ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Within the scope of the ESMP, information was provided regarding the work items planned to be fulfilled in the contract packages, the methodologies to be applied and the working areas, determining the social and environmental impacts that are likely to occur during drilling phase of the Project. Potential impacts and mitigation measures will be taken to prevent impacts and/or minimize negative impacts were described. To prevent and minimize the impacts described in this ESMP, the responsible project stakeholders were identified, and it was intended to monitor and control the impacts determined in ESMP during the implementation of the Project. ESMP has been prepared for ongoing projects.

The activities to be carried out within the scope of the Project will be in compliance with the most up-to-date national legislation and WB standards. Where Turkish legislation differs from WB Policies, the stricter one will be applied for the implementation of the Project.

The mitigation and monitoring plans prepared for the drilling phase of the project are presented in 11 Mitigation Plan for the Project and 12 Monitoring Plan for the Project, respectively.

1 Mitigation Plan for the Project

No.	Topic	Definition of Potential Impact	Type of Impact	Impact Significance Before Mitigation	Cost	Measures to be Taken	Responsibility	Key Performance Indicators
1	**Disclosure**	Insufficient information	Adverse	Low	Included in drilling costs	▪ Before the start of drilling works, the local people and all relevant stakeholders will be informed of the works to be performed and the measures to be taken. ▪ The information on the start and finish dates of drilling and working periods and the permits obtained from the provincial/district municipality will be shown by the project company in a signboard that is easily visible to all personnel at the drilling site.	Contractor Project Company	▪ Number of grievances ▪ Percentage of closed grievances within the target timeframe
2	**Occupational Health and Safety (OHS)**	Inadequate workers health and safety conditions	Adverse	High	Included in drilling costs	▪ Project company or the drilling contractor will include staff(s) (at least one environmental and one social expert and one full time OHS expert) who will take part in full-time and effectively control the implementation of the Project and, Project Company will make sure that the measures provided below are taken by the contractor and enforce necessary actions/sanctions in case lack of these measures on site. ▪ To control the cases (fire, earthquake, etc.) which may occur during the drilling activities under the Project, and which require urgent action, an Emergency Preparedness and Response Plan (EPRP) and an Occupational Health and Safety Plan (OHSP) will be prepared and shared with all employees. ▪ The Project Company will require all employees and contractors to adhere to local and international health and safety legislation and guidelines. Workers will be provided with all necessary personal protective equipment (PPE) (hard hats, safety harnesses, protective coveralls, glasses, gloves, armor-clad shoes, etc.). ▪ Non-smoking areas will be allocated at the drilling rig. ▪ Appropriate hand and face washing facilities will be provided to the employees, and also shower facilities for dusty works. ▪ Technical and OHS training, including the code of conduct indicating the possible risks regarding the work site and works to be carried will be given to workers by the contractor. These will include regular trainings to workers on COVID-19 symptoms, how to be protected and what to do when symptoms appear. Training will also be given on risks that may arise due to changes in workplace or job, change of work equipment, application of new technology. Information and training activities will be carried out not only for the employees, but also about the measures to be taken for community health and safety. ▪ All employees will be informed about working conditions, job definitions, responsibilities, relations with the local community and potential work risks. ▪ Workers will be required to comply with all OHS regulations given in **Error! Reference source not found.** at the ESDD prepared for the project and necessary inspections will be made. In this context, regular inspections should be carried out by occupational safety experts and 3rd party auditors. ▪ The contractor formally agrees that all work will be carried out in a safe and disciplined	Contractor Project Company	▪ % of scheduled HSE Inspection ▪ % of attendance at HSE meetings ▪ % of closing of Non Compliance Reports (NCRs) ▪ Reporting safe observations ▪ Reporting unsafe observations ▪ Reporting near misses ▪ % of Toolbox attending ▪ % of Risk Assessment compliance ▪ % of Legal Requirements compliance ▪ Results of scheduled audits ▪ HSE training carried out to training matrix ▪ > 90% of all training to matrix ▪ % of attendance at scheduled trainings ▪ Engagement in HSE program by individual managers and supervisors ▪ Engagement in HSE program by contractor's

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						manner and is designed to minimize risks on neighboring residents and environment. ▪ All activities will be implemented in line with both the Law on Occupational Health and Safety and its relevant regulations which presented in **Error! Reference source not found.** at the ESDD prepared for the project, and also the WBG EHS Guidelines. ▪ The contractor will ensure a safe working environment for the workers in line with international best practice and Turkish Legislation including the health and safety measures related to COVID-19 provided by the Ministry of Health and Ministry of Family and Social Services. ▪ The contractor will assign full-time personnel with relevant certification and experience in charge of OHS and she/he shall monitor the site implementations. ▪ Before the drilling works start, a Risk Assessment study will be implemented for all works to be carried out. EPRP will be prepared and put into practice. Both the Risk assessment and EPRP will take into consider the COVID-19 risks and other communicable disease risks, as relevant. ▪ Emergency teams will be formed, and drills and training programs will be carried out in line with emergency scenarios. ▪ Employees will have a good command of emergency plans, and the grievance will be reported to the authorized teams and resolved, if they require urgent action. ▪ Project and site-specific OHS Management Plan based on drilling rig OHS risk assessment and that will also cover measures to address COVID-19 and/or any other pandemic/communicable disease risk, which will be in line with the WBG EHS Guidelines (both general and sector specific) should be developed before the commencement of works and implemented on site. ▪ Appropriate signposting of the sites will be provided and then workers will be informed of key rules and regulations to follow. ▪ OHS trainings and toolbox talks will be provided to the employees including the code of conduct indicating the possible risks regarding the work site and works to be carried out. These will include regular trainings to workers on COVID-19 symptoms, how to be protected and what to do when symptoms appear. ▪ First aid kit will be kept available at the drilling rig, taking into account that first aid response may be required before the casualty is referred to the nearest healthcare provider. ▪ Both trainings and incidents (fatalities, lost time incidents, any significant events including spills, fire, outbreak of pandemic or communicable diseases, social unrest, etc.) will be recorded. ▪ In the event of any significant incident (e.g. environmental, social, labor or lost-time incidents) the Contractor shall immediately notify Project Company shall inform TSKB and WB within three business days. Then, within 30 days, a report on the root causes of the incident and the corrective actions to be taken will be presented to TSKB and WB. ▪ Guidance, directives and recommendations of Ministry of Health, Ministry of Family and Social Services, WHO and the WB shall be followed and all relevant necessary measures shall be taken, both for occupational health and safety of employees and for workplaces, in case of an outbreak of any other pandemic/communicable disease including COVID-19. ▪ Areas where excavation work is to be carried out will not be accessible other than the authorized personnel. The loading and unloading activities shall be carried out together with the persons to oversee the personnel to carry out the activity. ▪ Since the works will be performed at areas close to the public, the public access to these areas shall be restricted by any means. If a trench needed to be left open for night, the sufficient illumination of the area shall be ensured by the Contractor and necessary signs shall be placed, and the area shall be enclosed with barriers. ▪ Installation of concrete molds, concreting, installation of water tank etc. may require working at height, working in confined space etc. Therefore relevant procedures such as Confined Space Entry Procedure, Working at Height Procedure, etc. will be prepared in accordance		

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						with applicable national requirements and internationally accepted standards. ▪ Adequate and appropriate training in confined space hazard control, atmospheric testing, use of required PPE as well as the serviceability and integrity of PPE shall be verified before workers are required to enter a permitting confined space. In addition, adequate and appropriate rescue and/or rescue plans and equipment shall be in place before the worker enters the confined space. In the event of an accident, coordination will be established with the emergency response teams to ensure that the most accurate first aid is given. The Emergency Action Plan will be revised in accordance with the operational period and necessary training will be given to all personnel. ▪ Only personnel holding the height work permit will work at height, and safeguarding measures (guardrails, fall arrest) will be in place. ▪ The areas to be excavated will not be accessible except by authorized personnel. Loading and unloading activities will be carried out together with the persons who will supervise the personnel who will carry out the activity. ▪ The drilling areas will be surrounded, and necessary security measures will be taken, no one will be allowed to enter except for the staff. ▪ The WBG General Environment, Health and Safety Guidelines will apply. ▪ Equipment that meets international standards in terms of performance and safety will be used. ▪ All equipment used during the drilling phase will be kept in good working condition. ▪ The contractor will assign a full-time staff responsible for OHS with relevant certification and experience and monitor field practices.		
3	**Employment / Economy**	Child labour, forced labour and unregistered employment Contribution to economy	Adverse	Low	Included in drilling costs	▪ Care will be taken to contributing to the local economy through the use of local materials and to procuring various goods and services from local resources. ▪ Priority should be given to the local labor where possible and practical. ▪ Efforts will be exercised to allocate employment opportunities to the local parties. ▪ The work permits of the employees will be controlled within the scope of the Project, prohibiting child labor, forced labor, and child labor under the age of 18. ▪ Discrimination in the workplace will be eliminated. ▪ Necessary measures will be taken by contractor to make sure that workers coming from outside the city will be given a training program on dialogue and communication with local communities, and that there are no social or cultural issues between host communities and external workers. It is the Project Company's responsibility to ensure that the contractor complies with the determined criteria.	Contractor Project Company	▪ Pre-evaluation records ▪ Number of non-compliance ▪ Number and % of local businesses contracted ▪ Number and % of local workforce ▪ Percentage of goods and services procured from local resources. ▪ Number of reported cases of discrimination in the workplace. ▪ Percentage improvement in workplace equality measures Number of actions taken to eliminate discrimination in the workplace. ▪ Feedback from employees on the workplace environment regarding discrimination. Number of collaborative infrastructure projects with local authorities. ▪ Percentage improvement in local infrastructure, such as roads, utilities, and community facilities. Number of workers from outside the city completing

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								the training program on dialogue and communication with local communities. ▪ Assessment of the resolution of social and cultural issues between host communities and external workers.
4	**Social Life**	Potential Community Disturbance	Adverse	Low	Included in drilling costs	▪ The Contractor will provide training to the site personnel on environmental and social issues. It is the Project Company's responsibility to ensure that the contractor complies with the determined criteria. ▪ The operations to be carried out during drilling works will be performed not to restrict / hinder the social and economic life of local people. ▪ To avoid any impact on the safety and daily life of communities, safety and information signs will be placed around drilling rig before the work. ▪ The Project Company will ensure that contractors establish the code of conduct and will check that workers will be given training especially on communication with local people of foreign nationality public before starting work, so that local people of foreign nationality will not be adversely affected by external workers.	Contractor Project Company	▪ Number of grievances ▪ Percentage of closed grievances within the target timeframe
5	**Labor and Working Conditions**	Improper Working Conditions, Child labor, forced labor and unregistered employment	Adverse	Low	Included in drilling costs	▪ Camp Management Plan will be prepared prior to mobilization and applied. ▪ Establish clean and comfortable cafeteria and rest areas for workers during breaks, ensuring access to sanitary facilities. ▪ Workers will be allowed to have access to the Grievance Redress Mechanism and will be required to be aware about this Mechanism. ▪ Ensure that the grievance mechanism allows for confidential reporting, protecting workers from retaliation for reporting issues. ▪ Code of conduct will be prepared. All workers will be given training on discrimination and codes of conduct. At the same time, through the trainings, it will be ensured that workers learn the Grievance Mechanism of the Project and the steps to be followed in exercising their legal rights. Access to the Grievance Redress Mechanism will be easy and effective. The grievance mechanism officer designated for the Project will be announced to all employees during the trainings to be given before starting work. There will be brochures and posters containing the grievance mechanism and the contact information of the authorized person in places such as the cafeteria, canteen and service areas used by the employees. ▪ The project owner will provide gender training to both its own staff and contractor staff. The content of these trainings will basically be the reflection of the problems arising from gender inequality in society on working life. Apart from this, employees will learn the definitions, differences, emergence and intervention methods of concepts such as SEA/SH and GBV through interactive activities. ▪ Minimum legal labor standards will be met (child/forced labor, anti-discrimination, working hours, minimum wages) as per International Labor Organization (ILO) regulations. ▪ At the same time, the Operational Policies of the World Bank given in Chapter 4 of ESIA and the national legislation given in **Error! Reference source not found.** will be complied with in terms of the working conditions. ▪ Workers will be provided hygienic and adequate facilities. ▪ Workers will be allowed to have access to primary healthcare on site, enabling the provision of prescriptions. ▪ Provide access to healthcare services for workers, including regular health check-ups and medical facilities. ▪ Discrimination based on language, race, gender, political thought, philosophical belief and	Contractor Project Company	▪ Number of grievances ▪ Percentage of closed grievances within the target timeframe ▪ Number of grievances on SH/GBV ▪ Results of employee satisfaction surveys ▪ Percentage of workers trained on discrimination and codes of conduct ▪ Number of training sessions conducted on sexual harassment, abuse, gender-based violence, and intervention methods ▪ Number of staff members and contractors who receive gender training ▪ Number of healthcare services provided, including regular check-ups and medical facilities

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						religion will be avoided in business relations. ▪ An employee satisfaction survey to be conducted by human resources every 6 months will ensure that employees' views on working conditions and the working environment are obtained.		
6	**Community Health and Safety**	Community health and safety risks	Adverse	High	Included in drilling costs	▪ To minimize the impact of the traffic activities, the working hours will be adjusted according to the peak hours of transportation. ▪ The drilling rig area will be fenced to avoid physical hazards to the communities associated with the project. ▪ Contractors will take necessary health and safety measures, such as using appropriate warning signs, making the regular maintenance of the machinery, replacement or repair of part which cause noise and performing watering in dry seasons, under the management of the Project Company during site preparation and drilling activities so that the public is informed of the drilling plan and locations in a timely manner and the drilling rig is determined. ▪ Care will be taken to ensure that warning signs are visible at night and in bad weather conditions. ▪ The adequate number of appropriate firefighting equipment will be kept available at drilling rig at all times. ▪ An emergency action plan will be prepared and implemented in order to be able to take and manage measures to protect public health and safety. Project employees, local people and response teams will be informed about this plan. ▪ Local people will be informed about possible dangers and precautions to be taken with brochures that will be placed on signs and notice boards to be hung in various areas in the neighborhood. ▪ Detailed information on the use of the Grievance Redress Mechanism and contact information on the grievance mechanism officer will be made available to the public. (via the project website, information brochures left at the Mukhtars offices, posters and hand brochures in places such as schools, health centers, hospitals, mosques, which are the common areas used by the community intensively). ▪ Damages that may occur on the road surfaces due to traffic caused by heavy drilling machinery during drilling works on existing roads will be repaired by the contractor. In case of any damage to infrastructure elements on private lands due to drilling activities, mitigation measures will be taken by the contractor.	Contractor Project Company	▪ Number of communicable and non-communicable diseases and injuries experienced. ▪ Number of community health safety & security complaints from local communities as recorded in the grievance register. ▪ Number of reported community health & safety incidents ▪ Number of reported noise incidents
7	**Land Use**	Damages to adjacent lands and structures	Adverse	Low	Included in drilling costs	▪ Any unintended damages caused to adjacent land and structures during drilling will be compensated and repaired by Project Company/Contractor. ▪ If grievances are received regarding unauthorized use of privately-owned lands, damage to neighboring lands, etc. through the Grievance Mechanism to be established, assessments / investigations will be performed on a case-by-case basis, and corrective actions will be planned and implemented, where necessary. ▪ Materials will be stored in closed and protected areas. ▪ If it is required to provide an additional space for closed and protected areas, the contractor will fulfill temporary rental formalities or obtain relevant permits. ▪ Community Health and Safety training will be provided by the project owner to both its own employees and contractor employees.	Contractor Project Company	▪ Number of grievances ▪ Percentage of closed grievances within the target timeframe
8	**Land Acquisition**	Loss of Land	Adverse	Low	Included in drilling costs	▪ The Project Company will voluntarily choose to purchase the land directly. In addition, land valuation will be made by independent organizations during the direct purchase process and the valuation strategy will be explained and made as transparent as possible. The land price will be calculated on the basis of the full replacement cost. ▪ All users/shareholders will be informed of the purpose of the land acquisition process. Fair	Project Company	▪ Number of grievances ▪ Percentage of closed grievances within the target timeframe

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						and transparent compensation will be provided to all formal and informal users. ▪ If grievances are received regarding unauthorized use of privately-owned lands, damage to neighboring lands, etc. through the Grievance Mechanism to be established, assessments / investigations will be performed on a case-by-case basis, and corrective actions will be planned and implemented, where necessary. ▪ The Project-specific SEP that includes a grievance redress mechanism will be implemented, and all grievances related to the land acquisition process will be recorded and followed up.		
9	**Stakeholder Engagement**	Communication issues with the stakeholders	Adverse	Low	Included in drilling costs	▪ An adequate timing will be planned for interaction / communication with communities and for engagement. ▪ Regular consultations will be carried out with the authorities and communities regarding the project management. ▪ Comprehensive information on the stakeholder engagement is provided in SEP of the Project and the SEP will be updated and implemented throughout the Project.	Contractor Project Company	▪ Number of grievances ▪ Percentage of closed grievances within the target timeframe ▪ Records of stakeholder engagement activities
10	**Grievance Redress Mechanism**	Grievance Issues	Adverse	Low	Included in drilling costs	▪ An efficient Grievance Redress Mechanism will be initiated to allow potentially affected individuals to voice their concerns on the Project. ▪ Managing sensitive grievances in a project is crucial for maintaining a positive work environment and ensuring the well-being of team members. There are several measures that can be taken for good management of sensitive grievances in a project: ○ Emphasize the importance of confidentiality in handling sensitive grievances. ○ Assure individuals that their concerns will be treated with discretion and that only those directly involved in the resolution process will be informed. ○ Create an environment where team members feel comfortable expressing their concerns. ○ Establish regular communication channels, such as team meetings or one-on-one sessions, to encourage open dialogue. ○ Maintain thorough documentation of the grievance process, including the nature of the grievance, actions taken, and resolutions. ○ This documentation can serve as a reference for future incidents and may be important for legal or compliance purposes. ○ Respond promptly to grievances to show that they are taken seriously. ○ Delayed responses can exacerbate the issue and contribute to a negative perception of the project's commitment to addressing concerns. ○ Use past grievances as learning opportunities to improve the overall project environment.	Contractor Project Company	▪ Number of grievances ▪ Percentage of closed grievances within the target timeframe
11	**Documentation**	Missing documentation	Adverse	Low	Included in drilling costs	▪ All activities, information meetings, opinions/suggestions, grievances, etc. provided during the drilling period will be documented continuously	Contractor Project Company	N/A
12	**Traffic**	Direct and indirect threats posed by drilling activities against traffic and pedestrians	Adverse	High	Included in drilling costs	▪ Traffic Management Plan will be prepared prior to drilling and applied. ▪ Actions will be taken to ensure that any vehicles operating during the drilling period obey the set speed limit (30 km/hr). ▪ Traffic and warning signs will be placed around and near the project area. ▪ The project area will be made visible with lighting by means of strategically placed floodlights (places with construction work, areas where construction machinery will pass etc.)	Contractor Project Company	▪ Number of non-compliances against the mitigation controls identified in Traffic Management Plan ▪ Number of drivers found to be exceeding speed limits or driving unsafely ▪ Number of road traffic

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						▪ Local people will be informed about potential hazards and risks through brochures and posters left in common areas frequently used by local people such as headman's offices. ▪ The activities affecting the local traffic will be planned considering the rush hours of the traffic as much as possible. ▪ All drivers involved in the project will be informed about road safety, speed limits, and traffic rules to be followed during the project, and requirements to be observed. ▪ The weight of all vehicles will not exceed the legal limits according to Highway Traffic Regulation. ▪ In case of hazardous chemical or waste storage on site, the transfer of these wastes will be performed out by licensed carriers not to pose a threat to community health. ▪ The routes developed in agreement with the competent authorities will be used for special cargos. The designated routes will be programmed to prevent traffic congestion on the roads and will be published in advance to prevent possible disturbance. ▪ The arrangements in traffic will be discussed with the Municipality and planned jointly. ▪ To prevent unauthorized access to the drilling rig, the drilling rig will be surrounded by fence/curtain/protection tape, and uncontrolled entrances will be prevented.		accidents involving: ▪ Accidental injuries and deaths, ▪ Spillages (such as cargo or fuel), ▪ Wildlife-vehicle collisions. ▪ Number of traffic-related grievances
13	**Resource Efficiency**	Improper use of resources (Water, fuel, electricity, raw material)	Adverse	Low	Included in drilling costs	▪ Optimize the use of drilling materials by accurately calculating the required quantities, reducing waste generation. Use of durable and long-lasting materials can extend the lifespan of drilling equipment. ▪ Implement water-efficient drilling techniques to minimize water consumption. Utilize closed-loop systems that recirculate and treat drilling fluids to reduce the need for freshwater intake. ▪ Choose drilling equipment with high energy efficiency ratings. ▪ Develop strategies to reuse materials and equipment wherever possible. Recycle steel casing, drill pipes, and other components at the end of their life cycle. ▪ .	Contractor Project Company	▪ Amounts consumed in m³, L, kWh, ton
14	**Air Quality**	Air pollution from Drilling Works	Adverse	Low	Included in drilling costs	▪ Dust from outdoor sources will be minimized by employing control measures such as covering the piles and increasing the moisture content. ▪ Dust suppression techniques such as the application of water or non-toxic chemicals will be used to minimize dust from vehicle movements. ▪ Truck loading and unloading operations will be carried out with due care, and materials will be prevented from scattering around. ▪ Modern equipment and vehicles that can meet the applicable emission standards will be selected for drilling works. ▪ All vehicles will have exhaust emission permits and all vehicles will be regularly maintained. ▪ Exhaust systems and emission levels of machinery and vehicles will be checked by the contractor. ▪ Project Grievance Mechanism will be implemented. ▪ In case of any complaints, air quality measurement will be carried out at the nearest sensitive receptors in accordance with international standards, and the results will be recorded. ▪ Speed limits will be set for cars and trucks, and actions will be taken to ensure that such limits are complied with. ▪ During transportation, excavated materials will be covered with nylon canvas. ▪ Any damage caused by inadequate dust suppression measures (i.e. pollution of the surrounding area, transport to a residential area by wind, dust deposits by the wind, etc.)	Contractor Project Company	▪ Air Quality incidents ▪ Records of Non-Compliance with air quality standards ▪ Community complaints

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						will be compensated by the contractor.		
15	**Noise**	Noise from Drilling Works	Adverse	Low	Included in drilling costs	▪ Noise Management Plan will be prepared prior to drilling and applied. ▪ Residents living near the project area will be informed during the drilling phase. ▪ Drilling works will be planned in consultation with local communities, and operations with the highest noise generation potential will be scheduled during the time of the day that will cause minimum disturbance. ▪ Use of roads close to the settlements in transportation activities for the project will be avoided or minimized. ▪ Equipment and vehicles used externally will be regularly maintained. ▪ "Low noise" equipment will be used as much as possible during the drilling phase. Where drilling equipment is provided with impermeable acoustic covers or enclosures, covers will be kept closed while equipment is in operation. ▪ When equipment is not working, they will be turned off or reduced to the minimum level. ▪ Vibration levels will be monitored in case of complaints, and measures will be taken to reduce vibration if standards are exceeded. ▪ In case of any complaints, noise measurement will be carried out in accordance with the international standard, ▪ Provide hearing protective devices, such as silencers and earmuffs, to workers in accordance with relevant legislation.	Project Company Contractor	▪ Noise and Vibration incidents ▪ Records of Non-Compliance with Project standards ▪ Number of noise-related community grievances
16	**Waste Management**	Wastes of Drilling Works	Adverse	Medium	Included in drilling costs	▪ Waste Management Plan will be prepared prior to drilling and applied. ▪ Hazardous waste, waste oil, used accumulators and batteries, electrical and electronic waste, recyclable waste, domestic waste, medical waste, and other similar materials will be classified, stored separately at source, and disposed of in compliance with relevant regulations and the WBG EHS Guidelines. ▪ Adequate and appropriate temporary storage areas will be provided for waste management purposes. ▪ The temporary waste storage areas will adhere to national and international standards, including the following: ✓ The storage areas will have covered roofs and sides, and proper drainage to prevent contact between surface water or rainfall and the waste. ✓ The selection of flooring materials for the storage areas will adhere to IFC standards, encompassing choices such as reinforced concrete or impermeable epoxy for permanent setups, while for temporary mobile waste storage areas, modular flooring systems compliant with IFC Standard should be applied.. ✓ Adequate drainage will be in place to collect any potential leakage. ✓ If volatile wastes are stored, proper ventilation will be provided. ✓ Access to the storage areas will be controlled through gates. ✓ Cautionary signage and boards displaying the name and contact number of authorized personnel will be placed. ✓ Separate storage areas or compartments will be designated for different types of waste. ✓ Secondary containment measures in accordance with relevant legislation and standards will be implemented for related wastes. ✓ Absorbents, spill kits, firefighting equipment, etc., will be readily available nearby to facilitate immediate response in case of emergencies such as spills or fires.	Project Company Contractor	▪ Total waste generated ▪ Ratio of recovered/reused/ recycled waste to total waste generated

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						✓ Container types, labeling, classification, etc., within the storage areas will comply with sub-project standards. ▪ Hazardous and non-hazardous wastes will be segregated at the source. ▪ Recyclable and non-recyclable solid waste will be separated and stored separately until collected by the municipality or licensed firms. ▪ Ensure that transportation, recovery, and disposal firms for waste management are licensed. o Implement excavation activities in line with the cut and fill program to minimize excavation waste. ▪ Training to personnel on waste reduction, general waste management, and housekeeping will be provided for personnel. ▪ Conduct drills for personnel to prepare them for emergency situations. ▪ Prohibit disposal or burial of waste on-site under any circumstances. ▪ Develop and implement a Waste Management Plan in accordance with national regulations and the WBG EHS Guidelines. ▪ Drilling waste will be regularly collected by licensed collectors at the permitted excavation waste storage site of the Municipality. ▪ Waste disposal records will be kept regularly. To keep these records, a Waste Registry Information Form will be prepared, which will contain information on the waste code, amount, and transfer and disposal method as presented in the Waste Management Regulation – ANNEX IV. ▪ Where appropriate, waste can be reused or recycled. ▪ Temporary storage of medical waste will be performed in accordance with Article 14 of the Medical Waste Control Regulation. In addition, medical waste will be transported to processing facilities in accordance with Article 15 of the same regulation.		
17	**Drilling Mud**	Waste management failure, pollution from storage and disposal of mud	Adverse	Low	Included in drilling costs	▪ ▪ The 'dry location' method will be used fort he Project which involves the use of specialized equipment to separate chemicals from the mud, and the retained water is permitted to circulate within the drilling system. The remaining mud will be disposed of through a transfer agreement to be arranged with a licensed disposal company (Cement company). In the dry location application, the cuttings that reach the surface in a wet and muddy state are processed in advanced decanters and directed to crescent-shaped waste tanks using screening systems.	Project Company Contractor	▪ Total drilling mud generated ▪ Ratio of recycled to total mud generated
18	**Domestic Waste**	Waste management failure, pollution from waste	Adverse	Low	Included in drilling costs	▪ Any domestic waste generated will be sorted at source (plastic, glass, paper, etc.), and reusable waste will be recycled. ▪ Unrecyclable waste will be collected in closed sanitary trash bins and will be disposed of by the solid waste collection system of Municipality.	Project Company Contractor	▪ Total waste generated ▪ Ratio of recovered/reused/ recycled waste to total waste generated
19	**Waste Oils**	Waste management failure, pollution from waste	Adverse	Low	Included in drilling costs	▪ If different categories of oils are generated from the works at the drilling rig, these oils will be stored separately. ▪ Containers where waste oils are stored will be kept closed and protected from rainwater. ▪ Waste oils will only be transported by licensed transportation companies, and will only be delivered to licensed recycling or disposal facilities.	Project Company Contractor	▪ Total waste oil generated ▪ Ratio of recycled to total waste oil generated
20	**Waste Batteries and Accumulators**	Waste management failure, pollution from waste	Adverse	Low	Included in drilling costs	▪ Waste batteries will be collected separately from other wastes, delivered to authorized organizations and recycled. ▪ Waste batteries and accumulators will be delivered to waste battery and accumulator disposal facilities within the Municipal borders through authorized transportation	Project Company Contractor	▪ Total waste batteries and accumulators generated ▪ Ratio of recycled to total waste batteries and

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						companies.		accumulators generated
21	**End-of-life Tires**	Waste management failure, pollution from waste	Adverse	Low	Included in drilling costs	▪ In cases when tires of the vehicles to be changed during drilling activities; end-of-life tires will be delivered to the companies that distributes and sells tires via the authorized transportation companies.	Project Company Contractor	▪ Total end-of-life tires generated ▪ Ratio of recycled to total end-of-life tires generated
22	**Effluent Discharges**	Wastewater management failure, pollution from wastewater	Adverse	Low	Included in drilling costs	▪ Wastewater Management Plan will be prepared prior to drilling and applied. ▪ Drilling fluids will be stored in designated tanks or sumps within a restricted area of the project site. The sumps or earth-based ponds will be lined with an impermeable membrane, and concrete ponds will be sealed. ▪ The Geothermal Resources and Natural Mineral Waters Law requires consideration of environmental limits for discharging drilling fluids, including well test waters. If the fluid composition exceeds the environmental limits, reinjection is mandatory. ▪ Whenever possible, drilling fluids will be reused. ▪ If drilling fluids need to be discharged into a receiving body, they will undergo testing for specific parameters in accordance with relevant legislation and discharge permits. The discharge must comply with the Turkish Water Pollution Control Regulation and WBG EHS Guidelines. ▪ Before discharging cleaning waters, the final pH level must be monitored. ▪ Alternatively, after reuse, the fluids must be transferred to appropriate storage facilities. Based on their chemical, biological, and physical characteristics, they will be disposed of as hazardous or nonhazardous material. Licensed tankers will transport them to suitable wastewater treatment plants, which may include treatment plants in nearby industrial zones or municipalities. Hazardous materials require disposal in specialized hazardous waste treatment plants within reasonable proximity. ▪ During the decommissioning phase, if the sumps or tanks are no longer in use, they should be removed, and the site must be restored to prevent future material release into the soil and water resources. The treatment or disposal of the contents as hazardous or non-hazardous waste depends on their characteristics. Once determined, they will be disposed of or treated at licensed facilities in accordance with national legislation and WBG EHS Guidelines. ▪ Periodic testing of effluent water will be conducted in all cases to monitor any potential contamination of surface or groundwater that could pose risks to community health and safety. ▪ Storage and disposal of domestic wastewater will comply with the Water Pollution Control Regulation and WBG EHS Guidelines. ▪ As a recommended best practice, unused or abandoned wells should be covered with blind flanges to prevent leakage.	Project Company Contractor	▪ Minimization and continued improvement in the number of the reported water quality related incidents. ▪ Zero Non-Conformance Reports (NCRs) prepared by Contractor per 3 months and monitored by Project Company ▪ Zero grievances per year ▪ No significant adverse impact ▪ No infrastructure damage and damage to loads/humans
23	**Groundwater Quality**	Groundwater contamination caused by geothermal fluids	Adverse	High	Included in drilling costs	▪ Preliminary impact analysis and related mitigation measures (i.e. double casing) depending on literature survey about aquifer structure and groundwater use at exploration area as a part of EIA prepared in accordance to EIA Regulation. ▪ Existing Groundwater users in the vicinity of the well(s) (e.g. 1 km) will be identified. In addition, some technical information about existing groundwater wells (e.g. depth, flow, etc.) should be collected. ▪ If important freshwater aquifers overlie geothermal reservoirs, monitoring wells will be installed to monitor ground water composition and temperature. ▪ Proper well casing and well casing material selection for groundwater aquifer section(s).	Project Company Contractor	▪ Literature information on ground water users around drilling rig. ▪ Well casing diagram. ▪ Presence of monitoring wells and monitoring records.
24	**Hazardous Materials**	Pollution from hazardous	Adverse	Low	Included in drilling costs	▪ Hazardous Material Management Plan, Spill Response Plan, and EPRP will be prepared prior to drilling and applied.	Project Company	▪ Ratio of hazardous waste generated to total waste (by

No.	Topic	Definition of Potential Impact	Type of Impact	Impact Significance Before Mitigation	Cost	Measures to be Taken	Responsibility	Key Performance Indicators
		materials				▪ If hazardous waste is stored in the project area, that waste will be stored in containers that are strong, leak-proof, safe and in accordance with internationally recognized standards. The containers will bear "hazardous waste" label, with the amount, content, properties, storage conditions and storage date of the stored material indicated on the containers. ▪ Containers containing hazardous materials will be placed in sealed vessels to prevent spills and leaks. ▪ Hazardous waste will be transported by licensed waste transportation companies and will be disposed of at licensed facilities. ▪ Toxic paints, solvents or lead-based paints will not be used. ▪ Hazardous waste management will be fulfilled in consultation Project Company in accordance with the Hazardous Waste Control Regulation. ▪ Hazardous chemicals and wastes likely to be generated at the drilling rig will be stored not to pose a threat to community health. ▪ The disposal of hazardous chemicals and wastes that may be generated at the drilling rig will be carried out at licensed facilities under the supervision of authorized companies and experts.	Contractor	contamination + by generation)
25	**Cultural Heritage**	Loss of cultural heritage	Adverse	Low	Additional cost is not expected.	▪ Any artifacts found during the drilling works will be indicated and recorded as “chance finds”. A “Chance Find Procedure” has been prepared for the steps to be followed and implemented after the chance finding. ▪ The Cultural and Natural Assets Conservation Boards will be informed about the chance finds and the approval of the Conservation Board, who is responsible for the area where the drilling rig is located, will be required. No demolition/drilling work will be carried out when awaiting the said approval. ▪ All relevant actions for demolition, postponing or rescheduling of drilling activities regarding the chance finds will be put into effect. ▪ Any correspondence on this subject will be updated in accordance with all decisions taken, and all documents will be submitted as annexed to ESMP.	Project Company Contractor	▪ Number of chance find records and reports
26	**Biodiversity**	Protection	Adverse	Low	Additional cost is not expected.	▪ No impact is expected on flora and fauna during the drilling phase. Therefore, there is no need to take mitigation measures.	Project Company contractor	▪ Zero damage to natural habitats, wetlands and sites considered as protected areas ▪ Zero hunting, foraging, logging

2 Monitoring Plan for the Project

No	Topic	Phase	Why	Location	Parameters Monitored	Monitoring / Reporting Time / Frequency	Key Performance Indicators	Target/ Threshold Values	Cost	Responsibility
1	**Site arrangements and Establishment of management system**	Drilling Rig Construction	Establishment of insufficient environmental and social organization and failure in management Deficiencies in the documentation, training and permit process	- Office - Drilling Rig	- ESMS Documents, Record keeping, and log control system are in place - Regular audits	- At the beginning of the drilling works	- ESMS is in place - Permits are in place - Trainings provided to every worker before start of drilling	- Zero non-compliance	Included in drilling costs	Project Company
2	**Occupational Health and Safety**	Land preparation Drilling and test operations Rehabilitation	- Negative impact on health and safety of the workers	- Drilling locations	- Internal site audits - Log and records on OHS - Training records - Internal grievance records - 3rd Party Compliance audit	- Weekly - Monthly (for 3rd Party)	- Number of incidents - Number of non-compliances - Number of trained staff - Number of complaints from workers	- Zero incident - Minimum non-compliance - All personnel trained - Zero complaint	Included in drilling costs	Contractor Project Company
3	**Employment / Economy**	Pre- construction Land preparation Drilling and test operations Rehabilitation	Non-compliance with project standards	- Drilling locations	- Pre-evaluation records of contractors on E&S and OHS competence and evidences of selection taking into account the economic and feasible considerations following the Beneficiary Agreement Article 11 and Annex 5. - Employment records by gender and locality/ supply records by locality - Non-compliance records	- Prior to contractor selection - Monthly - Weekly	- Pre-evaluation records - Number of non-compliance - Number and % of local businesses contracted - Number and % of local workforce	- Selection of most economical and feasible option - Minimum non-compliance - No E&S incident - Increase in local businesses engaged and employment	Included in drilling costs	Contractor Project Company
4	**Labor and Working Conditions**	Land preparation Drilling and test operations Rehabilitation	Negative impacts associated to the management of workers' fundamental principles and rights.	- Drilling locations	- Internal audits - Accommodation facility audit - Internal grievance records - 3rd Party Compliance audit	- Weekly - Monthly (for 3rd Party)	- Number of non-compliance - Number of complaints from workers	- Zero non-compliance - Zero complaint	Included in drilling costs	Contractor Project Company
5	**Community Health and Safety**	Land preparation Drilling and test operations Rehabilitation	Negative impact on health and safety of the communities	- Drilling locations - Nearby communities	- Internal site audits - Training records - External grievance records - 3rd Party Compliance audit	- Weekly - Monthly (for 3rd Party)	- Number of incidents - Number of trained staff - Number of complaints from community	- Zero incident - All personnel trained - Zero complaint	Included in drilling costs	Contractor Project Company
6	**Land Acquisition**	Pre- Construction	Unsuccessful land acquisition implementation	- Drilling locations	- Internal audits	- Weekly	- Land acquisition records/agreements	- Successful land acquisition process - Successful compensation	Included in drilling costs	Project Company

No	Topic	Phase	Why	Location	Parameters Monitored	Monitoring / Reporting Time / Frequency	Key Performance Indicators	Target/ Threshold Values	Cost	Responsibility
7	**Land Use**	Drilling and test operations Rehabilitation	Negative impact on livelihood	- Nearby communities	- External grievance records	- Weekly	- Records on damage to neighboring lands - Number of complaints	- Zero damage to neighboring lands - Resolving all grievances within the stipulated timeframe	Included in drilling costs	Project Company
8	**Stakeholder Engagement and Grievance Mechanism**	Land preparation Drilling and test operations Rehabilitation	Non-informing the stakeholders and non-raising of the complaints / requests of the Project stakeholders / workers	- Nearby communities	- Stakeholder engagement activities and records - Grievance mechanism training records - Internal grievance records - External grievance records	- Continuous - Monthly - Weekly - Weekly	- Number of stakeholder engagement activities - Number of trained staff - Number of complaints	- Sufficient stakeholder engagement activity according to SEP - All personnel trained - Resolving all grievances within the stipulated timeframe	Included in drilling costs	Project Company
9	**Resource Efficiency**	Land preparation Drilling and test operations Rehabilitation	Improper use of resources (Water, fuel, electricity, raw material)	- Office - Drilling locations	- Document and resource use log control - Regular audits	- Monthly	- Amounts consumed in m^3, L, kWh, ton	Decrease in use of resources	Included in drilling costs	Contractor Project Company
10	**Air Quality**	Drilling and Well test	Potential impact on local air quality	- Drilling location and nearby sensitive areas	- Internal site audits - Environmental air quality measurements (PM10, H2S) - Vehicle exhaust emission measurements - External grievance records - Training and drill records - H2S and CO2 emissions monitoring and warning system records - 3rd Party Compliance audit	- Daily - Air quality measurements will be performed in case a complaint - Exhaust emission measurements will be performed for: - Passenger cars – every 2 years; and - other vehicles – once a year - Weekly - Training drill records will be reviewed weekly - Daily - Monthly (for 3rd Party)	- Number of non-compliances - Number of complaints - Regulatory limits	- Zero non-compliance - Zero complaints - Compliance with the limits	Included in drilling costs	Contractor Project Company
11	**Odor**	Drilling and test operations	Disturbance of nearby residents	- Drilling locations and nearby sensitive areas	- Internal site audits - Environmental odor measurements - H2S measurements - External grievance records - H2S emissions monitoring and	- Daily - In case of any complaint with the approval of the RSM Unit (Risk Sharing Mechanism Unit)	- Number of non-compliances - Number of complaints - Regulatory limits	- Zero non-compliance - Zero complaints - Compliance with the limits	Included in drilling costs	Contractor Project Company

No	Topic	Phase	Why	Location	Parameters Monitored	Monitoring / Reporting Time / Frequency	Key Performance Indicators	Target/ Threshold Values	Cost	Responsibility
					warning system records - H2S emissions monitoring and warning system maintenance records - 3rd Party Compliance audit	- In case of any complaint with the approval of the Risk Sharing Mechanism Unit (RSM Unit) - Weekly - Daily - Weekly - Monthly (for 3rd Party)				
12	**Noise**	Land preparation Drilling and test operations Rehabilitation	Potential impact on health of living creatures and disturbance of nearby residents	- Drilling locations and nearby sensitive areas	- Internal site audits - Environmental noise measurement - Records for maintenance of the machinery and vehicles - External grievance records - 3rd Party Compliance audit	- Daily - In case of any complaint with the approval of the Risk Sharing Mechanism Unit (RSM Unit) - Regularly (according to the recommended by the services - Weekly - Monthly (for 3rd Party)	- Number of non-compliances - Number of complaints - Regulatory limits	- Zero non-compliance - Zero complaints - Compliance with the limits	Included in drilling costs	Contractor Project Company
13	**Waste Management**	Land preparation Drilling and test operations Rehabilitation	Potential impact on soil and surface water because of wastes	- Drilling locations and temporary waste storage areas	- Internal site audits - Waste records, log, invoices and receipts - Waste analysis - Soil/groundwater/surface water analysis - 3rd Party Compliance audit	- Daily - Daily - In case of any contamination - In case of any contamination, subject to the approval of the Risk Sharing Mechanism Unit (RSM Unit) - Monthly (for 3rd Party)	- Volume/amount of wastes - Number of incidents	- Decrease in generation amount - Zero incident	Included in drilling costs	Contractor Project Company
14	**Drilling Mud**	Drilling and test operations	Potential impact on soil and surface water because of drilling mud	- Drilling locations	- Internal site audits - Mud analysis results - Waste records, invoices, receipts - Soil/groundwater/surface water analysis	- Daily - After completion of the drilling, with the approval of the RSM Unit - Daily - In case of any contamination, subject to the approval of the Risk Sharing Mechanism (RSM Unit)	- Mud volume - Number of incidents	- No overflow of drilling mud tank - Zero incident -	Included in drilling costs	Contractor Project Company

No	Topic	Phase	Why	Location	Parameters Monitored	Monitoring / Reporting Time / Frequency	Key Performance Indicators	Target/ Threshold Values	Cost	Responsibility
15	**Wastewater Management**	Land preparation Drilling and test operations Rehabilitation	Potential impact on soil surface water and groundwater because of wastewater	- Drilling locations - Septic tanks	- Internal site audits - Waste records, log, invoices and receipts - Wastewater analysis - Soil/groundwater/surface water analysis	- Daily - Daily - In case of any contamination, subject to the approval of the RSM Unit - In case of any spill and contamination, subject to the approval of the Risk Sharing Mechanism Unit (RSM Unit)	- Volume of wastewater - Number of incidents	- Decrease in generation amount - Zero incident	Included in drilling costs	Contractor Project Company
16	**Drilling Fluid Spillage**	Drilling Operations	Preparation for potential drilling fluid spillage due to well blowout	- Drilling locations	- Internal emergency response drills, - Emergency response plan and equipment readiness, - Incident log and documentation, - Contingency measures deployment	- Quarterly, - Annually, - Immediate response during the event	- Timely and effective response during drills, - Readiness of emergency equipment, - Number of actual spill incidents	- No uncontrolled spill incidents, - Fast and appropriate containment and response	Included in drilling costs	Contractor, Project Company
17	**Hazardous Materials**	Land preparation Drilling and test operations Rehabilitation	Potential impact on soil and surface water because of hazardous materials	- Drilling locations - Chemical storage area	- Internal site audits - Accident/incident/near miss log and investigation reports - Assignment records - Spill kit checklists - Training records - Collection pit control records - Contamination analyses for collection pit - Inspection records for vehicles and equipment - Soil/groundwater/surface water analysis	- Daily - Weekly - Monthly - Weekly - Monthly - Daily - In case of any contamination, subject to the approval of the RSM Unit - Daily - In case of any spill and contamination, subject to the approval of the Risk Sharing Mechanism Unit (RSM Unit)	- Number of incidents	- Zero incident	Included in drilling costs	Contractor Project Company
18	**Effluent Discharges**	Drilling and test operations	Potential impact on soil, groundwater and surface water because of test water, recirculation water and geothermal fluid	- Drilling locations	- Internal site audits - Soil/groundwater/surface water analysis	- Daily - In case of any leak into reservoir and contamination, subject to the approval of the Risk Sharing Mechanism (RSM Unit)	- Test water, geothermal fluid and recirculation water volume - Number of incidents	- No leak in reservoir - No overflow of test water and recirculation pool - Monitoring the wells to be drilled in the drilling location areas	Included in drilling costs	Contractor Project Company

No	Topic	Phase	Why	Location	Parameters Monitored	Monitoring / Reporting Time / Frequency	Key Performance Indicators	Target/ Threshold Values	Cost	Responsibility
19	**Groundwater Quality**	Drilling and test operations	Potential impact on groundwater quality because of drilling and test operation works	- Drilling locations - Groundwater observation wells	- Drilling logs for ground water reservoir controls - Drilling records - Groundwater analysis	- Daily - Monthly groundwater analysis in the direction of groundwater flow to identify any leak into reservoir formation and surface or subsurface contamination, subject to the approval of the Risk Sharing Mechanism Unit (RSM Unit)	- Report regarding measurements and analysis	- No leak in groundwater reservoir	Included in drilling costs	Contractor Project Company
20	**Soil Quality**	Land preparation Rehabilitation	Potential impact on soil quality because of land preparation and rehabilitation works	- Drilling locations	- Internal site audits - Topsoil and excavation handling and storage records - Drainage and surface stabilization design documents	- Daily - Daily - Before works are performed and weekly	- Number of incidents	- Zero incident	Included in drilling costs	Contractor Project Company
21	**Cultural Heritage**	Land preparation	Potential impact on tangible and intangible cultural heritage	- Drilling locations	- Internal site audits - Training records	- Daily - Monthly	- Number of non-compliances - Number of trained staff	- Zero non-compliance - All personnel trained	Included in drilling costs	Contractor Project Company
22	**Biodiversity**	Land preparation Drilling and test operations Rehabilitation	Hazard to the biodiversity features	- Drilling locations	- Internal site audits - Training records	- Daily - Monthly	- Number of incidents - Number of trained staff	- Zero incident - All personnel trained	Included in drilling costs	Contractor Project Company