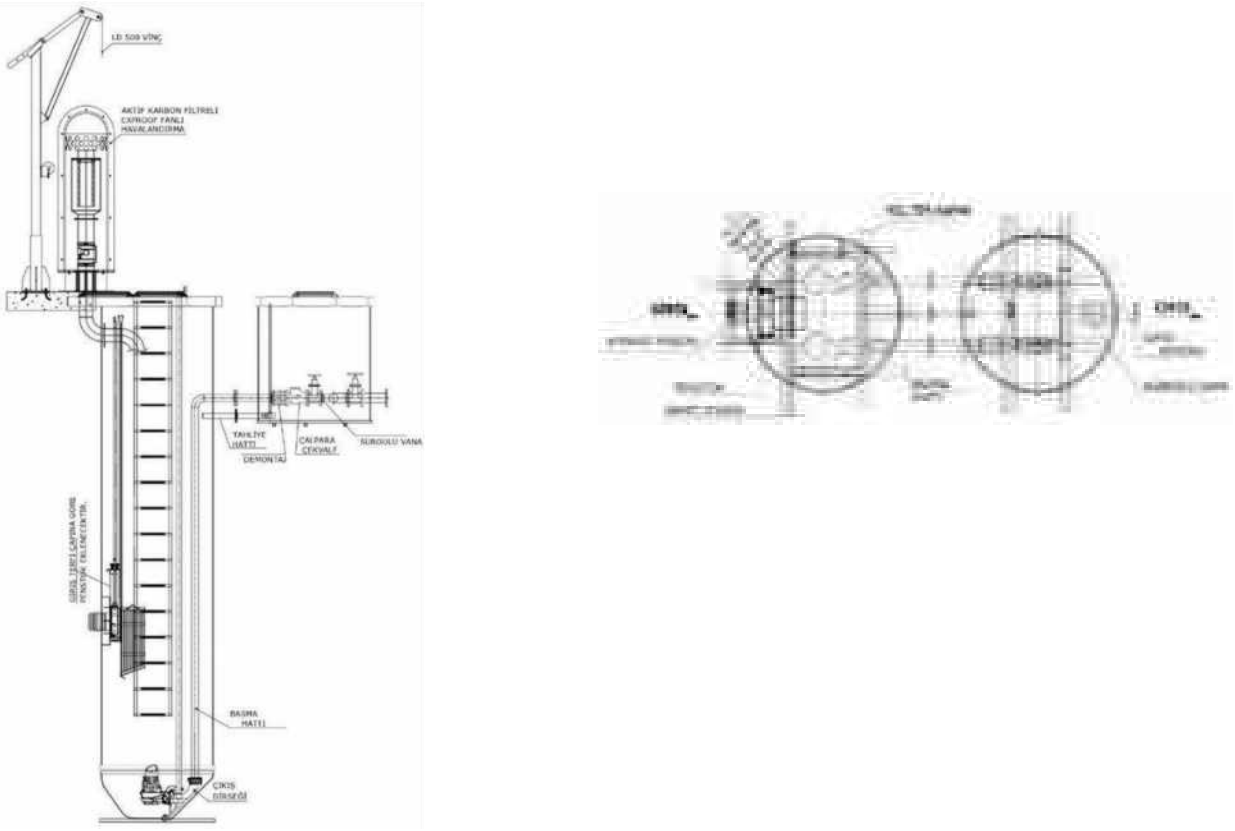


Figure 12-Package Type Pumping Station (with valve chamber)- Side View and Top View

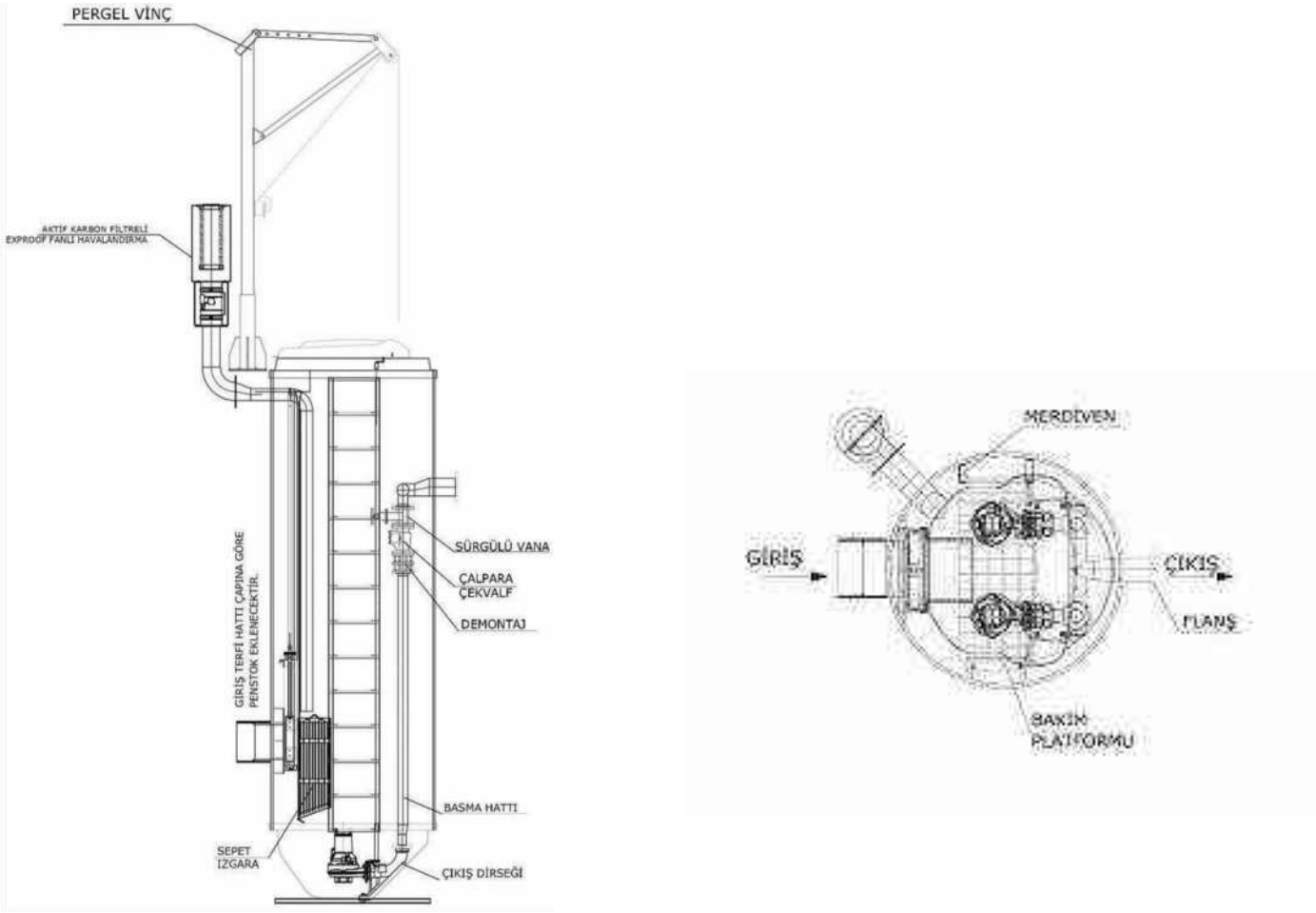


Figure 13: Package Type Pumping Station (without valve chamber)-Side View and Top View

Considering the factors of flow rate, useful volume requirement, number of pump switches, location, etc. of package pumping stations, it is decided to produce them with or without a valve chamber.

Equipment:

Gate Valve:

Pumps are installed on the discharge line. Depending on the length of the pressurized line and the water load that will occur along the line, a gate valve can be placed on the discharge collector outlet.

Check valve:

Pumps are installed on the discharge line.

Basket Screen:

It is placed in the wastewater inlet to hold the solid wastes coming from the sewerage line and to prevent the pumps from being damaged/clogging. Depending on the wastewater characteristics, it should be cleaned at regular intervals.

Muncher:

It can be used as a basket screen alternative or together with a basket screen. It is placed in the wastewater inlet to prevent the pumps from being damaged/clogging by breaking up the solid wastes coming from the sewerage line.

Pump:

Wet type wastewater submersible pumps are commonly preferred. Capacity and quantity can be decided depending on the flow. The pumps are operated as redundant, at least 1 spare part is included in the chamber.

Crane:

It is used for maintenance and repair of pumps, grinder, and discharge of the basket screen.

Penstock:

It is used at the wastewater inlet.

Level Meter:

It is used to control the start-up and stop times of the pumps according to the amount of wastewater allowed to accumulate in the chamber and to automate the system.

Float:

In case of malfunction of the level sensor, 2 level floats are used for safety. One of the floats is placed on the accepted upper water level and the other on the lower water level, ensuring the operation of the system.

Odour Removal System:

In general, an activated carbon odour control system is used. The gas is sucked from the odor source and passed through activated carbon to remove odor.

Generator:

It is used to keep the system working in case of power failure.

Electric panels:

Depending on the electrical equipment powers pump, grinder etc., LV/MV panels are used.

5.2 Drinking Water Lines

The area where the drinking water supply line planned to be constructed within the scope of the project is open for construction, and the final allocation of the electrical, mechanical and construction works of the well area has been completed by the General Directorate of ASAT on 24.07.2019.

Excavation and Filling for Drinking Water Network

While preparing the application projects, the sections to be excavated in accordance with the instructions of the Control Engineer will be determined. After the road platform has been established, the trench will be excavated. With the knowledge of the Control Engineer, the excavation will be started from upstream to downstream.

The Contractor shall take the necessary measures to prevent the soil piled at the edges during the excavation of the trench and foundation. All kinds of infrastructure facilities such as telephone, electricity, water, etc. during the excavation shall not be damaged during production. Where necessary, such facilities must be suspended, properly supported, and treated with care when filling is completed after completion of manufacture. In any case, the contractor shall be responsible for the elimination of damages that may occur to such facilities, and the cost of the elimination of such damage, damage and loss shall not be paid separately. Such infrastructural facilities arising during the excavation will be processed on the work completion projects to be submitted by the contractor. Particular attention shall be paid not to damage the trees during excavation and construction.

Trenches and construction pits deeper than 1.5 m will be supported or sloped as required by the circumstances and conditions while excavating to the depth shown in the profiles. The slope or shoring application shall be carried out in accordance with the instructions of the Supervisory Organization taking into consideration the conditions of the road, the location of the land, the working place, the traffic density etc. Slope will not be applied on asphalt floors. In cases where filling of the quarry material is required except the material extracted from the excavation, the parameters in Table 7 shall be applied.

Bedding- Covering and Backfilling Material Specifications

In drinking water works (Steel and HDPE pipes) 0-3 mm sand material obtained from quarries approved by the Supervision shall be used as bedding and covering material. In all drinking water Works trench back fillings; 0-25 mm backfill material shall be used.

Drinking water in all beddings and coverings, 0-3 mm fine sand backfills 0-25 mm material (crushed stone, or gravel or stabilized in the following proportions) 1/3 fine sand (0-3 mm),

1/3 medium gravel (3- 7 mm), 1/3 coarse gravel (7-25 mm) will be taken care of and backfilling.

No manufacturing shall be manufactured without the permission of the control engineer. Material specified in the construction of the production shall be used. The backfills of the trench shall be marked as max 30 cm layers, and each 30 cm layer shall be leveled in the trench and rammed and compacted by using hand compactors or by watering with appropriate tools and required amount of water. The second layer is not laid until each layer is compacted according to the technique. In any case, the bedding and covering material will be submitted to the Supervision Agency prior to use and in writing. In addition, the bedding material will not contain materials such as ash or slag which will cause corrosion of the pipe.

The bedding materials shall be placed in place above and below the pipe and compressed; will meet the conditions given in the drawings.

Granular Bedding and covering material shall be spread and its surface shall be smooth and homogeneous in order to support the pipe thoroughly between the connection points or sockets of the pipes. Some deterioration of the first sheet surface by the rope or pipe lifting equipment will be within permissible limits.

After placing each tube in its place, tilting, directing and bringing it to its final position, the bedding material will be filled and compressed so as to support the tube on each side and the other end to form a suitable space for the next tube to be installed.

The bedding material shall be placed uniformly on both sides of the pipe and shall be compressed at the same time to prevent the pipe from changing its position.

The continuity of the bedding material will be interrupted by low permeable groundwater barriers to prevent the passage of water through the bedding layer. The barrier material shall be of gravel-clay, sand-clay, clay or national soil class and shall be compacted to 95% of the maximum density. The barrier material may also be an excavation soil free of stones, organic materials and tree residues. The barriers shall be formed of compacted soil for the entire depth of the granular material, for the entire trench width and 1.2 m long, at intervals of not more than 100 m.

Ductile Pipe for Drinking Water Lines

The construction of the pipes shall comply fully with TS EN 545 standard or equivalent international standard. The manufacturer must have ISO 9001: 2008 quality certification. In addition, the manufacturer must have TS EN 545 certificate.

The material to be used in the manufacture of pipes shall be ductile cast iron material having nodular structure with spherical graphite and shall comply with TS EN 545. Since the material to be used in production is compared with the material used in cast iron; should

have higher tensile strength, more welding ability, less brittle (more flexible) material. Material hardness shall be maximum HB 250.

Material Cleaning shall be in accordance with TS EN 545. Wall thickness, ductile casting pipes should show homogeneity (uniform distribution) at every point. Wall thicknesses must comply with the class C measurements given in TS EN 545. All pipes and fittings shall withstand the operating pressure of the standards.

Internal coating of pipes (Pipe internal coating- with cement mortar) The coating surface shall be uniform and smooth, the coated surface shall be free of bubbles and cracks in the mortar and the surface shall be smooth and smooth. The mortar shall be adhered to the pipe surface in such a way that no gaps are left between them. The quality and manufacture of the cement mortar material shall comply with the latest revised version of the ISO 4179 standard.

The inner part of the insert can be coated with epoxy coating instead of the cement coating. The properties of epoxy coating shall be in accordance with DIN 30677 standard. The thickness of the epoxy coating should be at least 200 microns. The epoxy material to be used shall be resistant to all kinds of climatic conditions and impacts. Before starting the coating process, the surfaces to be coated shall be cleaned and free of foreign materials and thus the surface to be coated with epoxy material shall be adjusted properly. The epoxy material to be used must not deteriorate the quality, color, smell and taste of the water and should not contain toxicological properties.

The outer surface of ductile pipes must be zinc plated from the outside for corrosion control. Zinc should be 99.9% pure and spray method should be used. The distribution will be 200 g / m2. Zinc will be covered with black bitumen at least 100 microns thick. The internal part of the pipes shall be coated with epoxy paint suitable for drinking water.

Ductile fittings shall be coated with at least 150 micron thick black bitumen on zinc rich primer paint at least 250 micron thickness externally against corrosion.

The gaskets shall be as specified in TS EN 545. The seals to be used in the pipe connections of the pipes shall consist of natural rubber or equivalent material. The gaskets shall be delivered separately packaged, protected from ultraviolet rays, not mounted inside the pipes.

6.ENVIRONMENTAL AND SOCIAL MANAGEMENT STRUCTURE AND RESPONSIBLITIES

6.1 Environmental and Social Management Structure

Within the scope of the Antalya Sustainable Water and Wastewater Management Project, the realization of the possible effects on the region where the construction activities take place, and the nearby settlements will be supervised by the Inspection Organization. During the activities, the Contractor should comply with the existing environmental laws and regulations and other legislation in this respect.

The Contractor shall undertake all relevant planning, including risk analysis and specific environmental management reports for the construction site, linked to the work and work areas covered by the Activity (as provided for in the Occupational Health and Safety Regulation).

Pre-construction survey results of the study area will be inspected by the Inspection Service and Environmental and Social Management Plans (ESMP) will be prepared by the Contractor before the start of the activities. Before the Construction activities, the Contractor is obliged to prepare and to take precautions regarding to the monitoring parameters specified in the ESMP whis was prepared by the Client. During the construction activities, the Contractor shall perform in accordance with this situation. If the environmental and social risks change due to the changes that may occur during the execution of the contract, the Contractor is obliged to change the monitoring plans according to these changes and to continue to fulfill the obligations by reducing and / or eliminating the risks to a minimum.

The ESMP will also include the basic construction activities and the environmental impact mitigation methods and safe working practices that must be implemented, especially during the implementation of risky activities. Conduct of the contractor's work, transportation of excavation waste, etc. all necessary permits and licenses for the activities will be checked. The Contractor's Quality Control or Environmental Health and Safety (EHS) Expert will be responsible for the health, safety, and environmental management at work, taking into account the socio-economic characteristics of the environmental protection, nearby settlements and the socio-economic value of public asset and daily routines of residents. The Quality Control or EHS Specialist will be responsible for the monitoring, supervision, and planning of the construction activities in terms of environment and health and safety and will report in writing the EHS practices on the site quarterly. The Contractor's Quality Control or EHS Specialist will also monitor and coordinate the application and process of obtaining licenses and permits related to the local environment, health and safety laws and regulations. These applications and processes carried out by the Contractor shall be under the supervision of the Controlling Organization.

The Environmental and Social Management System and the Environmental and Social Management system flow chart showing the authorities and responsibilities of the Supervision Organization, Contractor and ASAT envisaged to be implemented at various stages of the project are presented in Figure 14.

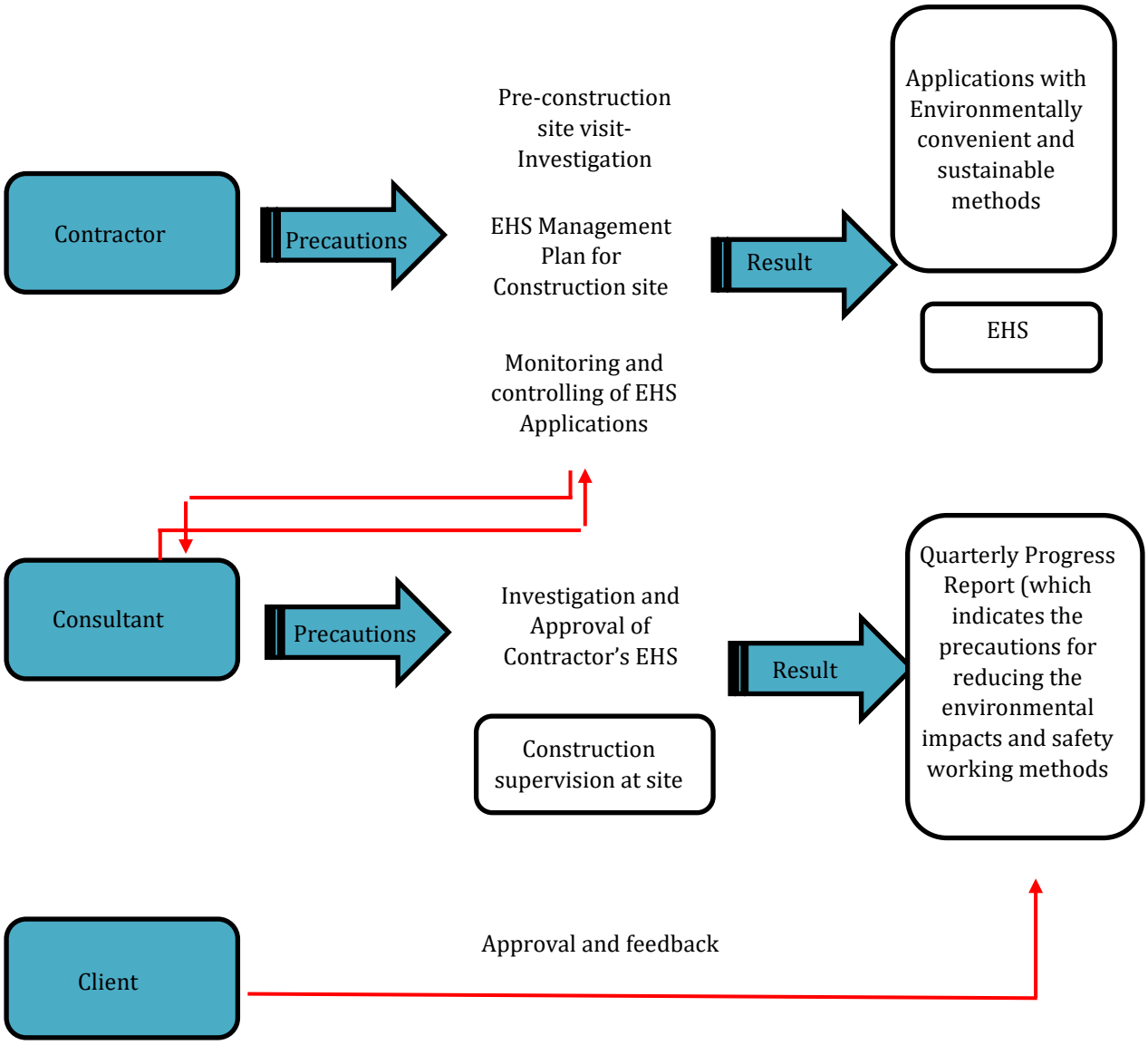


Figure 14:Environmental and Social Management System to be Implemented

The construction site will be regularly inspected by the Controlling Organization to ensure that site cleanliness and order is maintained, conforms to environmental standards and is not adversely affected by environmental habitats or socio-economic conditions in the immediate vicinity.

The delivery of workers' environmental health and safety training in accordance with the contractor's relevant occupational health and safety regulations will also be monitored by the Controlling Organization.

6.2 Training

Within the scope of Antalya Sustainable Water and Wastewater Management Project, Occupational Health and Safety Training should be provided to all contractor's staff to include the subjects specified in the "Regulation on the Procedures and Principles of Occupational Health and Safety Training of Employees" plans related to staff training will be included in the quarterly ESMP.
In addition, the Contractor will provide training on the environmental and social impacts of the ESMP document. It is the responsibility of the contractor to inform the contractor that the contractor has taken all necessary measures to minimize the environmental and social impacts during field production.

The employer will ensure that employees are trained primarily in matters involving risks associated with work and workplace risks and safeguards before the employee starts to work. Training will also be given on the risks that will arise due to changes in the workplace or job, the change of work equipment, or the application of new technology.
The trainings will be repeated at regular intervals, taking into account the changing and emerging risks identified in the Regulation on the Procedures and Principles of the Occupational Health and Safety Training of Employees. Informing and training will be done not only for employees but also for measures to be taken for community health and safety.

Persons who have been away from work for six months or more for any reason should be given training in information renewal before starting work again.
Careful attention should be given to the selection of the topics that the trainers need in order to be effective. Training should be organized theoretically and practically so that employees can easily understand.
In addition to trainings, citizens will be informed about the bloking and disconnection of roads. This will include the followings:

- A brochure will be prepared by the Contractor, and it will contain the sketch of the site, authorized person information to communicate in case of emergency, start date and targeted end date. The brochure will be distributed to all related buildings in the region.
- 10 days before starting work, print out flyers containing the sketch of the site, authorized person information to communicate in case of emergency, start date and targeted end date will be distributed to all related vehicles in that area.
- Before the construction works, the traffic direction plans, and the necessary sign tables will be settled to the related areas.

It is necessary that the knowledge, skills, attitudes, and attitudes of the contractor personnel should be presented separately and in a measurable manner in occupational health and safety, environment, and social issues.

Individual level determination is performed by a method that the contractor will determine by himself / herself and the trainings to be taken by employees other than the pre-training level and related regulations are determined.

Measurement and evaluation are done at the end of the trainings given. According to the evaluation results, if the education is effective, the education program or the trainers should be changed, or the training should be repeated if it is needed.

6.3 Instutional Arrangements

Table 8. Relevant Institution- Duties and Powers.

Related Institution	Task And Authority
ASAT General Directorate	Within the scope of the General Directorate of ASAT, 19 units have been separated. Among these units, "Sewerage Department" is located. ASAT3 / W1 Lot1 " Construction of Collector and Wastewater Network in Döşemealtı District" , Lot2 "Construction of Collector and Wastewater Network in Aksu-Kundu Districts , ASAT3 / W3 " Construction of Wastewater Network in Kepez District", ASAT3 / W8 "North Antalya Water Supply Project" " and ASAT3/ W10 "Construction of Wastewater Network in Dösemealtı Region" Contract packages within the scope of the ESMP report will be carried out on the job description and responsibility of the Sewerage Department. The task of the Sewerage Department is; Regarding the operation of sewage system; maintenance and control of the deep sea discharge line, opening of the drilling wells for the provision of rainwater drainage, final connection, domestic connection, maintenance and preliminary maintenance, solving the problem of parcel blockage problems, control of system whole, contract and correspondence, purification plant, pumping stations, and to resolve any complaints that may arise in this matter.

Aldaş Infrastructure Management and Consultancy ınc.	Antalya ALDAS Infrastructure Management Consultancy Industry and Trade Inc. will serve as the supervisory organization during the implementation of the Sustainable Water and Wastewater Project. was established on 13 December 1995 in order to serve as responsible for the administrative and financial management of the water supply and sewage services on behalf of the General Directorate of ASAT. As ALDAS-ASAT's sole and authorized representative, it manages investments and supervises the private operator and provides consultancy services on corporate restructuring, new investments, and new policies. ALDAŞ Inc. will serve as project management unit within the scope of the project and will control both the technical and administrative progress of the contract packages and the applications of the issues stated in the ESMP. In addition, ALDAS will examine the quarterly environment and social monitoring reports of the contractors as well as the field inspectionsand will submit these reports to Ilbank regularly.
Contractors	The construction contracts and the operation of the contract packages within the scope of the Environmental and Social Management Plan will be carried out by the contracting firms. Contractor Firms are obliged to comply with the responsibilities specified in the Environmental Management Plan. The issues related to the implementation of the ESMP will be examined by the contractor during the preparation of the tender offer and will be given taking into consideration the Environmental and Social Management Plan. Measures to be taken within the Environmental and Social Management plan to reduce the most possible adverse effects of the project on the construction and operation stages and monitoring plans designed to control the implementation conditions of the measures. These plans also include the institutions and organizations (project stakeholders) responsible for the betting items. During the construction phase, the contractor firm will provide training to the personnel who will take part in the project, including environmental, occupational, health and safety,

	citizen safety, measures within the scope of ESMP, in order to create social awareness. The implementation of the measures for the construction phase of the ESMP will be coordinated by experts in environmental, social, and occupational health and safety. The subject experts are responsible for taking necessary measures and implementing monitoring plans to eliminate/minimize environmental and social impacts in the direction of the ESMP.
Ilbank and World Bank	During the construction and operation stages, the Bank Authorities and General Directorate of ASAT will supervise the performance of the contractors in compliance with the ESMP. Regarding these issues, contractors will be required to quartely reports periodically and if necessary, on-site inspections will be done. Regarding the quarterly studies and reports, Ilbank Inc., The General Directorate of International Relations Department will be informed by ALDAŞ with prepared monitoring reports. and the field supervision that the Bank has carried out with certain periods and the activities and progress of the quarterly reports will be carried out. Ilbank will inform the World Bank with its environmental and social monitoring reports biannually. In addition to this information, the World Bank will also check its activities periodically.

6.4 Necessary Approvals and Permissions

Within the context of the Antalya Sustainable Water and Wastewater Management Project, the processes related to the permits to be taken prior to the start of work, from the Employer, the Employer Representative, the Project Manager and other infrastructure and superstructure institutions and organizations, (DSİ, Museum Directorates, TEDAS, TEAŞ, TCK, Traffic Branch Directorate, AYKOME, UKOME, municipalities and so on.) should be shown in the Work Program within the work program the Contractors are obliged to submit first.

Permissions to be taken from natural gas distribution company, Museum Directorate and Protection Board, TEDAS, Telekom, Highways, Traffic Branch Directorate, AYKOME, UKOME and related municipalities for the contractual application projects to be controlled by the Contractor and to be excavated It will be taken.

In accordance with the provisions specified in the Technical Specifications, the Contractor shall comply with all requirements and recommendations of the Municipality, the Traffic Supervision Branch Directorate and the Highways Administration on traffic regulations and road safety precautions. The contractor will submit the traffic recommendations (if necessary) and the permits received from the Traffic Supervision Branch Directorate and the Highways Administration before approval by the Project Manager of the Supervision Organization before passing the activity on the site.

Compliance with the specifications specified in the technical specifications of the work done and compliance with the particulars specified in the ESMP plan will be audited by the control organization. The Contractor shall fulfill its obligations in line with the approval and approval of the Controlling Organization.

Technical, environmental, and social responsibilities and / or risks will be monitored by exchanging information on the work during the weekly and monthly meetings with the Administration, the Controlling Organization, and the Contractor.

7.ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

7.1 Environmental and Social Impacts and Precautions

Within the scope of the Sustainable Cities Project, it is envisaged that the drinking water and wastewater projects planned for the future will occur the environmental and social effects in the construction and operation stages. The measures to be applied for the elimination of these effects and / or the reduction of the effects at the maximum level are given in this section.

7.1.1 Construction Stage

Possible social and environmental impacts during construction are divided into groups as follows.

(I) Environmental Impact

a) Soil Pollution

- Excavation Waste,
- Solid Waste
- Packing wastes (paper, plastic, glass, metal)
- Hazardous waste (waste oil, oakum, contaminated package etc…)
- Protection of existing infrastructure,
- Impact formation outside the construction site.

b) Water Pollution

• Influence of surface waters such as ponds, streams etc… and underground waters.

c) Air Pollution

- Dust formation during the excavation works,
- Exhaust from work machines

d) Noise Pollution

(II) Social Impact

- Informing the people of the environment about the investments,
- Evaluation of the effects that are transportation, noise, dust, visuality, etc. that may occur during construction within the scope of Worker and Citizen Health and Safety,
- Meet the wastewater infrastructural requirements of the citizens,
- Personel recruitment.

Table 9. Possible Environmental and Social Impacts and Precautions During the Construction Stage

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Excavation Waste	• Taking security precautions in the site to be excavated to prevent visual disturbances and accidents, closing of the excavation area, placement of safety signs, routing of road, • Removal of the excavated material from the site at regular intervals without waiting, it will not be used in backfilling, • Mounting of sensors registered to Metropolitan Municipality system for earth moving trucks and disposing of excavation materials in the area allowed by the Municipality of Metropolitan Municipality with the transportation vehicles without accumulating and / or temporarily storing it. (Annex-I contains letters of the Antalya Metropolitan Municipality about the excavation wastes.) • Providing the infrastructure plan of the region (energy, telecommunication, natural gas, etc.) to the workers (especially construction machinery operators) during the excavation of excavation soil to prevent damage to other infrastructure systems.	Within the contract price.	Contractor, Supervision Team, ASAT, Antalya Metropolitan Municipalty

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Air quality	• Regular irrigation of the study area, particularly in spring and summer, to reduce the effects of dust-causing activities such as excavation and backfilling, • Storage of daily backfilling, bedding, and covering materilas from quarry at temporary storage areas, moistening and compacting the materials to prevent the materials moving with the help of wind, • Carefully loading and unloading trucks and preventing the material from being thrown out, • Covering of the transport trucks with canvas during their arrival and departure to the contruction site and on the public highway, • Application of speed limit for trucks, • Cleaning truck tires to prevent mud transport on roads, • Covering the construction site, • Selection of modern equipment and tools that can provide relevant emission standards during the construction activities, • Checking exhaust systems and emission levels of machines and vehicles.	Within the contract price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Solid Waste	• Providing containers for different types of solid wastes at site office and construction site for collecting wastes in these containers, • Transferring the wastes collected in closed containers at the project site to the waste disposal sites by the Municipality, Collecting of wastes which are possible recycled in different waste containers by seperating source.	Within the contract price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Package Waste	The packaging waste is not directly or indirectly spreaded to receiving environment in a way that harms and it should be stored separately from domestic solid waste and sent to licensed collection and disposal companies for disposal.	Within the contract price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment,Urbanization and Climate Change

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Hazardous Waste (Oakum, contaminated package, end-of-life-tire etc...)	Hazardous wastes that may occur in the construction site and in the site, office should be stored in accordance with the provisions of the "Waste Management Regulation" and transmitted to the licensed company for disposal.	Within the contract price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Waste Oil (In the event that the maintenance of the machines and the oil changes are carried out in the vehicle service, the Contractor will be provided with promotional documents)	• A complete list of the vehicles, construction machinery and equipment to be used under the contract and their maintenance and repair status shall be indicated quarterly by the Contractors to the supervision team under the ESMP, • Starting maintenance and repair work for vehicles after taking measure all precautions against leakage and spillage, • Oil filters taken out from vehicles should be accumulated in a seperate covered containers and never be thrown in the domestic waste containers or sent to the landfill area, • Disposal / recycling of the accumulated waste oils by	Within the Contract Price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

		sending them to the licensed facilities via licensed carriers, • Containers where wastes are deposited are placed on impermeable floors, protected from rainwater.		

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Wastewater	• Site office should be connected to the existing wastewater network (or if there is not an existing network for connection, the formation of temporary isolated septic tank pits and the transfer of the wastewater to the nearest wastewater treatment plant by licensed vacuum tankers,) • During the connection of newly constructed sewer lines to existing sewerage lines, the contractor has all the precautions to prevent wastewater from spreading to the working area. (Teams and equipment such as plugs, plugging pads, pumps, and sewage trucks etc.),	Within the Contract Price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Noise	• Closing sewerage and collectors' excavation areas with security barriers, • Arrangment of suitable working hours in construction site, • Informing citizens before the start of noisy activities that could cause a temporary discomfort, • Construction work to be done on the allowed days and hours, • Within the scope of the project, attention is given to the selection of equipment with low noise level, • Regular maintenance of work machines to be used during the construction phase, • Applying of speed limit for work machines.	Within the Contract Price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Health and Safety	• Surrounding the construction area and around the work area in such a way that it can be easily noticed and placing signs, • Printing and distribution of the brochure prepared by the contractor containing the work site sketch, start and targeted end dates and authorized person contact information that can be contacted in case of emergency, and distributed to all buildings in the region, • 10 days before the start of the work, the flyers containing the sketch of the work site, the starting and targeted end dates and the contact information of the authorized person who can be contacted in case of emergency are prepared and printed and distributed to all vehicle users in that region, • To prepare traffic guidance plans and signboards, to place them in the places foreseen before starting the work, • Providing a safe and adequate level of pedestrian areas and bus stops, if necessary, with pedestrian crossings at intervals not exceeding 50 m in the construction area, • Providing personal protective equipment (earmuffs, helmets, vests, etc.) to workers to	Within the Contract Price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

		minimize occupational health and safety risks, • Providing personal protective equipment suitable for the disinfection material to be used for the disinfection processes to be carried out at the end of the construction and providing necessary trainings in this regard, • Surrounding the well area and making necessary markings, • Giving and informing workers about proper starting, health, and safety training, • "Hazard", "Entry is Forbidden" etc. in accordance with the Occupational Health and Safety Regulation. security signage, • Always have adequate and adequate fire-fighting equipment in construction sites, • Keeping all equipment used and working in good condition during the construction phase, • In case of any injured accident that may be encountered during the construction phase, the equipment related to the first aid to be made should be available at the construction site, considering that it may be necessary to carry out first aid intervention before the victim is transferred to the nearest health institution, • In the event of any significant accident in the working area,		

		(e.g., fatal or injured accidents, lost time problems, environmental spills, etc.), ASAT will report the work accident to law enforcement forces immediately and to Social Security Institution within 3 working days. The Contractor should inform ASAT and ASAT should inform ILBANK within 24 hours via telephone or e-mail. The World Bank will also be informed by ILBANK. The World Bank will be informed about the accident report and additional measures within 30 working days.		

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Cultural Heritage	• In the event of encountering a property or area with cultural prescription during construction activities, stopping the work immediatelty, informing the competent authorities of the situation, no to restart work until the written approval from the competent authorities, not to remove any artifact.	Within the Contract Price	Contractor, Contractor, Supervision Team, ASAT, Directorate of Regional Board for the Protection of Cultural Assets.

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Land use	• The protection of the vegetation cover in the working area, if necessary; removal of the trees, transport to another place and sewing again at the end of the work, • Keeping materials and equipments in closed and protected areas, if it is needed to provide additional space for closed and protected areas, temporary reantal procedures or permits must be obtained by the Contractor, • Making improvements in the areas such as road, pavement, garden etc. damaged during the work, • No more than 200 m of open trench during operation. • The establishment of temporary security bridges in order to prevent citizens from suffering trench excavation works carried out in front of the citizens' shops, houses and communal areas	Within the Contract price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Traffic	• Informing the public about the work and time schedule before starting to work, • Preparing the traffic direction plans and the necessary sign tables, placing them in the places foreseen before the start of the work. • The pedestrian areas and bus stops should be provided safely and adequately if required, along with pedestrian crossings with intervals not exceeding 50 m on the construction site. • Identification and announcement of alternative routes for transportation of work machines and trucks, • Placing the warning signs at least 500 m before the field works, • Transportation works in areas with heavy traffic are carried out at times when traffic is off-peak time, • Warning signs are visible at night and in bad weather conditions.	Within the contract price	Contractor, Supervision Team, ASAT, Antalya Metropolitan Municiple Directorate of Transportation Services

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Employment	• In required, constitution of accomadation area for emplooyers who will come from outside the city. • Taking necessary precautions to ensure that workers from outside the city are trained in dialogue and communication with local communities and that social and cultural problems do not arise between host communities and outside workers.	Within the contract price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change
Construction	Procurement	• Contribution to the local economy through the use of local materials, to pay attention to carry various goods and services locally	Within the contract price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Construction	Negative influence of social lifes	• Training of the contractor's field personnel on environmental and social issues, • Execution and controlling the activities carried out during the construction works in such a way as not to restrict / prevent the social and economic life of the people of the region.	Within the contract price	Contractor, Supervision Team, ASAT, Provincial Directorate of Environment, Urbanization and Climate Change

		• Placement of security and information signs on the site before starting to work, in order to provide the security and prevent the daily life of the citizens from being affected. • During the excavation, filling works etc, temporary bridges should be provided if they effect the access to the living areas of the citizens and excavation wastes should not be kept in front of the houses and workplaces, necessary precautions should be carried out.		
Construction	Water Quality and Supply	• To prevent contamination by closing the ends of the pipes which are not assembled during the construction period, Constructing the water tank to consist of two separate rooms independent of each other (in case one of the rooms fails during maintenance or repair work, for the second room to continue feeding the network), •Disinfection of water transmission and distribution lines at the end of construction, washing and disinfection of pipelines, disinfection of fire hydrants and valves, final washing and testing, disinfection of parts in contact with water of pumps and mechanical equipment,	Within the contract price	Municipal Directorate of Environment and Forestry Advisor The contractor

		• Disinfection of drinking water tank, collection room structures,		

7.1.2 Operation Stage

Table 10. Possible Environmental and Social Impacts and Precautions During the Operation Stage

Phase	Issue	Mitigation Measures	Cost	Instutional Responsibility
Operation	Continous Controlling of Society, work, and Employee Safety	• Continuous monitoring of the operation of the entire sewerage system, • In case of clogging, immediately eliminate the causes of clogging, cleaning the pipeline and cleaning the area where the wastewater spills do not affect the environment and human health, • Applying sanctions to persons responsible for damage, • Preventing methane (CH4) and hydrogen sulfide (H2S) gas hazards during flue and line cleaning operations. measurement, • Provision of protective safety equipment to personnel, • Continuous inspection of manhole covers and replacement of defective covers in order to avoid any citizen grievance and / or traffic accidents due to manhole covers that are not fully installed or locked. • During the operation of manhole type package wastewater pumping stations, performing	ASAT own resources (The damages generating from the construction contractor's deficients and defects will be conpansed by the contractor during the defect and liability period)	ASAT

		periodic electro-mechanical equipment maintenance in accordance with the maintenance and repair handbooks prepared at the end of the work. • Maintenance and repair of the filters in the odor control units in the manhole type pumping stations and replacement of the filters in the periods recommended by the manufacturers. • Monitoring of ambient air measurements with H2S measuring instruments during the control of manhole type package pumping stations. • Technical training of the personnel to deal with chlorination in the drinking water tank, using protective masks, glasses, and gloves, and ensuring the ventilation of the storage and dosing areas, • Continuous monitoring of the drinking water network for hydraulic and water quality for water quality and supply • Continuous control of chlorination process in order to maintain water quality in drinking water network, • In order to protect the water tank from external factors, the storage area is surrounded by fence and barbed wires and transportation, settlement, farm, animal husbandry, etc.		

		in this region. prohibition of all activities, • Preventing all kinds of contamination and contamination that may reach the warehouse through the operation personnel, • Providing equipment and equipment that will discharge the mains water if necessary, during repairs (This equipment consists of pumps and pipes to be used to direct the mains water to the drainage line), • Cleaning of rainwater grating in well areas.		

7.2 Environmental and Social Impact Monitoring Plan

7.2.1 Construction Stage

Table 11. Posibble Environmental and Social Effects Monitoring Plan during the Construction Stage

Parameter	Phase	Where the parameters shall be monitored?	How shall the parameters be monitored?	When shall the parameters be monitored?	Why shall the parameters be monitored?	Cost	Instutional Responsibility
Excavation Waste	Construction	At the excavation area and by following truck which are used for materials transportation	• By supervision team's monitoring of excavation works at site, • Controlling of opened trenches in the excavated areas wheter or not affect the transportation of residents to the residence, workplace, hospital, shopping mall and individually or collectively used places. • By supervision team's following of	By daily records during the construction period.	• In order to prevent unsuitable storage, transportation and removal, • In order to prevent open trench excavation, which is too long than determination, • In order to eliminate the subjects which, effect the social	Within the contract price.	Contractor, Site Supervision Team, ASAT

			trucks and machineries which are used for materials transportation, • By recording of permissions for excavation works.		life/trasportation.		
Solid Waste	Construction	• Throughout the contruction site and site office area where the waste containers are located.	• Checking the occupancy rates of the containers and observing that there are no beautiful wastes coming from the area, • By providing separate containers for recyclable wastes, with monthly record keeping.	By daily records during the construction period.	In order to prevent unsuitable solid waste storage, transportation and removal.	Within the contract price.	Contractor, Site Supervision Team, ASAT
Packing waste	Construction	• Throughout the contruction site and site office area where the	• For collecting of packing waste in seperate waste containers, • By recording of packing waste which	By daily records during the construction period.	In order to prevent unsuitable packing waste storage,	Within the contract price.	Contractor, Site Supervision Team, ASAT

		waste containers are located.	are transported to the collecting and sortation facilities.		transportation and removal.		
Hazardous Waste	Construction	Throughout the construction site and site office area.	• By monitoring of temporary storage field in case of hazardous waste generation.	By daily records during the construction period.	In order to prevent unsuitable hazardous waste storage, transportation and removal.	Within the contract price.	Contractor, Site Supervision Team, ASAT
Waste Oil	Construction	In the construction site where the work machineries work.	• By monitoring of oil leakage and oil change of work equipments and machineries in construction site, • By following the maintenance and repair information of work machineries.	During the construction period, maintenance, and repair times of work machineries.	In order to prevent unsuitable waste oil storage, transportation and removal.	Within the contract price.	Contractor, Site Supervision Team, ASAT
Wastewater	Construction	In the construction site and site office in general	• By recording of wastewater receipts if the site office is connected to the existing wastewater network (or	On the daily basis records during the construction period.	In order to prevent unsuitable wastewater storage,	Within the contract price.	Contractor, Site Supervision Team, ASAT

			recording of sewage vacuum truck transportation receipt)		transportation and removal.		
Air Quality	Construction	During the excavation works, in materials storage fields, emissions from work machines.	• By irrigation during the excavation works, controlling of emission limits from work machines and storage fields of backfill materails.	During the constructio n stage.	In order to protect the health of workers and citizens and to protect air quality.	Within the contract price.	Contractor, Site Supervision Team, ASAT
Noise	Construction	In construction site where work machines work extensively Pumping station	By measuring the noise levels with portable devices, especially in areas where machines work extensively.	During the project construction Monthly	In order to protection of employer and citizens heath and control the noise pollution.	Within the contract price.	Contractor, Site Supervision Team, ASAT Municipal Environmen tal Health Directorate
Healty and Security	Construction	Construction site and office. Within the project boundaries	• By the controlling of security sign boards and safety barriers during the site works.	It will be monitoring continuous ly during the	In order to protect work, employeer and citizens safety.	Within the contract price.	Contractor, Site Supervision Team, ASAT

			• By checking whether the speed limits of work machines and trucks are complied with, • By checking whether workers health and safety equipment (earplugs, eyeglasses, safety boots, etc.) are used, • Checking of work conditions of work site and office, • By following the training of Contractor's employee. • It will be checked wheter or not the contractor informs the residents about the work site, targeted start, and end date, contact person in case of emergency	construction stage.			

Traffic	Construction	On streets and roads where the construction works are going on and connected roads.	• With the monitoring of the road closing and route permission and route chart drawing, • Safety precautions for road closure and routing, with the relevance of traffic signs and signs. • The operations, which will be carried out for the purpose of traffic routing, will be controlled on site, • In the construction site, pedestrian crossings along with pedestrian areas will be checked to ensure that they are safe and adequate.	It will be monitoring continuously during the construction stage	Not to block the existing traffic flow and to prevent from the unforeseen traffic accidents.	Within the contract price.	Contractor, Site Supervision Team, ASAT
Usage of land	Construction	Construction site	• Controlling the vegetation and trees in the study area and controlling the	It will be monitoring continuously during the	To avoid from probable disputes.	Within the contract price.	Contractor, Site Supervision Team,

			excavation widths and material storage areas in the study area • Rental agreement for additional land required in the work area or obtaining permission from related institutions.	construction stage			ASAT
Artifacts / Areas with a Historical or Cultural Value	Construction	Excavation site	In case of encountering an unforeseen historical, cultural structure or region when the is works is going on, the Project Manager is informed by site employee and necessary trainings about the subject is given to Contractor's employees.	It will be monitoring continuously during the construction stage	Protection of cultural heritage.	Within the contract price.	Contractor, Site Supervision Team, ASAT
Restriction of Social Life	Construction	Monitoring will be done in areas affected by	• Training of personnel on the environment and social issues to	It will be monitoring continuously during	For prevention of probable complaints and ensuring the	Within the contract price.	Contractor, Site Supervision Team, ASAT

		Construction Site.	express the points to consider during the construction works and to keep under control of workers' relationship with citiziens. • Checking the security and information signs in order to ensure citizens safety and daily lives are not affected. • During the excavation, filling works etc. monitoring of transportation to places where citizens use collectively or individually, such as residence, workplaces, hospital, shopping mall, etc.,	the constructio n stage.	citizens' health and safety.		

7.2.2 Operation Stage

Table 12. Monitoring Plan for Possible Environmental and Social Impacts During The Operation Stage

Parameter	Where will it be monitoring?	How will it be monitoring?	When will it be monitoring?	Why will it be monitoring?	Responsible
Society, Work and Worker Security	Monitoring along the network line.	Periodic Controls	It will be monitoring countiously. In case of a complaint, follow-up studies will also be carried out.	In order not to have a negative effect on environment, the citizens, and the employees during the operation of the manufacturing done within the project.	ASAT
Water Level	In the water tank	With water level device with SCADA system	Continous	For the management of the drinking water network	ASAT
Water quality (residual chlorine)	In the water network	With land measurements at the dead ends of the network	When there are daily and complaints	To determine the water quality in the network	ASAT

Electro-Mechanical Equipment maintenance-repair	Manhole type Package Pumping station	SCADA and Periodic Controls	Daily / Additional Periodic maintenance periods	Obtaining optimum energy and operating efficiency by operating electro-mechanical equipment at optimum level	ASAT
Odour Control	Manhole type Package Pumping station	Periodic Control for Surroundings of the Pumping Station and by H_2S measuring instruments at the time of grievance.	During the maintenance and repair of electro-mechanical equipment, in case of grievances, additional monitoring actions are carried out.	Preventing the odour problem/Protecting Worker Health	ASAT

8.PUBLIC PARTICIPATION MEETING

8.1 PUBLIC PARTICIPTION MEETING-Contract Nr. ASAT3/W1

8.1.1 Information of Meeting: Contract Nr. ASAT3/W1

Meeting Notice Method : Local Newspaper/Press Announcement

Meeting Date : March 27, 2018 - hour: 14.00

Meeting Place : ALDAŞ Building, Meeting Room

Meeting Participants : Attendance sheet of Meeting has been enclosed below.

Meeting Agenda :
1. Opening Speech
2. Project Description
3. Questions-Answers
4. Closing-Pleasure

According to the project, the Public Participation Meeting was held by the project owner in order to inform the public about the investments and to obtain opinions and suggestions about the project.

The public participation meeting was held on the third floor of ALDAŞ Infrastructure Management and Consultancy Services Industry and Trade Inc. building located at Liman Mahallesi 2. Cadde No: 11 07070 Antalya on March 27, 2018, at 14.00.

The Public Participation Meeting notice has been published on the 5th page of Hürses Gazetesi dated 19 March 2018 and announced at www.ilan.gov.tr. The represantaive of several instutions were invited to the meeting with public. 43 people attended the Public Participation Meeting related to the project and the name and telephone information of the participants were recorded.

A presentation related to environmental and social impacts that could occur during the implementation of the project was prepared for public participation meeting. In the presentation, the definition and effects of the project were supported with figures and photographs. The effects of the construction and operating periods of the project were evaluated and presented.

The presentation of the project at the Public Participation Meeting was made by ALDAŞ A.Ş.

In the presentation made at the Public Participation Meeting, the definition of the project and the environmental and social effects were discussed. After the presentation, participants had a chance to declare their opinions, suggestions, and questions. Regarding the project, no

negative opinion was given by the participants. At the public participation meeting, the questions asked by the participants and the answers given to the questions and recorded.

The participant's questions which were answered by the representative of ASAT and ALDAŞ Authorities at the end of the public participation meeting held on March 27, 2018, at 14:00 in ALDAŞ Meeting Room are given below.

8.1.2 Questions and Answers

Question :

I am dealing with trade in the Kepez region. During the infrastructure works, in summertime dust, in wintertime mud is occurred. In your presentation, you declared that you would take precautions for these situations, but how will we reach you if we live such kind of disturbances?

Answer : Faruk KARAÇAY- ALDAŞ Inc.

Before the construction phase of the project, detailed technical studies were carried out in terms of environmental health, public health, citizen benefits and social impact assessment. Also, Stakeholders have significant duties and responsibilities during project implementation. On the construction site, the Contractor shall be under continuous control by the staff supervision team. If the contractors fail to fulfill their responsibilities, the site controller has the authority to suspend construction work and implement contractual sanctions. The site will be assessed in terms of environmental and social impacts and reported every month.

For the unfroseen problems during the construction works.
You can reach your complaints with the shortest way by means of your complaints petitions to be left to General Directorate of ASAT, site office, and "Alo 185 Complaint Line", local authorities.

Question :

How long the investments at Döşemalatı Region will be completed?

Answer : Dr. İbrahim Uğur ERKIŞ-ALDAŞ Inc.

It was foreseened that the construction period at Döşemaaltı Region will 12 months.

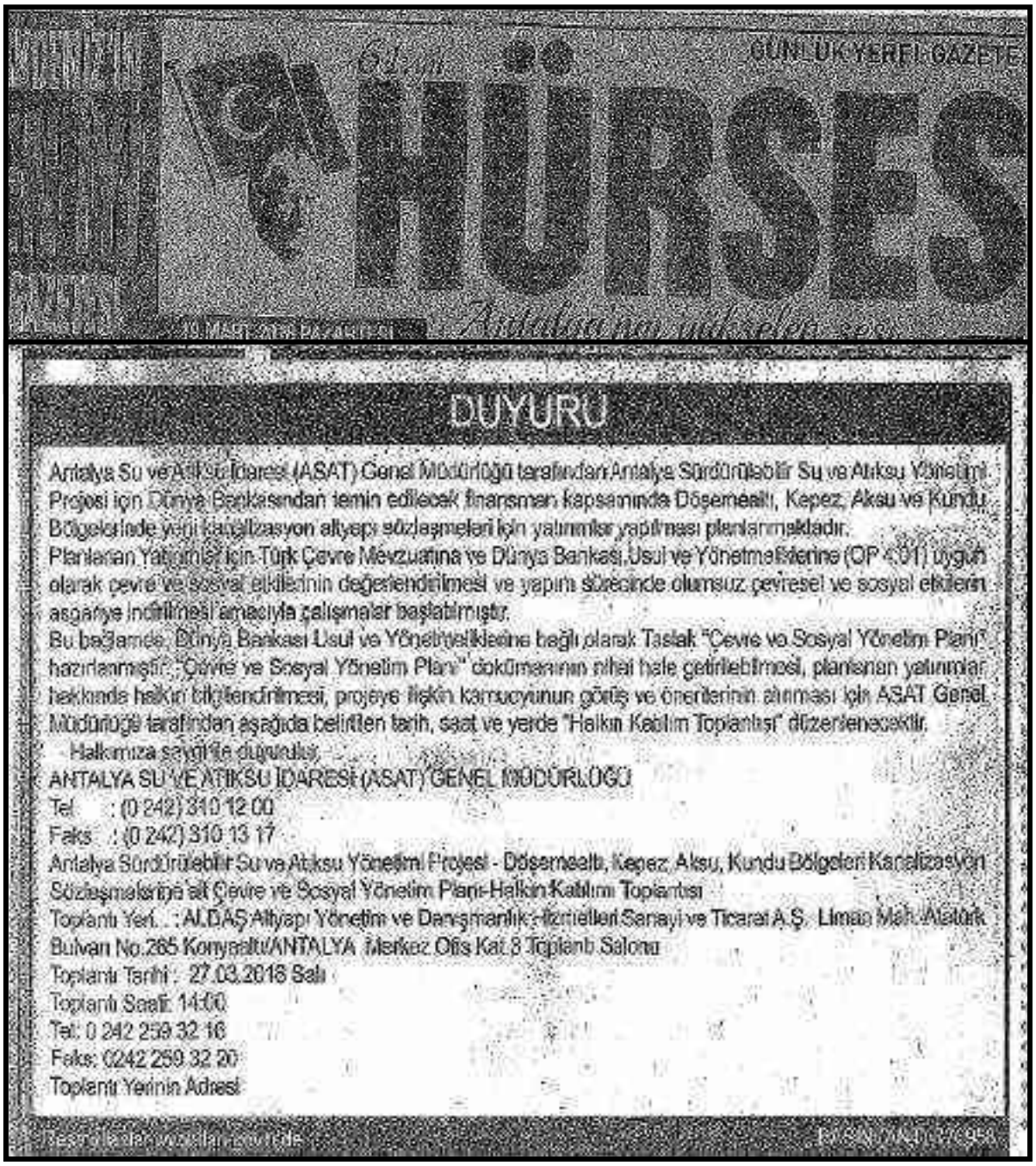
Question :

Will we live disconnection of our electricity, telephone connections or water cut while you are digging?

Answer : Bekir KUMBUL-General Directorate of ASAT, Head of Wastewater Department Manager

During excavation works of the water and wastewater networks, discoonections of electricity, telecominications etc. are generaly encountered. However, as we mentioned in our presentation about our project; our projects were prepared taking into account existing infrastructure data. When excavation works are carried out in any area, all the necessary measures will be taken in order not to damage the existing infrastructure by getting intouch the authorities of other infrastructure instutions. In case of unforeseen circumstances, temporary disturbances will be terminated shortly by getting in touch the institutions immediately.

8.1.3 Advertising Notice



GÜNLÜK YEREL GAZETE

ÇAĞRI SES

DUYURU

Antalya Su ve Atıksu İdaresi (ASAT) Genel Müdürlüğü tarafından Antalya Sürdürülebilir Su ve Atıksu Yönetimi Projesi için Dünya Bankasından temin edilecek finansman kapsamında Döşemealtı, Kepez, Aksu ve Kundu Bölgelerinde yeni kanalizasyon altyapı sözleşmeleri için yatırımlar yapılması planlanmaktadır.

Planlanan Yatırımlar için Türk Çevre Mevzuatına ve Dünya Bankası Usul ve Yönetmeliklerine (OP 4.01) uygun olarak çevre ve sosyal etkilerinin değerlendirilmesi ve yapım sürecinde olumsuz çevresel ve sosyal etkilerin asgariye indirilmesi amacıyla çalışmalar başlatılmıştır.

Bu bağlamda, Dünya Bankası Usul ve Yönetmeliklerine bağlı olarak Taslak "Çevre ve Sosyal Yönetim Planı" hazırlanmıştır. "Çevre ve Sosyal Yönetim Planı" dokümanının nihai hale getirilebilmesi, planlanan yatırımlar hakkında halkın bilgilendirilmesi, projeye ilişkin kamuoyunun görüş ve önerilerinin alınması için ASAT Genel Müdürlüğü tarafından aşağıda belirtilen tarih, saat ve yerde "Halkın Katılım Toplantısı" düzenlenecektir.

Halkımıza saygı'la duyurulur.

ANTALYA SU VE ATIKSU İDARESİ (ASAT) GENEL MÜDÜRLÜĞÜ

Tel : (0 242) 310 12 00

Faks : (0 242) 310 13 17

Antalya Sürdürülebilir Su ve Atıksu Yönetimi Projesi - Döşemealtı, Kepez, Aksu, Kundu Bölgeleri Kanalizasyon Sözleşmelerine ait Çevre ve Sosyal Yönetim Planı-Halkın Katılımı Toplantısı

Toplantı Yeri : ALDAŞ Altyapı Yönetim ve Danışmanlık Hizmetleri Sanayi ve Ticaret A.Ş. Liman Mah. Atatürk Bulvarı No:265 Konyaaltı/ANTALYA Merkez Ofis Kat:8 Toplantı Salonu

Toplantı Tarihi : 27.03.2018 Salı

Toplantı Saati: 14:00

Tel: 0 242 259 32 16

Faks: 0242 259 32 20

Toplantı Yerinin Adresi

8.1.4 Images Related to Public Participation Meeting

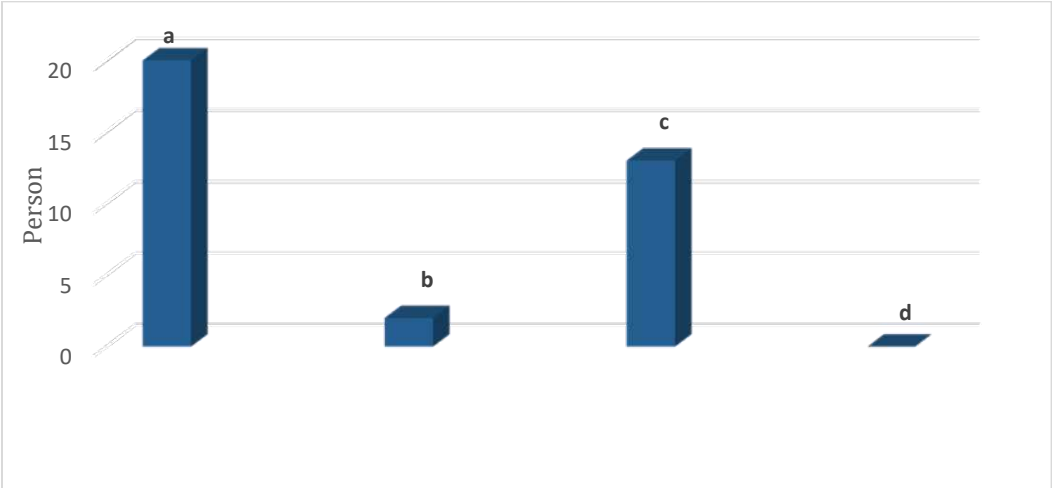
8.1.5 Survey Results

At the end of the public participation meeting, survey form prepared before the meeting were distributed in order to get opinions about the project of participants. The survey consists of 7 questions and 35 people were participated to survey. The survey studies were put into the

computer and the results of the survey were calculated. The total responses given to each question in the survey studies were evaluated. The graphs showing the result of the answers are presented below.

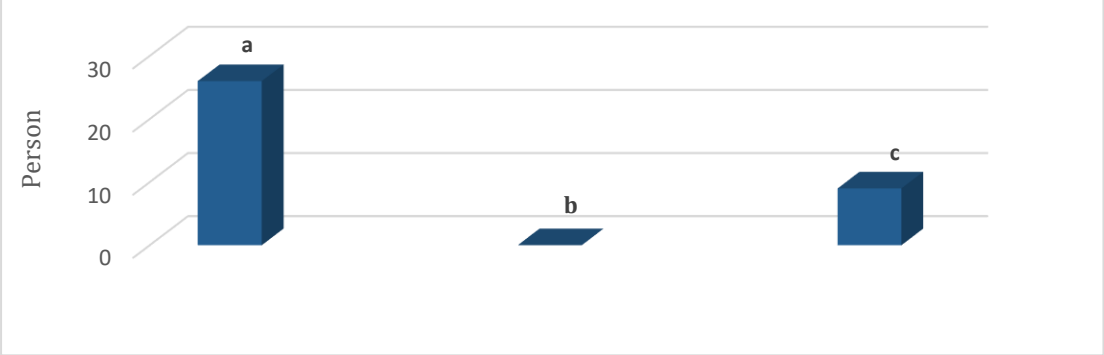
1. What is your relationship with the project?

(a) I live in the project area.
(b) I am dealing with agriculture in the region.
(c) I'm attending the meeting on behalf of a certain group.

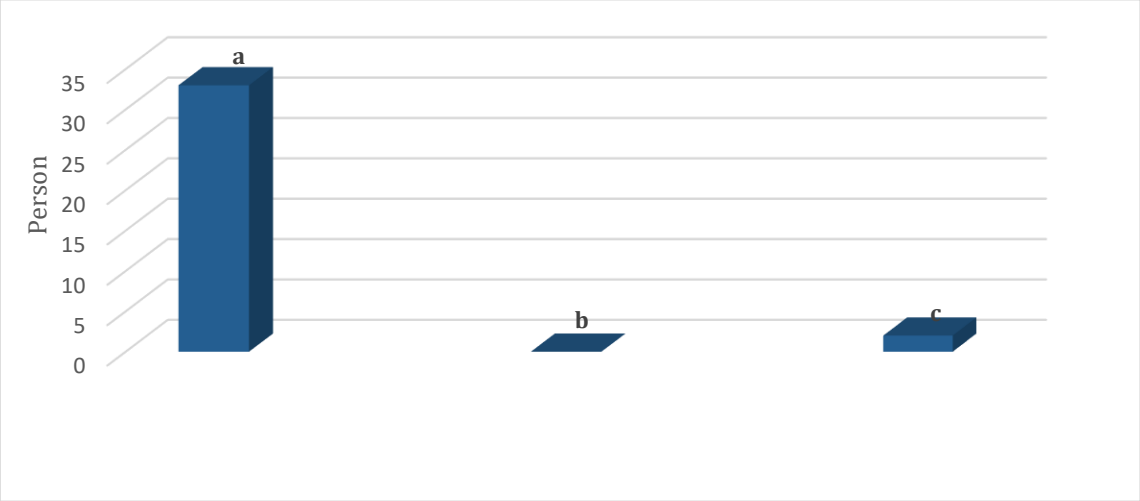


2. Did you get detailed information about the new project explained during the meeting?

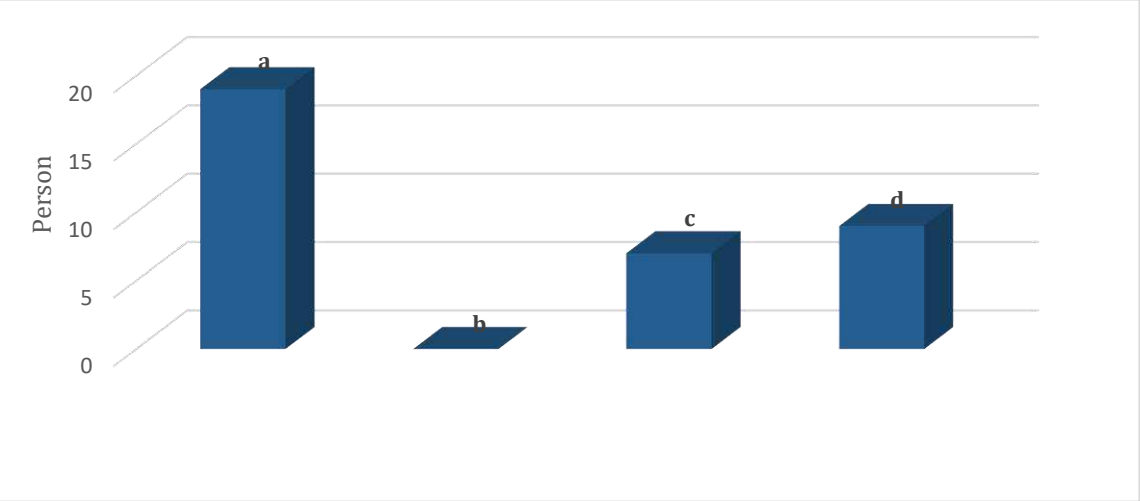
(a) Yes
(b) No
(c) Partially



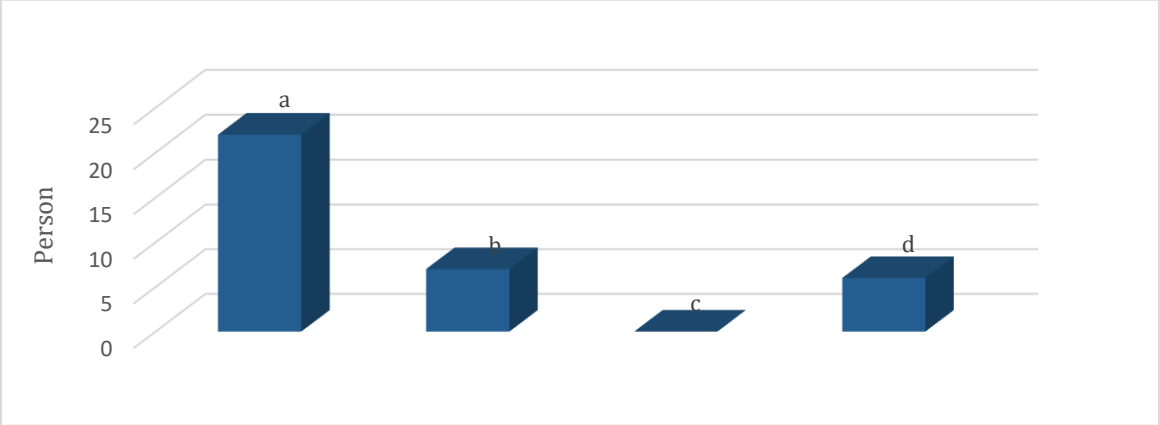
3. Do you think the new project will be useful to the people of Antalya?
   (a) Yes
   (b) No
   (c) Partially



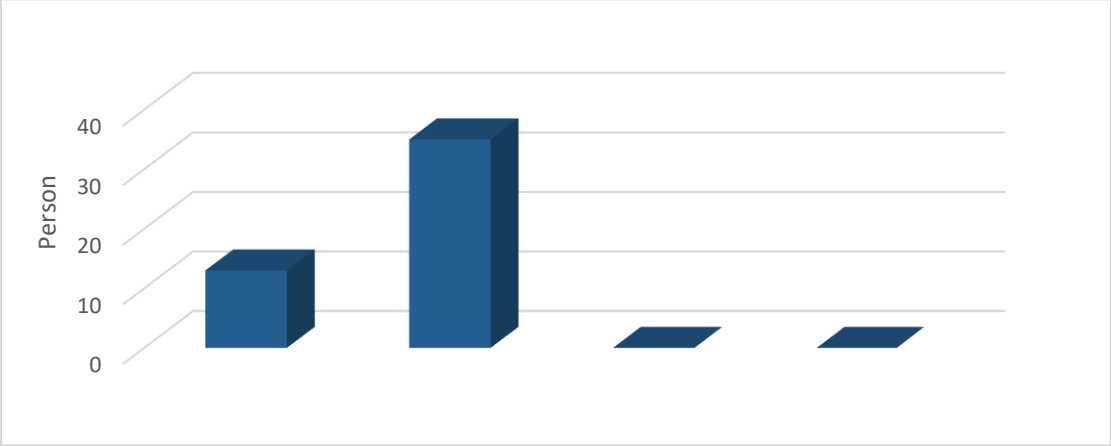
4. What is your opinion about how will the project affect your daily life and the environment you live in?
   (a) Possitive
   (b) Negative
   (c) Inffective
   (d) Neutral



5. Do you think that the infrastructural work of General Directorate of ASAT that was done from 1996 up to now is sufficient?
   (a) Yes
   (b) Partially
   (c) No
   (d) I have no idea.

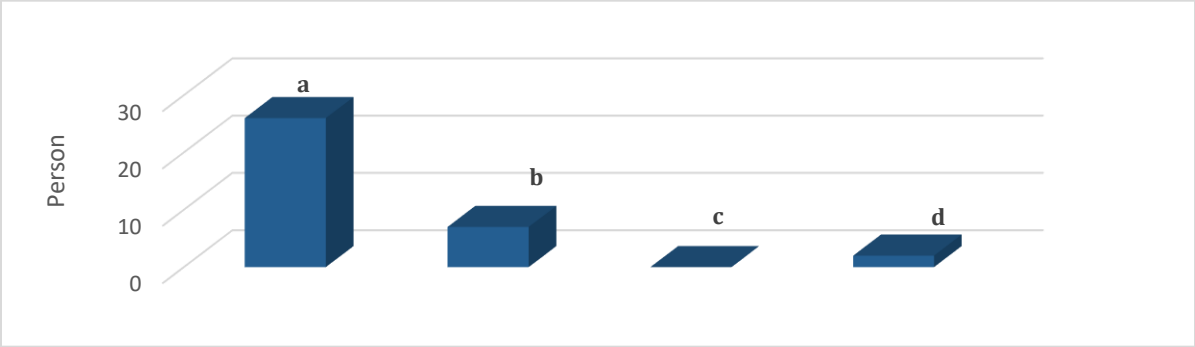


6. What do you think about the temporary inconveniences that may arise during construction in name of having a healthy infrastructure in our city?
   (a) Temporary inconveniences can be overlooked for useful infrastructure projects.
   (b) It's a useful project but I do not want to be adversely affected.
   (c) I do not think the project is needed.
   (d) I have no idea.



7. Do you think that the measures taken to prevent environmental impacts during the infrastructure works carried out by ASAT General Directorate are sufficient?

(a) I found enough.
(b) Precautions are taken, but I do not think it's enough.
(c) I think precoutions are not taken.
(d) I have no idea.



It was observed that the public support the infrastructure investments and approach the project positively with the opinions and questionnaire studies stated in the Public Participation Meeting.

As a result of the consultation meeting held on March 27, 2018 and Kovanlık village meeting held on February 10, 2020, public has been informed on the Döşemealtı, Kepez, Aksu, Kundu sewerage and drinking water supply line. The Project has been recognized as an investment to improve and protect the environment.

With the project planned to be implemented, it is planned to take measures against environmental and social risks that may occur in terms of environment and human health. For this reason, it is concluded that the implementation of the Environmental and Social Management Plan prepared for each stage of the project will have an important place in the protection and improvement of the environment and human health.

8.1.6 List of Participants

ANTALYA BÜYÜKŞEHİR BELEDİYESİ

ASAT3/W1 "Döşemealtı Bölgesinde Kolektör ve Kanalizasyon Şebeke Hattı İnşaatı İşi"
ASAT3/W2 "Aksu ve Kundu Bölgesinde Kolektör ve Kanalizasyon Şebeke Hattı İnşaatı İşi"
ASAT3/W3 "Kepez Bölgesinde Kanalizasyon Şebeke Hattı İnşaatı İşi" Sözleşmeleri için

ÇEVRE VE SOSYAL YÖNETİM PLANI

HALKIN KATILIMI TOPLANTISI

KATILIM TUTANAĞI

TARİH: 27 Mart 2018
SAAT: 14^{00}

No.	Ad Soyad	Kurum	e-posta/Telefon	İmza
1	Tuncay Ercan			
2	Saadet Teser			
3	SERPİL ATAMER			
4	Hüseyin GÜNER			
5	Adem [illegible]			
6	Mesut TEKE[illegible]			
7	ÖZEN KARA			
8	Fatma ALKAN			
9	[illegible]			
10	[illegible]			
11	[illegible]			

ALDAŞ

ANTALYA BÜYÜKŞEHİR BELEDİYESİ

asat

No.	Ad Soyad	Kurum	e-posta/Telefon	İmza
12	Hasan Boztepe			
13	Cem Besen			
14	Hülya Besen			
15	Ramazan Kırmak			
16	Ayşegül Sarıkaş			
17	Şenay Kurt			
18	Kubilay Yıldırım			
19	Özge Karamık			
20	Murat Yaşar			
21	Bekir Karabal			
22	Mehmet [illegible]			
23	Esra Volkan			
24	Hakan Kaplan			
25	Aras Gezer Göksu			
26	Sinan Akdoğan			
27	İsmail Gümüşdağ			
28	M. Mustafa Yeşil			
29	[illegible]			

ALDAŞ

ANTALYA BÜYÜKŞEHİR BELEDİYESİ

No.	Ad Soyad	Kurum	e-posta/Telefon	İmza
31	Perihan Öz			
32	Sevim Porim			
33	Hasan Sepren			
34	[illegible] Bektaş			
35	AHMET MEYDAN			
36	Ümme Yıldırım			
37	MERAL ÇETİN			
38	[illegible]			
39	Hüseyin DEMİRTAŞ			
40	Özlen Koca			
41	Zahide Özdemir			
42	Selami KARAAĞAÇ			
43	Aysel Saltan			
44	Mehmet [illegible]			
45				
46				
47				

ALDAŞ

8.2 PUBLIC PARTICIPATION MEETING

8.2.1 Information of Meeting: Contract Nr. ASAT3/W8

Meeting Notice Method : Local Newspaper/Press Announcement

Meeting Date : February 10, 2020 – hour: $14.^{00}$

Meeting Place : Kovanlık Village Headman's Office-Coffeehouse

Meeting Agenda :
1. Opening Speech
2. Project Description
3. Questions-Answers
4. Closing-Pleasure

Project information was also provided in the Kovanlık Village in the region where the wells are located for the ASAT3 / W8 Contract, which covers the supply and installation of the electro-mechanical equipment belonging to the drinking water transmission line and the well region to be made in the Kovanlık Region. In this context, information posters were hung to the Village Headman and coffeehouse of Kovanlık Village, and citizens were informed about the project. On the other hand, on February 10, 2020, the headman of the Kovanlık Village and the President of the Western Antalya Headmans Federation and the citizens in the village coffeehouse were informed about the project.

8.2.2 Information Poster

Figure 15:Information Poster Prepared for Water Transmission Line Construction Work in Kovanlık Region

8.2.3 Images Related to Public Participation Meeting




Figure 16:Images of Public Participation Meeting of North Antalya Water Supply Project

8.2.4 Comments

It was observed that the public support the infrastructure investments and approach the project positively with the opinions and questionnaire studies stated in the Public Participation Meeting.

As a result of the consultation meeting held on March 27, 2018 and Kovanlık village meeting held on February 10, 2020, public has been informed on the Döşemealtı, Kepez, Aksu, Kundu sewerage and drinking water supply line. The Project has been recognized as an investement to improve and protect the environment.

With the project planned to be implemented, it is planned to take measures against environmental and social risks that may occur in terms of environment and human health. For this reason, it is concluded that the implementation of the Environmental and Social Management Plan prepared for each stage of the project will have an important place in the protection and improvement of the environment and human health.

8.3 PUBLIC PARTICIPATION MEETING

8.3.1 Information of Meeting: Contract Nr. ASAT3/W10

Meeting Notice Method	**:** Local Newspaper Advertisement
Meeting Date	**:** May 18, 2023 – hour: 14.^{00}
Meeting Place	**:** Dösemealtı Municipality Building-Conference Hall
Meeting Participants	**:** Attendance Sheet has been included in Section 8.3.5.
Meeting Agenda	**:** 1. Opening Speech 2. Project Description 3. Questions-Answers 4. Closing-Pleasure

Regarding the project, Public Participation Meeting was held by the Supervision Team in order to inform the public about the investment and to obtain opinions and suggestions about the project.

The public participation meeting was held at the Conference Hall on the 3rd floor of the Döşemealtı Municipality Building, located at Yeniköy mah. Atatürk Cad, Döşemealtı/Antalya on May 18, 2023, at 14.^{00}.

The Public Participation Meeting notice has been published on the 7th page of Akdeniz Gerçek newspaper dated 09 May 2023 and announced at www.ilan.gov.tr.

In addition, before the Public Participation Meeting, information notices about the project were posted in 4 different neighborhoods, where construction will take place and so citizens have been informed about both the project and the public participation meeting to be held. (Figure 17-Figure 18)

Figure 17:ASAT3/W10 Project Information Notices Posted in Döşemealtı Municipality and Mukhtar Offices

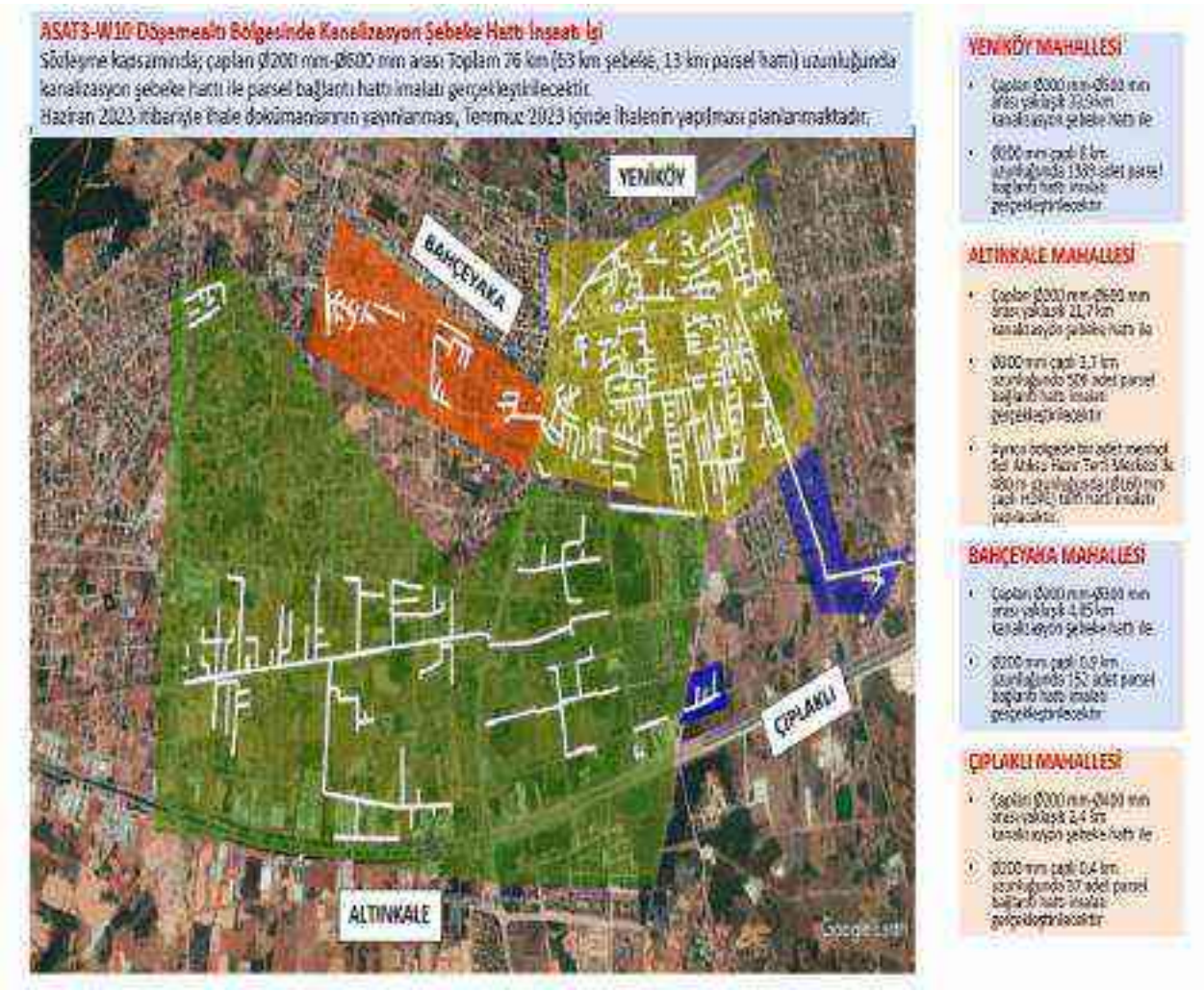
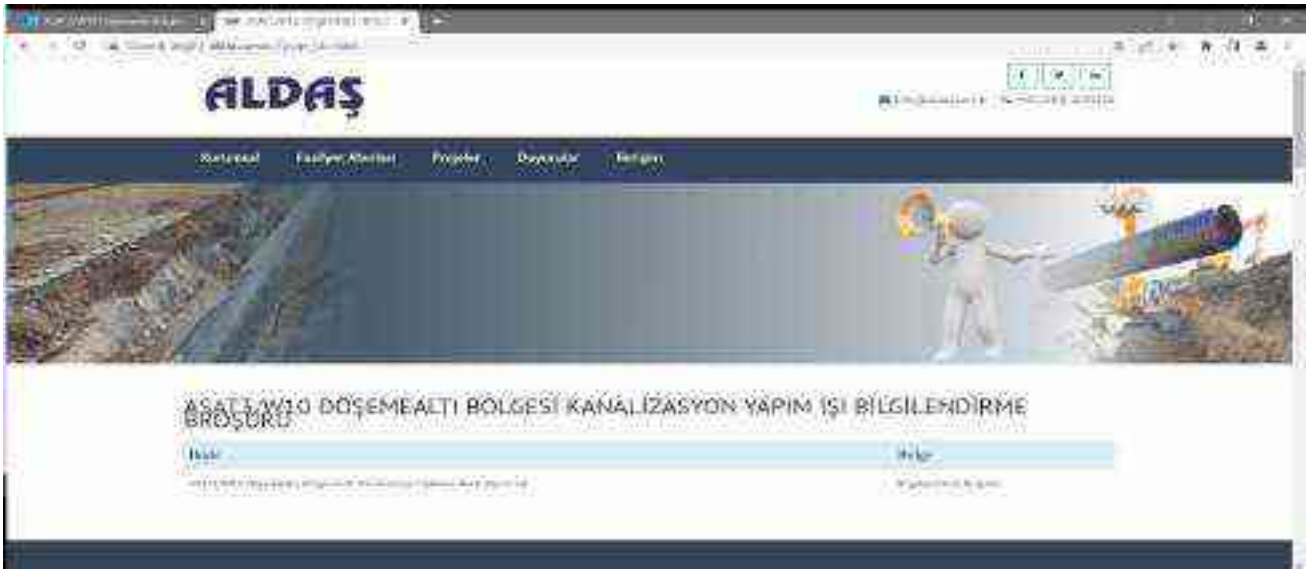


Figure 18:Information Poster Prepared for Construction of Wastewater Network Lines in Döşemealtı Region

In addition, in order to reach more group of people and inform the citizens of Antalya about the meeting announcement, information posters were publihed on asat.gov.tr and aldas.com.tr web adresses. (Figure 19)

http://www.aldas.com.tr/?page_id=391



https://www.asat.gov.tr/tr/duyuru/asat3w10-dosemealti-bolgesi-kanalizasyon-yapim-isi-bilgilendirme-brosuru-133.html

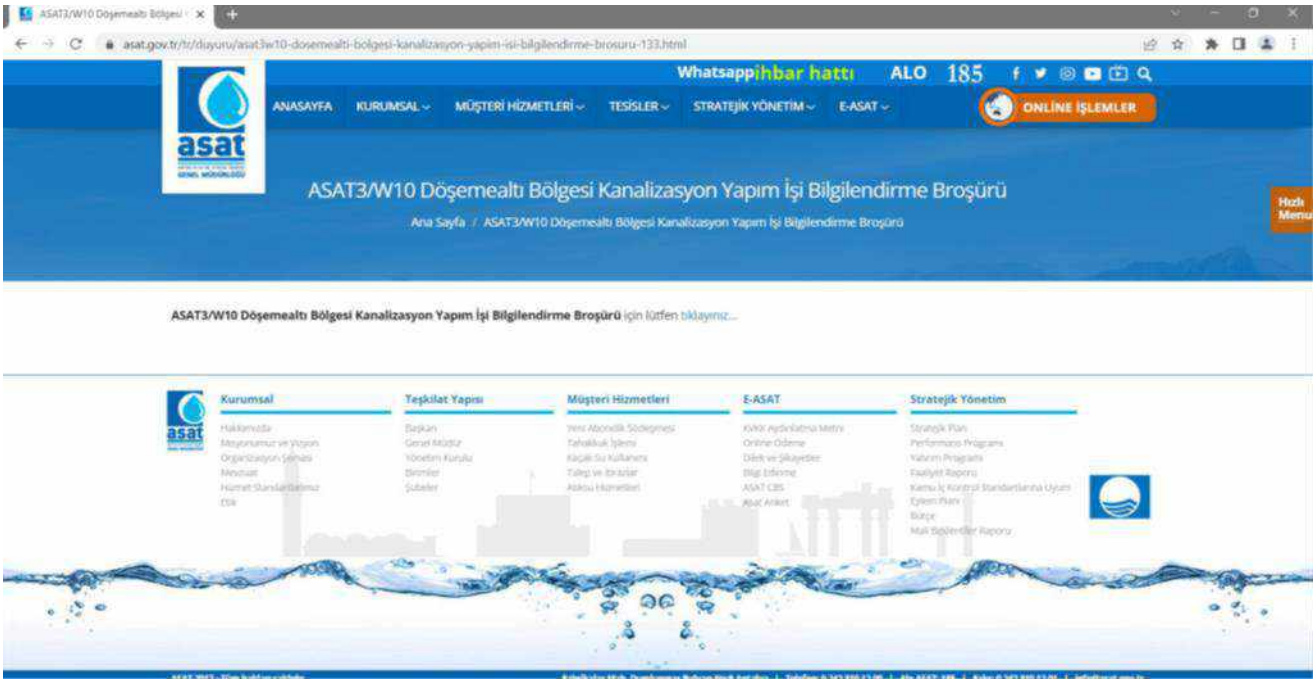
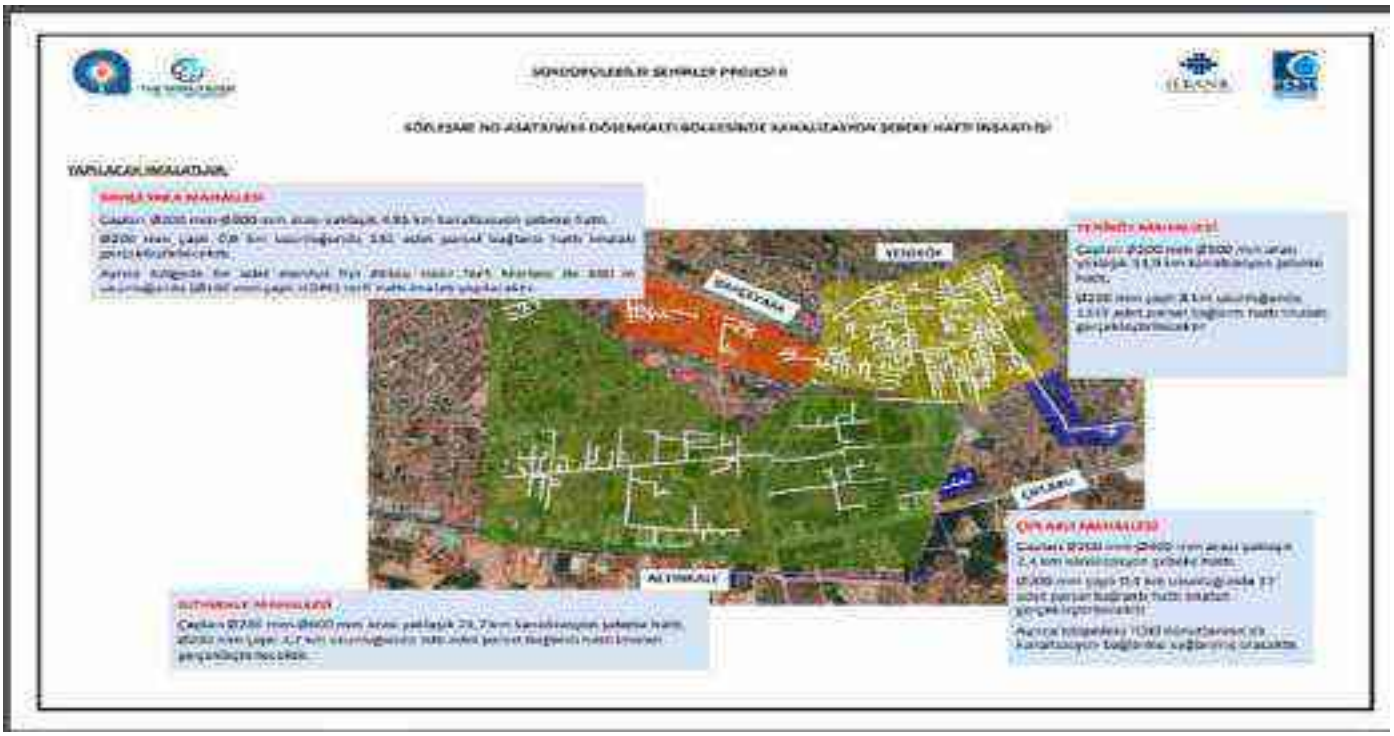


Figure 19:ASAT and ALDAŞ Websıte- ASAT3/W10 Constructıon of Network Lıne In Dösemealtı Regıon Informatıon Poster


YENİKÖY
ALTINKUM

The representatives of several instutions were invited to the meeting with public. Total of 33 people attended the Public Participation Meeting, and the name and telephone information of the participants were recorded.

A presentation related to environmental and social impacts that could occur during the implementation of the project was prepared for the public participation meeting. In the presentation, the definition and impacts of the project were supported with figures and photographs. The impacts related to the construction and operation periods of the project were evaluated as two separate stages and presented accordingly.

ALDAŞ Inc (Supervision Team) prepared the Environmental and Social Management Plan regarding the project and made the presentation at the Public Participation Meeting.

The description of the project and the environmental and social impacts were presented. After the presentation, participants had a chance to declare their opinions, suggestions, and questions. Regarding the project, no negative opinion was expressed by the participants. At the public participation meeting, the questions asked by the participants and the answers given to the questions have been recorded.

8.3.2 Questions and Answers:

The participant's questions which were answered by the representative of ASAT and ALDAŞ Authorities at the end of the public participation meeting held on May 18, 2023, at 14:00 in Dösemealtı Municipality Conference Hall are given below:

Question:

What is the duration and starting date of the project?

Answer: Hakan KAPLAN- ALDAŞ Inc.

The planned contract period is 18 months. However, we cannot give the starting date exactly, it is estimated that the tender announcement will be in June, and we the tender will be held in July. Since it is a World Bank project, the approval process may take longer time and there may be problems regarding the offers due to reasons beyond our control. It is estimated that the contract will be signed in the autumn period -September/October and the work will be started subsequently.

Question:

Where will the project start? I live in Termosos Avenue. Will there be any construction works in that area?

Answer: Hakan KAPLAN- ALDAŞ Inc.

It is not possible to finish the project by starting from one point. It is planing to be carried out starting from at least 3 separate points. It will be evaluated regarding situation of the project, seasonal conditions, and traffic density.

Question:

How will the commissioning process take place after the network line is completed?

Answer: Hakan KAPLAN- ALDAŞ Inc.

The contract period is 18 months. However, the partially commissining can be executed after the the completion of connection between existing line and new conctructed lines. Now, it is not possible to give commissioning schedule exactly for each region.

Question:

We have lime problems regarding drinking water. Some of our electronic devices have malfunctioned, and we are worried about our health. Are you planning any projects for the quality of drinking water?

Answer: Hakan KAPLAN- ALDAŞ Inc.

Our project is related to sewerage lines. Regarding this issue, General Directorate of ASAT - Department of Drinking Water will be informed, and feedback will be provided accordingly.

8.3.3 Advertising Notice

akdeniz Gerçek

Yerel Gazeteler Fazilet Adalarıdır

HALKIN VE HAKLININ YANINDA

www.akdenizgercek.com.tr | 9 MAYIS 2023 SALI | 6 TL (KDV dahil)

HALKIN KATILIMI TOPLANTISI DUYURUSU
SÖZLEŞME NO. ASAT3/W10

Dünya Bankası finansmanlı ASAT3/W10 Döşemealtı Kanalizasyon Şebeke Yapım İşi kapsamında Taslak **"Antalya Sürdürülebilir Su ve Atıksu Yönetimi Projesi Döşemealtı, Aksu, Kundu ve Kepez Bölgelerine Ait Kanalizasyon Projeleri ve Kuzey Antalya İçme Suyu Temin Projesi İçin Revize-2 Çevresel Yönetim Planı-I"** hazırlanmıştır.

Dünya Bankası'nın Çevresel ve Sosyal Koruma Önlem Politikaları, AB mevzuatı uyumlu yerel mevzuatlara bağlı olarak hazırlanan Taslak Çevre ve Sosyal Yönetim Planı (ÇSYP) Raporunun nihai hale getirilebilmesi, halkın ve proje paydaşlarının proje hakkında bilgi edinebilmeleri, sözleşme yönetimi boyunca oluşabilecek çevresel ve sosyal etkiler ve alınması gereken önlemeler hakkında bilgi verilmesi amacıyla aşağıda yer alan adres ve tarihte HALKIN KATILIMI TOPLANTISI düzenlenecektir.

Halkımıza saygı ile duyurulur.

TOPLANTI YERİ : Antalya-Döşemealtı Belediyesi Konferans Salonu
TOPLANTI ADRESİ : Yeniköy Mah. Atatürk Cad., 07190 Döşemealtı/Antalya
TOPLANTI TARİHİ : 18.05.2023 Perşembe
TOPLANTI SAATİ : 14:00
PROJE SAHİBİ :

T.C. ANTALYA BÜYÜKŞEHİR BELEDİYESİ
ANTALYA SU VE ATIKSU İDARESİ (ASAT) GENEL MÜDÜRLÜĞÜ
Telefon : +90 242 310 12 00
E-Posta: info@asat.gov.tr

Sözleşme No. ASAT3/W10 Döşemealtı Bölgesinde kanalizasyon Yapım İşi İçin Hazırlanan Taslak ÇSYP Raporu 'na aşağıdaki linklerden ulaşabilirsiniz.
https://asat.gov.tr/tr/duyuru/asat3-w10-taslak-csyp-132.html
http://www.aldas.com.tr/?page_id=1073

Resmi ilanlar www.ilan.gov.tr'de | BASIN NO: İLAN 1826379

8.3.4 Images Related to Public Participation Meeting

Figure 20:Images of ASAT3/W10 Public Participation Meeting in Dösemealtı Region

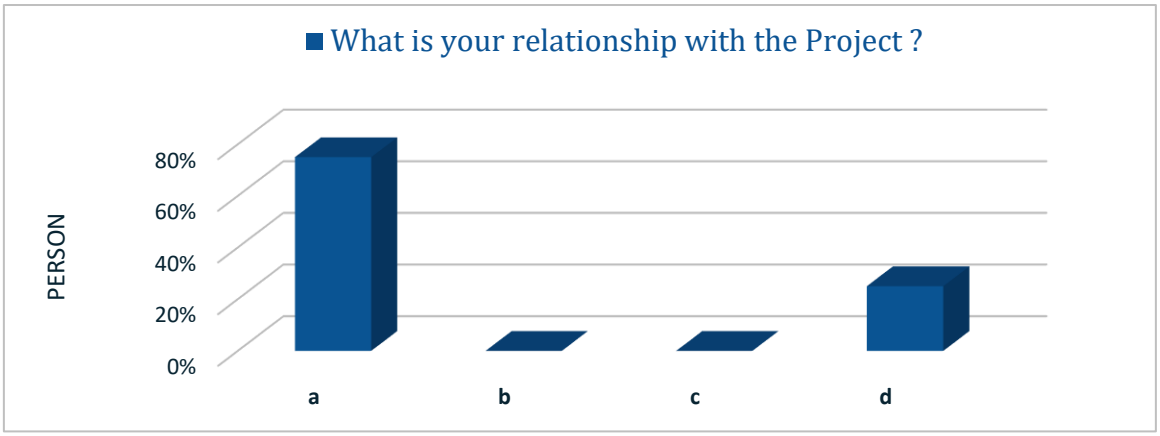
8.3.5 List of Participants

8.3.6 Survey Results

At the end of the public participation meeting, survey forms prepared before the meeting were distributed to get opinions about the project of participants. The survey studies were put into the computer and the results of the survey were calculated. The total responses given to each question in the survey studies were evaluated. The graphs showing the result of the answers are presented below:

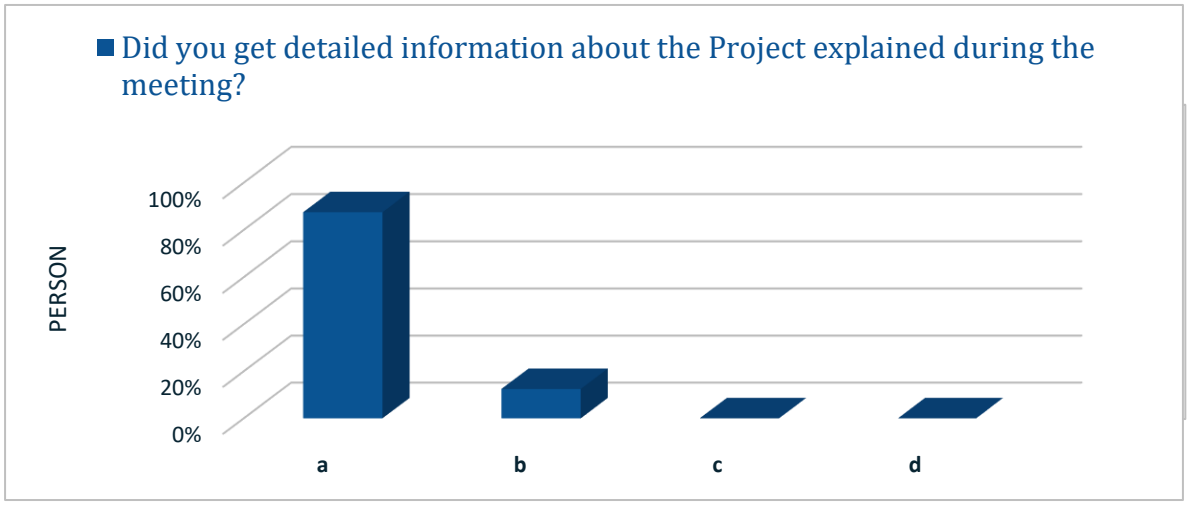
1.What is your relationship with the Project?

a) I live in the project area.
b) I am dealing with agriculture in the region.
c) I am dealing with commercial activitesi in the region.
d) I'm attending the meeting on behalf of a certain group.



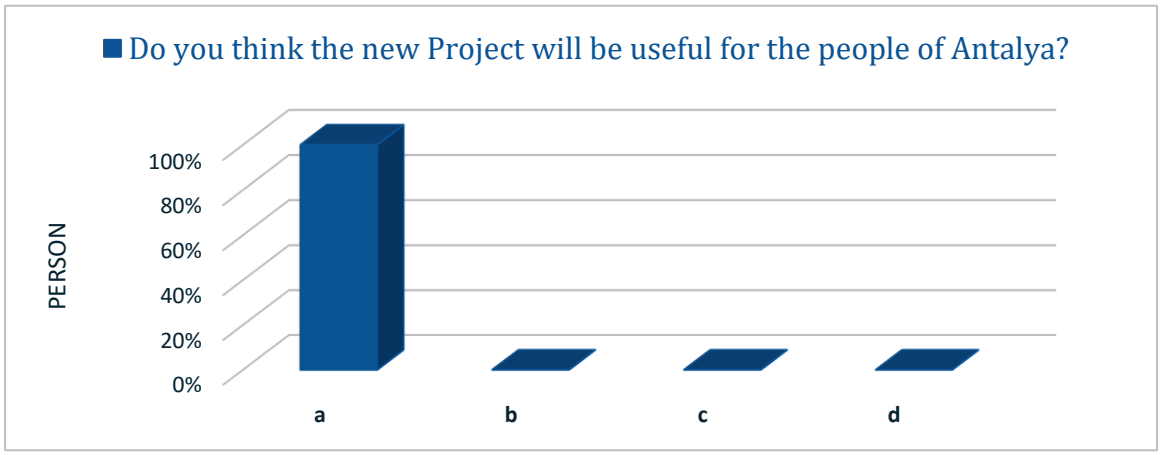
2.Did you get detailed information about the Project explained during the meeting?

a) Yes
b) No



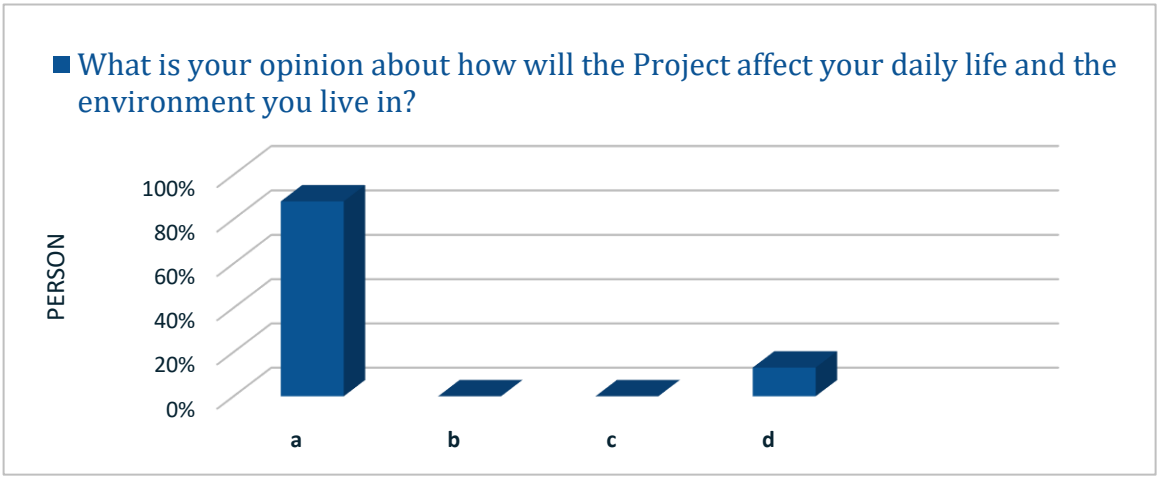
3.Do you think the new Project will be useful for the citizens of Antalya?

a) Yes
b) No
c) Partially



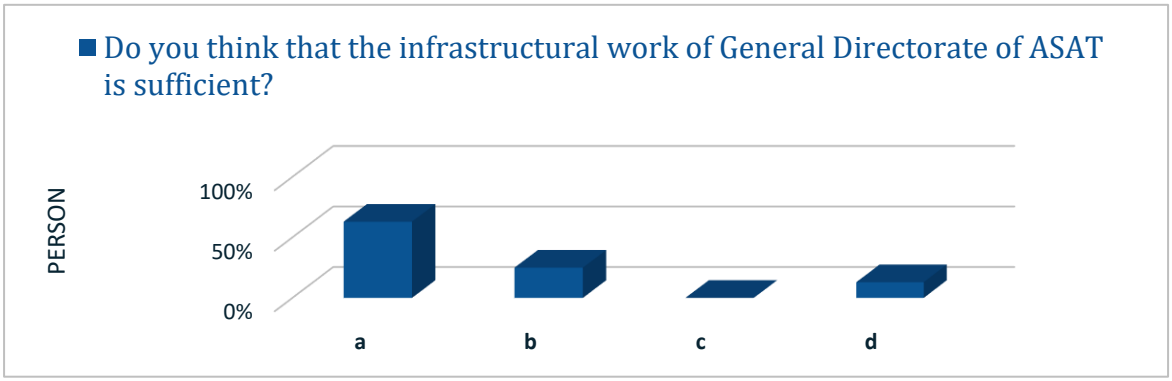
4.What is your opinion about how will the Project affect your daily life and the environment you live in?

a. Positive
b. Negative
c. Ineffective
d. Neutral



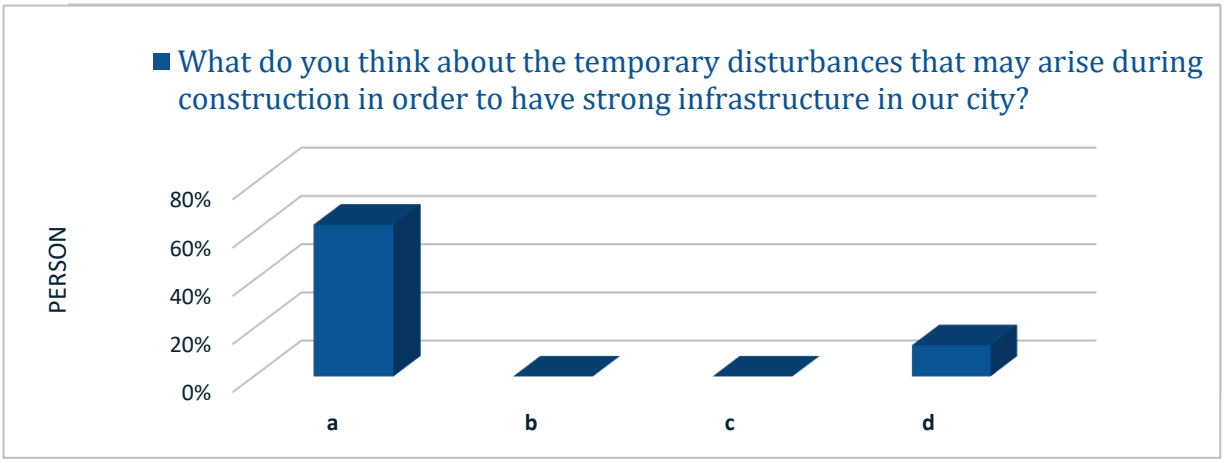
5.Do you think that the infrastructural work of General Directorate of ASAT is sufficient?

a) Yes
b) Partially
c) No
d) I have no idea.



6.What do you think about the temporary disturbances that may arise during construction in order to have strong infrastructure in our city?

a) Social and environment impacts occur during infrastructure works, relevant precautions are taken for these negative impacts and problems.
b) Social and environmental impacts occur during infrastructure works, relevant precautions are not taken for these negative impacts and problems.
c) Negative impacts and disturbances do not occur during infrastructure works.
d) I have no idea.



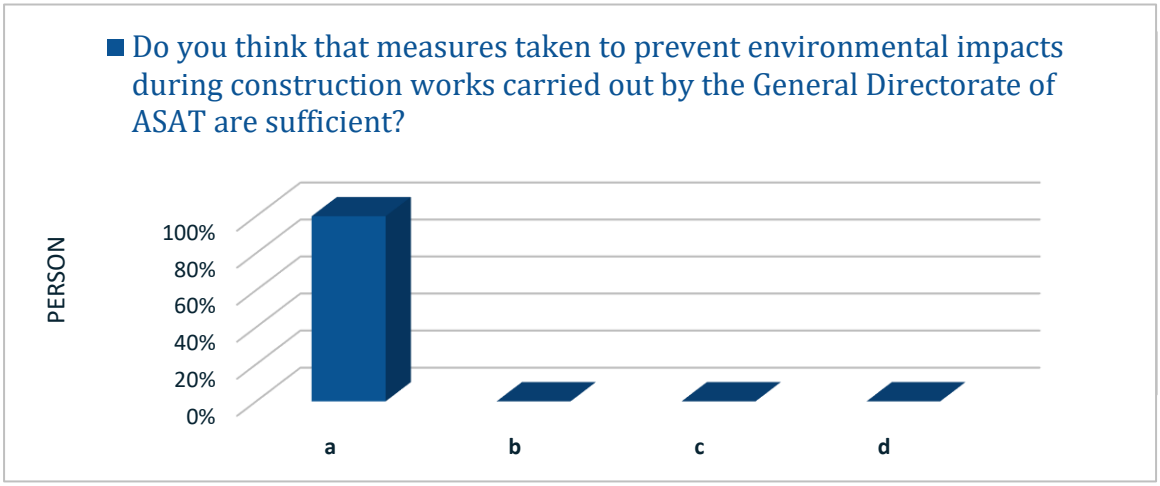
7.Do you think that measures taken to prevent environmental impacts during construction works carried out by the General Directorate of ASAT are sufficient?

a) I think they are enough.

b) Precautions are taken, but I do not think they are enough.

c) I think precutions are not taken.

d) I have no idea.



8.Please indicate if there is anything other than the explanations that you think you will be adversely affected by the project and that you would like to be evaluated.

8.3.7 Comments

The project that is planning has been introduced, and the citiziens have been informed about the project's risks and measures according to World Bank's Environmental and Social Protection Precaution Policies in the Public Participation Meeting.The most important issue indicated by the participants is completion of construction of sewerage lines as soon as possible.

Regarding to the indicated opinions and survey study, it has been observed that the infrastructure investments have been supported by citizens and they approach to the project positively. In the Public Participation Meeting, it was requested that the project to be started as soon as possible, and participants expressed their satisfaction to ASAT for this project.

9. INFORMATION ACTIVITIES PLANNED TO BE MADE WITHIN THE SCOPE OF THE PROJECT

The construction contractor will, on behalf of ASAT, obtain relevant permits and licenses from the following institutions: Natural Gas Distribution Company, Museum Directorate and Protection Board, TEİAŞ, Local Electricity Distribution Company, Local Natural Gas Distribution Company, Telecom and other private communication infrastructure companies, Highways, Traffic Branch Directorate, AYKOME, UKOME, relevant municipalities etc. for excavation. During construction of the work, no damage will be done to any underground and above ground facilities public and private entities. In order to ensure this, prior to excavation, the contractor will engage with relevant authroities for the suspension of underground services such as natural gas, telephone, electricity, sewerage and water and take precautionary measures. Despite the measures taken, in cases where there is damage to municipal infrastructure or to facilities of private entities, the contractor will be responsible of covering the damages. In cases where the Contractor does not undertake necessary repairments, all costs for the compensation of the damages occurred will be borne by the Contractor.

10.GRIEVANCE MECHANISM

An internal and external Grievance Mechanism System will be established within the scope of the project. By this grievance mechanism system, the rights of the employees and the expectations, opinions, suggestions, and grievances of the local people about the project will be recorded**.** In this way, evaluation, approval, investigation, and implementation of improvement activities and closing of the grievance will be carried out in a short time. The grievances can be forwarded by the following communication ways and via ALDAŞ Supervision Team. These communication ways are given as below:

- Republic of Turkey Presidential Communication Center (CİMER)

CİMER Official Website: https://www.cimer.gov.tr/
ALO 150 and 0312 590 20 Communication Line

- General Directorate of ASAT

ASAT Official Website: www.asat.gov.tr
ALO 185 and Whatsapp Grievance Line: 0530 676 67 67

- General Directorate of ALDAŞ Inc

ALDAŞ Inc Official Website: http://www.aldas.com.tr/
Phone: 0242 259 32 16, e-mail: info@aldas.com.tr

- ALDAŞ Supervision Team

Citizen and worker grievances and suggestions will be reported to the relevant authorities through the grievance forms prepared by the ALDAŞ Supervision Team which will work full-time during the project period. Grievance forms will be distributed to the Mukhtar Offices during the project period. Grievances will be added to the Environmental Social Management Monitoring Reports and monitored quarterly.

Figure 21: Grievance Opening and Grievance Closing Form

Additionally, in case project works are located on a part of a main street or a region that is used extensively by citizens (tourism, shopping area, etc.), changes in traffic flow and direction will be communicated prior to any construction work through the distribution of information notes and the citizens will be informed about the construction schedule in this region. Information notes will include contact numbers of both Contractor and Field Engineers of the Supervision Team. In case of any complaint, the teams will be informed about the issue via these phone numbers and provide immediate response. Once the corrective action or measure is taken the complianants will be provided feedback on the action taken.

Citizen grievances which are reported to the General Directorate of ASAT directly during the project will be submitted to the relevant Departments according to the work area and the project. The relevant department of General Directorate of ASAT will then inform the Project Manager of the Supervision Team and ask them to take necessary measures and provide feedback on the field. After the corrective measures are taken in the field, the Project Manager will again be informed by the relevant Department of ASAT, to provide feedback to the complianant via e-mail, written petitions, telephone messages or interviews.

11.RESULT OF ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The province of Antalya is the number one province in the country where the tourism sector and the sub-sectors related to the tourism sector develop. Tourism facilities Requirment of the tourism sector, the need for employment of tourism facilities, the staff needs of the supporting sectors of the tourism sector, the natural beauties of the city have made Antalya Province a center of attraction and caused to face an ever-increasing population and immigration.

Furthermore, in accordance with the Law No. 6360 of the General Directorate of ASAT, the service limits are as of 01.04.2016; the service boundary of Antalya Metropolitan Municipality and ASAT General Directorate; as a geographically 2,000 km^2 to 20,909 km^2, from 5 districts with 1,200,000 population to 19 districts with 2,328,555 population, from 40 km long shoreline to 640 km long shoreline, from 512,935 water subscribers to 1,169,304 water subscribers, from 2 wastewater treatment plants to 32 wastewater treatment plants, from 11 wastewater pumping station to 160 wastewater pumping station has been reached to these mentioned capacities.

Short term completion and commissioning of environmental infrastructure investments such as drinking water, wastewater networks, domestic wastewater treatment plant have been extremely successful in solving environmental problems caused by wastewater in the region.

In this respect, it was necessary to carry out sewerage infrastructure works in Döşemealtı, Kepez, Aksu-Kundu regions and it was necessary to carry out drinking water supply works in Kovanlık region. Within the scope of the Revised Environmental and Social Management Plan, Dösemealtı Region Sewerage Network Constructions within ASAT3/W1 Lot-1contract, and Aksu-Kundu Sewerage Network Constructions within ASAT3/W1 Lot-2 contract have been completed. Within ASAT3/W8 contract, the construction of drinking water transmission and network lines is ongoing. With new added ASAT3/W10 contract, it is aimed to meet the additional sewerage network requirements in the Döşemealtı region.

The Environmental and Social Management Plan, which covers the construction and operation phases of the project, describes the effects of the project, precautions to be taken and who will be responsible. The purpose of the Environmental and Social Management Plan is to specify the provisions on Environmental, Social, Work and Employeer and Citizen Security Healty to be monitored within the construction and operation phases of the ASAT3 / W1 Lot 1 and Lot2, ASAT3 / W3, ASAT3 / W8 and ASAT3/W10 contracts.

The operator during the operation phase, the Contractor during the construction phase is a critical organization for the implementation of the ESMP. Antalya Water and Wastewater Administration (ASAT) General Directorate and ALDAŞ Infrastructure Management and Consultancy Services Industry and Trade Inc. will be the supervisor part in the the ESMP during implementation of construction and operation phases.

Construction works of ASAT3 / W1 Lot1 and Lot 2, ASAT3 / W3 and ASAT3/W8 contracts have been carried out by Contractors who are successful within the scope of Sustainable Cities Project. The new added ASAT3/W10 project is also planning to be executed within the scope of SCP. As a general principle, the Contractor is obliged to follow the application of the environmental and social management plan during all construction activities under the contract and to minimize the inconveniences that may occur in the existing road networks, along with damages that may occur in vegetation, soil, groundwater, surface waters and landscapes.

During the operation phase, the contractor responsible for the operation will be responsible for the implementation of the Environmental and Social Management Plan under the supervision of ASAT and ALDAŞ. The management, supervision and coordination of environmental and social issues related to the project will be carried out under ASAT responsibility. These institutions will communicate with other relevant institutions through their assigned coordinators and will follow environmental and social issues. Compliance with national laws and regulations on the environment will be kept on the frontline at all stages of the project, and the necessary expert assistance will be available for this purpose.

During the preparation of the Environmental and Social Management Plan for the project; it has been found out that there is no significant environmental impact in the activities of carrying out the project environmentally due to the physical and biological, meteorological, geological, hydrogeological, geomorphological, agricultural areas, forestry, historical and touristic features of the project area.

As a result, it is estimated that the environmental effects of the activities to be carried out within the scope of the project will not reach significant dimensions if the measures to be

taken in order to reduce the environmental impacts arising from the above-mentioned project are minimized and or eliminated.

The sub-projects will be regularly audited during construction and operation phases to ensure that the ESMP is properly applied in a proper manner. If the Bank finds any problems with ESMP implementation, relevant project stakeholders will be informed on this and decide on the steps to be taken to resolve the problems. İlbank Inc. findings will be sent to the World Bank in six-month project progress reports and, if necessary, more frequently. The WB project team will visit the project sites from time to time and when necessary, within the scope of the project audit.

The environmental and social impacts of ASAT3/W1 Lot-1 and Lot-2, ASAT3/W3, ASAT3/W8 contract packages, which are included in the existing ESMP document, were observed to be minimal during the construction and operation periods, and potential negative environmental impacts were prevented or reduced. ASAT3/W10 contract, which has the same characteristics, is planning to prevent, or reduce the potential negative environmental impacts during the construction and operation phases.
The work carried out by contractors in the direction of environmental and social management plans (ESMP) in construction and operation stages will be inspected. Quarterly monitoring reports prepared by the Supervision Team and Environmental and Social Monitoring Reports prepared by the Contractor will be sent to İlbank Inc.

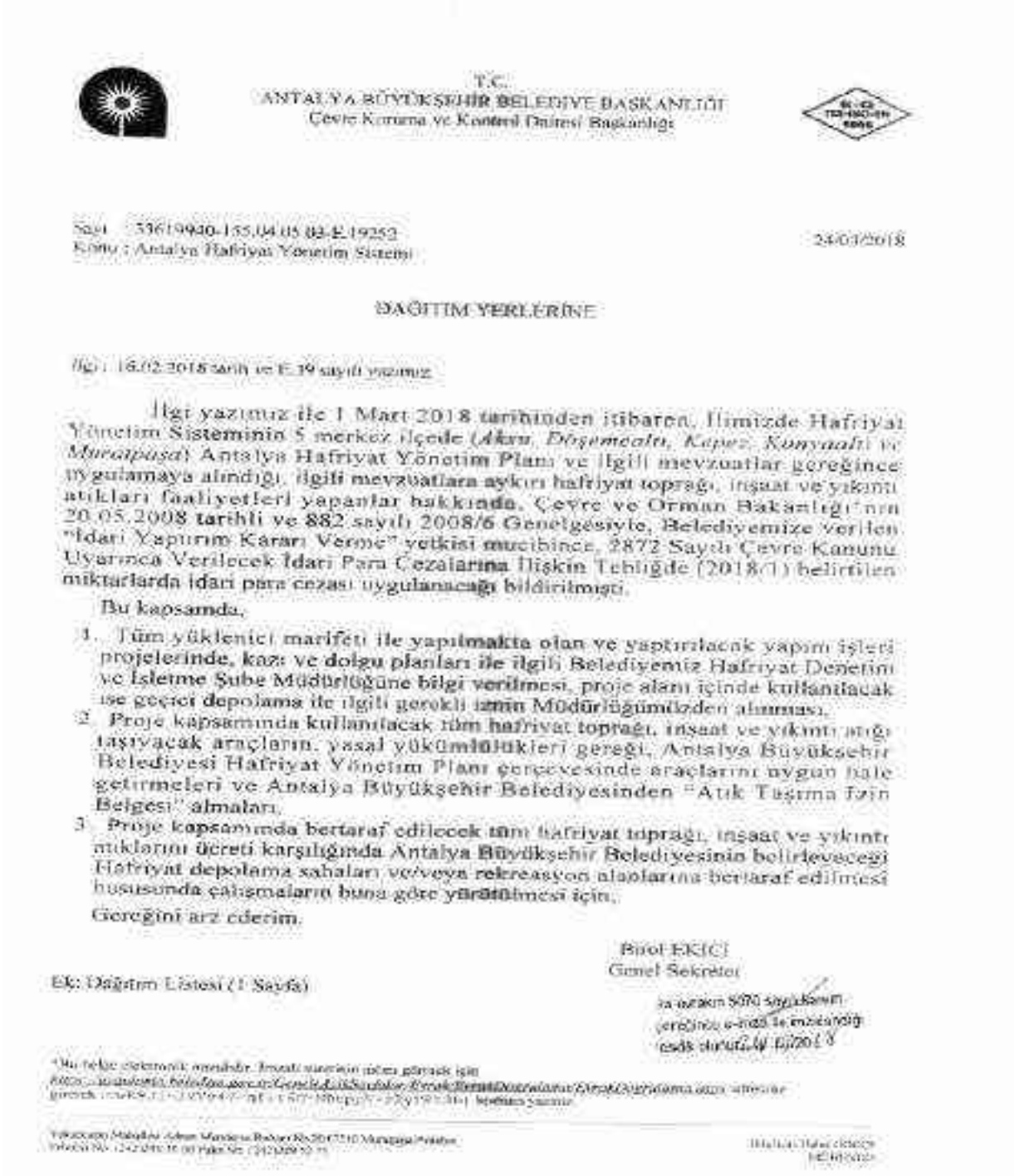
Contractor Firms shall carry out site works taking into account the monitoring parameters included in Section 7 of the ESMP document during the execution of contract packages. The works for each parameter, measures, and complaints, if any will be in quartely monitoring report and submitted to the Supervision Organization for approval.
In the execution of the Contract, the environmental and social monitoring parameters may change resulting from the change orders. In this case, ESMP document will be revised and and the Contractor will be responsible for the risks of the revised parameters.

12.REFERENCES

- Sustainable Cities Project (P128605) Environmental and Social Management Framework, Draft Executive Summary, 25 August 2014.
- Antalya Water and Wastewater Management Project, Feasibility Report
- Döşemealtı Municipality Strategic Development Plan (2014-2019)
- Aksu Municipality Strategic Development Plan (2014-2019)
- Kepez Municipality Strategic Development Plan (2014-2019)
- Antalya Culture and Tourism Directorate, Denel City Evaluation Work, Part 2.
- Advisory Based Registration Information System.
- Republic of Turkey Environmental Impact and Evaluation Regulation and Ministry's EIA Legislation

13. ATTACHMENTS

Offical letter of the Department of Environment Protection and Control of the Metropolitan Municipality of Antalya on excavation wastes.



T.C.
ANTALYA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞI
Çevre Koruma ve Kontrol Dairesi Başkanlığı

Sayı : 33619930-155.04.05 83-E.19253
Konu : Antalya Hafriyat Yönetim Sistemi

24/03/2018

DAĞITIM YERLERİNE

İlgi : 16.02.2018 tarih ve E.39 sayılı yazımız

İlgi yazımız ile 1 Mart 2018 tarihinden itibaren, İlimizde Hafriyat Yönetim Sisteminin 5 merkez ilçede (*Aksu, Döşemealtı, Kepez, Konyaaltı ve Muratpaşa*) Antalya Hafriyat Yönetim Planı ve ilgili mevzuatlar gereğince uygulamaya alındığı, ilgili mevzuatlara aykırı hafriyat toprağı, inşaat ve yıkıntı atıkları faaliyetleri yapanlar hakkında, Çevre ve Orman Bakanlığı'nın 20.05.2008 tarihli ve 882 sayılı 2008/6 Genelgesiyle, Belediyemize verilen "İdari Yaptırım Kararı Verme" yetkisi mucibince, 2872 Sayılı Çevre Kanunu Uyarınca Verilecek İdari Para Cezalarına İlişkin Tebliğde (2018/1) belirtilen miktarlarda idari para cezası uygulanacağı bildirilmişti.

Bu kapsamda,

1. Tüm yüklenici marifeti ile yapılmakta olan ve yaptırılacak yapım işleri projelerinde, kazı ve dolgu planları ile ilgili Belediyemiz Hafriyat Denetim ve İşletme Şube Müdürlüğüne bilgi verilmesi, proje alanı içinde kullanılacak ise geçici depolama ile ilgili gerekli izinin Müdürlüğümüzden alınması,
2. Proje kapsamında kullanılacak tüm hafriyat toprağı, inşaat ve yıkıntı atığı taşıyacak araçların, yasal yükümlülükleri gereği, Antalya Büyükşehir Belediyesi Hafriyat Yönetim Planı çerçevesinde araçlarını uygun hale getirmeleri ve Antalya Büyükşehir Belediyesinden "Atık Taşıma İzin Belgesi" almaları,
3. Proje kapsamında bertaraf edilecek tüm hafriyat toprağı, inşaat ve yıkıntı atıklarının ücreti karşılığında Antalya Büyükşehir Belediyesinin belirleyeceği Hafriyat depolama sahaları ve/veya rekreasyon alanlarına bertaraf edilmesi hususunda çalışmaların buna göre yürütülmesi için,

Gereğini arz ederim.

Birol EKİCİ
Genel Sekreter

Ek: Dağıtım Listesi (1 Sayfa)

Antalya Büyükşehir Belediyesi
Hafriyat Denetim Ve İşletme Şube Müdürlüğü
Sayı: 33619940-312.02.02-E.39
Tarih: 16.02.2018
Dosya Numarası: 2018-00619

T.C.
ANTALYA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞI
Çevre Koruma ve Kontrol Dairesi Başkanlığı

Sayı : 33619940-312.02.02-E.39 16.02.2018
Konu : Hafriyat Yönetim Sistemi

DAĞITIM YERLERİNE

Antalya Hafriyat Toprağı, İnşaat ve Yıkıntı Atıkları Yönetim Planına istinaden, Çevre ve Şehircilik Bakanlığı, 11.09.2017 Tarih ve 13980 Sayılı Oluru ile Antalya Büyükşehir Belediye Başkanlığı'na hafriyat toprağı, inşaat ve yıkıntı atıklarının denetimi ve idari yaptırım kararını verme konusunda ilgili Kanunlar gereğince yetki devrini vermiştir.

UKOME Genel Kurulunun 07.06.2017 tarih ve 2017/06-372 sayılı kararı ile Antalya Büyükşehir Belediyemizdeki mevcut sisteme entegre alacak şekilde GPS (araç takip sistemi) cihazı ve damper kapak sensörü takılması zorunlu hale getirilmiştir. Bu karar ile Hafriyat Toprağı, İnşaat ve Yıkıntı Atıkları ilimiz genelinde Belediyemizden "Atık Taşıma İzin Belgesi" alan araçlar tarafından taşınabilecektir. İlimizde Hafriyat Yönetim Sistemi 5 merkez ilçede (*Aksu, Döşemealtı, Kepez, Konyaaltı ve Muratpaşa*) **1 Mart 2018** tarihinden itibaren uygulamaya başlanacaktır. Belediyemiz tarafından, Merkez ilçelerimiz için Kepez İlçesi Kızıllı Mevkiinde 40 dekar döküm sahası hizmet vermek üzere işletmeye açılmıştır.

Bu tarih itibariyle, ilgili mevzuatlara aykırı hafriyat toprağı, inşaat ve yıkıntı atıkları faaliyetleri yapanlar hakkında, Çevre ve Orman Bakanlığı'nın 20.05.2008 tarihli ve 882 sayılı 2008/6 Genelgesiyle, Belediyemize verilen "İdari Yaptırım Kararı Verme" yetkisi mucibince, 28.12.2017 tarihli ve 30284 sayılı Resmi Gazetede yayımlanarak yürürlüğe giren 2872 Sayılı Çevre Kanunu Uyarınca Verilecek İdari Para Cezalarına İlişkin Tebliğde (2018/1) şahıslara 58.351,00 TL (ellisekizbinüçyüzellibir) firmalara 175.053,00 TL (yüzyetmişbeşbinelliüç) idari para cezası uygulanacaktır.

Birimlerimizce yönetilen projeler kapsamında biriminize ait ve yüklenicilerce kullanılan tüm hafriyat toprağı, inşaat ve yıkıntı atığı taşıyan araçların yasal yükümlülükleri gereği Antalya Büyükşehir Belediyesi Hafriyat Yönetim Planı çerçevesinde **1 Mart 2018** tarihinden önce araçlarına Antalya Büyükşehir Belediyesinden "Atık Taşıma İzin Belgesi" almaları için gerekli bilgilendirmelerin yapılması hususunda;

Gereğini rica ederim.

e-imzalıdır
Birol EKİCİ
Genel Sekreter

Dağıtım :
TÜM BİRİMLER
ASAT
ALDAŞ A.Ş
ANET A.Ş.
ANSET LTD. ŞTİ.
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Sayfa 1 / 1

Bu belge 5070 sayılı elektronik imza kanuna göre güvenli elektronik imza ile imzalanmıştır.
http://ebelge.antalya.bel.tr/imzaliBelge/Sorgulama adresinden Doğrulama Kodu : 3BF2A25A Belge No: 33619940-312.02.02-E.39 ile doğrulayabilirsiniz.