Construction of the Sport Complex in Akhaltsikhe

Municipal Development Fund of Georgia,

Ministry of Regional Development & Infrastructure, Government of Georgia

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ABBREVIATIONS

ADB	Asian Development Bank
EARF	Environmental Assessment and Review Framework
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
GoG	Government of Georgia
MDF	Municipal Development Fund of Georgia
MoEPA	Ministry of Environmental Protection and Agriculture of Georgia
MoESD	Ministry of Economy and Sustainable Development of Georgia
NACHPG	National Agency for Cultural Heritage Preservation Georgia
SSEMP	Site Specific Environmental Management Plan

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A. EXECUTIVE SUMMARY

1. Since November 2016, Asian Development Bank (ADB) has supported the Government of Georgia (GoG) to mainstream an integrated and participatory approach to urban development by improving strategic planning of selected urban area clusters to achieve a more balanced regional development by preparing Integrated Urban Action Plans (IUAPs). Building on this, the government has prioritized crucial urban investments for ADB to take forward through feasibility studies and safeguards due diligence. These include integrated solutions that bring co-benefits to the citizens in the development of the urban clusters including water supply, sewerage and sanitation (including off-network solutions), urban transport and mobility (including non-motorized and public transport), solid waste management, economic corridors, cultural and historical heritage conservation, flood control and drainage, urban safety and resilience, among others.

2. To expedite balanced regional development, support for basic urban services and transport have been prioritized, particularly in small towns and regional cities that are potential hubs for tourism, agribusiness, and regional trade as key drivers of economic growth. Governance and capacity building will need to be integrated into the ensuing projects to achieve more robust results and ensure operational and financial sustainability of infrastructure projects. The government has proposed to process the Livable Cities Investment Program (LCIP) under an multi tranche financing facility (MFF) to improve urban and tourism infrastructure and services. LCIP will help improve the livability of the urban areas through three interlinked outputs: (i) improved adequacy and efficiency of urban infrastructure and services, (ii) improved accessibility, connectivity and attractiveness of regional tourism clusters, and (iii) enhanced institutional capacity for implementing and managing urban infrastructure and services.

3. Construction of sport complex in Akhaltsikhe is one of the project, implemented under the Livable Cities Investment Program. The project area is located in the central part of Akhaltsikhe, 44, Aspindza street. The total area of the project site is 13 394 m2, including parking and backyard. The sport complex includes large swimming pool (33X25 m), small pool (16X8 m), gym, the vestibule with an open-air café, small shop. Boxing and wrestling halls will be located on the second floor of the building. The sport complex also includes arrangement spaces for administration, technical storage and other spaces. The project includes adaptations for the disabled persons. Parking for cars will be arranged. The landscaping of surrounding is envisaged by the project design as well. To increase the energy efficiency of the building in the exterior wall will be constructed with thermal insulation blocks. Outdoor stained glasses will be arranged by double glass packages. To ensure thermal insulation of the ceilings stone wool and pumice will be used.

4. According to the legislative provisions, rules, and regulations in Georgia, project activities are not included in Annex 1 and 2 of Environmental Assessment Code of Georgia do not require environmental screening, conducting of an environment impact assessment (EIA) or seek environmental clearance from the government.

5. All projects funded by ADB must comply with ADB Safeguard Policy as set out in the Safeguard Policy Framework (2009). The purpose of the environmental safeguards to establish an environmental review process to ensure that projects undertaken as part of programs funded under ADB loans are environmentally sound, are designed to operate in compliance with applicable regulatory requirements, and are not likely to cause a significant environmental, health, or safety hazards.

6. According to ADB Environmental Safeguards Policy Framework (2009), all ADB financed project requires preliminary environmental assessment for environmental screening, categorization, and further management.

7. The Environmental assessment for the presented IEE report was carried out based on desk review of available materials and consultation with specialists and stakeholders from the project area.

8. According to results of environmental assessment carried out for the project the majority of anticipated environmental risks and impacts are likely to be of minor importance and limited to construction activities in urban area. But taking into consideration that the project envisages construction of new facility, the project has to be discussed as environmental category B for which development of Initial Environmental Examination (IEE) with narrower scope, should be conducted as the impacts expected from the projects are few in number, generally site-specific, largely reversible, limited to project site, and readily addressed through mitigation measures.

9. General draft Environmental Management Plan (EMP) and Environmental monitoring plan for the project is prepared within the scope of IEE and is included in the report.

10. In order to discuss sample environmental and social documentation (Initial Environmental Examination (IEE) and Social Due Diligence Report (SDDR) prepared for the project- “Construction of Sport-complex in Akhaltsikhe”, on the 8th of July At 15:00, 2020 an initial public consultation meeting was conducted in the social network (via Facebook), as the COVID 19 outbreaks. Prior to the meeting, representatives of City Hall and local residents were informed personally by phone about the planned online meeting by the Communication Consultant – Irakli Japaridze.

11. Site-specific IEE along with EMP prepared for the Project will be publicly discussed and disclosed on MDF website after ADB approval.

12. The presented IEE, including EMP will form an integral part of contractors’ contract document.

1. INTRODUCTION

A.1. General

13. This section of the report: a) provides the background to the Livable Cities Investment Program (LCIP), b) summarizes the Project need and objectives, c) outlines the purpose of the IEE, d) describes the Project Category and c) describes the scope of the IEE and the structure of the report.

A.2. Background

14. The Asian Development Bank (ADB) and the Government of Georgia (GoG) reoriented urban sector operations to provide integrated and programmatic solutions for developing Livable cities in Georgia that are economically competitive, socially inclusive, and environmentally resilient[1]. Since November 2016, ADB has supported the government to mainstream an integrated and participatory approach to urban development by improving strategic planning of selected urban area clusters to achieve a more balanced regional development by preparing Integrated Urban Action Plans (IUAPs). Building on this, the government has prioritized crucial urban investments for ADB to take forward through feasibility studies and safeguards due diligence. These include integrated solutions that bring co-benefits to the citizens in the development of the urban clusters including water supply, sewerage and sanitation (including off-network solutions), urban transport and mobility (including non motorized and public transport), solid waste management, economic corridors, cultural and historical heritage conservation, flood control and drainage, kindergartens, sport complexes, urban safety and resilience, among others.

15. To expedite balanced regional development, support for basic urban services and transport have been prioritized, particularly in small towns and regional cities that are potential hubs for tourism, agribusiness, and regional trade as key drivers of economic growth. Governance and capacity building will need to be integrated into the ensuing projects to achieve more robust results and ensure operational and financial sustainability of infrastructure projects.

16. The government has proposed to process the Livable Cities Investment Program (LCIP) to improve urban and tourism infrastructure and services across Georgia. LCIP will help improve the livability of the urban area clusters interlinked outputs: (i) improved adequacy and efficiency of urban infrastructure and services, (ii) improved accessibility, connectivity and attractiveness of regional tourism clusters, and (iii) enhanced institutional capacity for implementing and managing urban infrastructure and services, (iv) improved access to quality pre-school infrastructure, improved environment: new playgrounds increasing gross motor skills of children, safe building - considering fire alarm and safety systems, clean and updated sanitary infrastructure including water closet and kitchen; (v) improved planning of the kindergarten building; increased space per child and per teacher; energy efficient kindergarten buildings; (vi) improvement of educational and working conditions for children and teachers in kindergarten; (vii) Improved access to inclusive child-friendly quality education; (viii) social impact – increased income of population during the implementation (employment of workers), and after the construction; (ix) implemented a healthy lifestyle for the population, which will also reduce youth drug addiction and alcoholism. (x) new sports complexes will lead to the success of the athletes, which will be especially important for the

[1]ADB's Urban Operational Plan 2012-2020 fosters the growth of Competitive, Inclusive, and Green Cities to improve the performance of cities on the Economic, Equity, and Environment (3Es) fronts. It focuses on 3 innovative approaches to guide the development of livable cities, which is a long-term process, achieved best through integrated planning and implementation of investment.

young people living in regions, as the representatives of the communities often have significant success in the international arena in a various types of sport, including water polo, synchronized swimming, etc.

17. Construction of the new sport complex in Akhaltsikhe is one of the project, implemented under the Livable Cities Investment Program.

A.3. Purpose of the Report

18. The Initial Environmental Examination (IEE) of the sport complex construction project in Akhaltshikhe (Samtskhe-Javakheti region) is conducted as part of preparation of the proposed the Livable Cities Investment Program (LCIP) and Finance Facility to meet requirements of ADB's Guidelines and Safeguard Policy Statement (SPS 2009), as well as to comply with environmental legislation of the Georgia. The IEE covers all proposed physical activities under the project.

19. The present IEE report covers construction of sport complex in Akhaltsikhe with the aim to:

- describe the existing socio-environmental conditions within the Project area;
- identify potential direct, indirect, cumulative, and induced environmental impacts and risks that may emerge due to Project implementation;
- analyze Project's alternatives of location, design and technological solutions, including "no project" option;
- develop Environmental Management Plan (EMP) that will include proposed mitigation measures, monitoring program and reporting requirements, institutional and organizational arrangements, capacity development and training provisions;
- describe grievance redress procedures under the Project.

A.4. Category of Project

20. Rapid Environmental Assessment checklists (see attachment 3), as well as review of their location vicinities through Google Earth and other GIS services were used to assign the category of the Project. Based on the existing ADB Environmental Safeguards Policy (2009), this Project falls under ADB's project Category B. According to ADB SPS 2009 proposed project can be classified as Category B due to the following reasons:

- adverse environmental impacts are less adverse than those of category A projects;
- these impacts are site-specific, few if any of them are irreversible, and
- in most cases mitigation measures can be designed more readily than for category A projects.

21. An initial environmental examination is required for category B projects. A category is assigned to a project by its most sensitive component, therefore, all of the outputs and activities to be undertaken under the Project fall under Category B as well.

22. Due the outbreak of COVID 19 distant communication channels was used to conduct consultation with stakeholders. The first consultation was carried out on the 8th of July At 15:00, 2020 in the social network (via Facebook), by MDF team (see attachment 2). Meeting was held with the representatives of Akhaltsikhe City Hall and local residents. Due to the COVID 19 outbreaks and related restrictions, public consultation meeting was conducted in the social network. Main

purpose of the meeting was keeping stakeholders abreast of the sub-project related planned activities, the expected negative impacts on the natural and social environment and the ways and means of preventing them. The participants were provided with contacts of designated focal persons from MDF and local government in case of any additional detail information request about the project as well as about GRM. Further public consultations with interested stakeholders, using distant communication channels such as mobile phones and internet, will be conducted. All findings of consultations and minutes of meetings will be incorporated into final IEE. In compliance with ADB's SPS (2009) the draft and final IEE will be disclosed on the ADB and MDF Websites in Georgian and English languages. All findings of consultations and minutes of meetings will be incorporated into final IEE.

A.5. Project Proponent

23. The Project proponent and borrower is the Government of Georgia acting through the Ministry of Finance of Georgia. Ministry of Regional Development and Infrastructure of Georgia is executing agency of the project, while Municipal Development Fund (LEPL under the Ministry of Regional Development and Infrastructure of Georgia) acts as implementing agency. MDF will establish a Project Management Unit and will supported by the supervision consultants. MDF will procure the construction of the sport complex under contract arrangement, undertake contract supervision and make payments to the contractors.

A.6. Nature, size, and location of the Project

24. The construction of a new sport complex is planned and the location is confirmed, which is the more convenient taking into consideration the existing infrastructure of the district, transport links, etc.

25. The selection of the proposed site for the sport complex building seems reasonable because it is located in the residential area and appropriate because in the existing plot there is enough space to build a new infrastructure for sport complex, including building and parking. The area allocated for the construction is 13 394 m2.

26. The land plot allocated for the construction is free of buildings and registered as municipal property. There will be no involuntary resettlement.

A.7. IEE Boundaries

27. For the purpose of the IEE, physical area considered as potentially being affected by the project in Akhaltsikhe, include:

- Areas of direct impacts due to construction activities and their vicinity, including:
  - construction site for sport complex facilities construction;
  - access roads along construction site;
  - dumpsite for construction and household wastes;
  - any other sites to be used by contractor, such as sites for labor camp, concrete batching plant, temporary material stockpiling and storage areas, etc.
- Areas of indirect impacts, including:
  - all adjacent lands potentially subject to pollution with waste generated by construction

activities.

28. During the project implementation, other actively used remote sites can be included into consideration of project's environmental impact assessment and scope of mitigation measures in contractor's EMP, such as waste dumps, concrete production facilities, labor camp(s), etc.

A.8. Methodology applied

29. Due to the circumstances occurring throughout the world related to the virus outbreak (COVID 19) and forced social distancing, no field visits were possible during the preparation stage of the IEE. Thus, in order to achieve the IEE objective, the team conducted online consultations with the representatives of Akhaltsikhe Municipality for obtaining relevant information and carried out desktop survey. Representatives of city hall of Akhaltsikhe municipality visited the project site, took pictures reflecting the existing situation, that were provided along the additional information. Namely, the team of consultants reviewed the project background documents, analyzed the relevant legal laws and technical standards, and undertook online meetings with people who possessed the information, additional to the received document, required for sound analyses of the situation and drafting of the document. The methodology to undertake and complete an IEE included a combination of methods and data collection tools. In particular, the IEE was prepared based on the results of: (a) review of background documents and information available on public domain; (b) online meetings with representatives Akhaltsikhe Municipality, consultants, design Institute and other stakeholders; (c) review of technical standards and norms; (d) analysis of the baseline information and planned construction activities in order to identify potential impact, measure their significance and identify mitigation measures.

A.9. Structure of the report

30. The report is organized to comply with ADB Safeguard Policies (2009) as follows:

- **Section A: Introduction** – The section in hand provides the introductory information for the Project.
- **Section B: Legal, Policy and Administrative Framework** - This section presents an overview of the policy/legislative framework as well as the environmental assessment guidelines of Georgia that apply to the proposed project. The section also identifies relevant Asian Development Bank Safeguard Policies that will apply.
- **Section C: Description of the Project –** Section C describes the Project and the need for the Project. A detailed scope of works is also provided indicating the type of engineering works required.
- **Section D: Analyses of Alternatives** – This section discuss various Project alternatives including the ``no project`` option.
- **Section E: Description of the Environment** – This section of the report discusses the regional and local environmental baseline conditions.
- **Section F: Anticipated Environmental Impacts and Mitigation Measures** – Section F outlines the potential environmental impacts and proposes mitigation measures to manage the impacts.
- **Section G: Information Disclosure, Consultations and Participation -** Section G provides a

summary of all of the stakeholder consultation activities undertaken.

- **Section H: Grievance Redress Mechanism** – A grievance redress mechanism for project affected persons is also provided along with information regarding the disclosure process.
- **Section I: Environmental Management Plan & Institutional Requirements** – This section provides the Environmental Management Plan and Environmental Monitoring Plan for the design, construction and operational phases of the Project.
- **Section K: Conclusions and Recommendations** – The final section of the report provides the report conclusions and any necessary recommendations.

B. LEGAL AND ADMINISTRATIVE FRAMEWORK

31. The preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities should be carried out in compliance with all applicable laws and regulations of the Borrower relating to environment, health and safety and the Environmental Safeguards as set out in ADB's Safeguard Policy Statement 2009.

32. This section discusses the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project-relevant international environmental agreements to which the country is a party.

B.1. National Environmental Legislation

33. Environmental legislation of Georgia comprises the Constitution, environmental laws, international agreements, by-laws, presidential decrees, ministerial orders, instructions, and regulations. Along with the national regulations, Georgia is signatory to a number of international conventions, including those related to environmental protection.

34. The Program will be implemented in compliance with the national regulations and in line with the ABD SPS 2009 requirements. Therefore, more stringent requirements of the two are applicable. Georgia has a large set of specific standards that refer to emission, effluent, and noise standards, as well as standard to handle and dispose specific wastes ranging from sewage to hazardous wastes.

35. A table 1 below presents a list of Georgia's environmental legislation as it pertains to the proposed program.

Table 1. List of laws relevant to environmental protection

Framework Legislation	
1995	Constitution of Georgia (as amended 04.10.2013) Reg. No - 010.010.000.01.001.000.116
1996	Environmental Protection (as amended 26.12.2014) Reg. No - 360.000.000.05.001.000.184
Permitting Legislation	
2005	Licensing and Permitting (as amended 18.09.2014)
Specific Environmental Laws	

Framework Legislation	
1994	Soil Protection (as amended 26.12.2014) Reg. No - 370.010.000.05.001.000.080
1996	System of Protected Ares (as amended 30.04.2014) Reg. No - 360.050.000.05.001.000.127
2007	on Status of the Protected Areas (as amended 30.04.2014) Reg. No - 360.050.000.05.001.003.060
2014	Waste Management Code 26.12.2014 Reg. No -360160000.05.001.017608
2017	Environmental Impact Assessment Code 01/06/2017
1996	Minerals (as amended 26.12.2014) Reg. No - 380.000.000.05.001.000.140
1997	Wildlife (as amended 26.12.2014) Reg. No - 410.000.000.05.001.000.186
1997	Water Protection (as amended 26.12.2014) Reg. No - 400.000.000.05.001.000.253
1997	Transit and Import of Hazardous Waste within and into the Territory of Georgia as amended 11.03.2011) Reg. No - 300230000.05.001.016218
1998	Pesticides and Agrochemicals as amended 08.05.2012) Reg. No - 340120000.05.001.016723
1999	Atmospheric Air Protection as amended 5.02.2014) Reg. No - 420.000.000.05.001.000.595
1999	Forest Code as (amended 6.09.2013) Reg. No - 390.000.000.05.001.000.599
2003	Red List and Red Data Book of Georgia (as amended 6.09.2013) Reg. No - 360.060.000.05.001.001.297
Relevant Laws	
2007	On Cultural Heritage (as amended 26.12.2014) Reg. No - 450.030.000.05.001.002.815
2007	On Public Health (as amended 29.05.2014) Reg. No - 470.000.000.05.001.002.920
2005	On Fire Protection and Safety 24.06.2005 Reg. No - 140.060.000.05.001.000.355
2006	on Regulation and Engineering Protection of Coasts of Sea, Water Reservoirs and Rivers of Georgia – 27.12.2006 Reg. No - 330.130.000.11.116.005.130
2014	Technical Regulations: “on Drinking Water standard”. Approved by the Government decree № 58 Reg. No- 300160070.10.003.017676

Framework Legislation	
2014	Environmental Technical Regulations. Approved by the Government decree № 17 Reg No- 300160070.10.003.017608

36. Summaries of the listed documents are given below:

37. The basic legal document is "The Constitution of Georgia", which was adopted in 1995. While the Constitution of Georgia does not directly address environmental matters, it does lay down the legal framework that guarantees environmental protection and public access to information with regard to environmental conditions.

38. Article 37, Part 3 states that "any person has the right to live in a healthy environment, use the natural and cultural environment. Any person is obliged to take care of the natural and cultural environment." Article 37, Part 5 states that: "an individual has the right to obtain full, unbiased and timely information regarding his working and living environment."

39. Article 41, Part 1 states that "a citizen of Georgia is entitled to access information on such citizen as well as official documents available in State Institutions provided it does not contain confidential information of state, professional or commercial importance, in accordance with the applicable legal rules.

40. **Environmental Assessment Code (EAC)** was adopted in June 2017 and entered into force on January 2018. The new Code replaced the law on Environmental Impact Permit and Ecological Expertise. The Environmental Assessment Code sets up regulations and procedures for Environmental Impact Assessment, Strategic Environmental Assessment, Trans-boundary Environmental Assessment, Public Participation and Expertise in the Decision-Making Process. The EIA shall be subject to the activities envisaged by the Annex I of this Code and the activities envisaged by the Annex II of the same Code, which will be subject to EIA on the basis of screening procedure set out in Article 7 of this Code (Article 5 of Chapter 2).

41. **The Law of Georgia on Environment Protection (1996)** regulates the legal relations between the state establishments and physical or legal entities in the field related to the use of territorial waters, air space, including continental shelf and special economic zones, environmental protection and natural resources on the territory of Georgia. The Law regulates the standards of the environmental protection and issues of environmental management; it describes the economic sanctions, standards and issues of environmental impact, different issues of protection of the natural eco-systems and biodiversity, and global and regional management issues. In addition to the above-mentioned, the Law considers the major principles of waste management. The law defines the ecological requirements for the waste (Article 34). According to the provision of the given Article, an entrepreneur is obliged to reduce the origination of industrial, domestic and other types of waste, ensure their treatment, utilization, placement or burying by considering the environmental, sanitary-hygienic and epidemiological standards and rules. The Law defines the requirements for the placement of toxic, radioactive and other hazardous waste and prohibits their discharge in the surface water sources.

42. **The Law of Georgia on Licenses and Permits (2005)** defines the list of activities needing licenses or permits, including so called "Environmental Decision". It also defines the requirements for the license or permit issue. The Law, together with the normative by-laws, regulates such organized activity or action, which relates to an indefinite circle of entities, is characterized by increased hazard to the human life or health, affects particularly important state or public interests or is related to the use of a state resource. The given Law regulates the field regulated by a license or

permit; it gives a thorough list of licenses and permits, and establishes the rules to issue the licenses and permits, 28 makes amendments to them or abolish them. Under the Law, a state regulation of the activity or action through a license or permit is undertaken only when the given activity or action is directly associated with the increased hazard to the human life or health or fields of state or public interests. The state regulation is undertaken only when the issuance of a license or permit is a real means to reduce the hazard in question or consider state or public interests. The aim and major principles of regulating the activity or action via licenses or permits are as follows:

- Provision and protection of human life and health
- Safety and protection of a human's residential and cultural environment
- Protection of state and public interests

43. The state ensures protection of the environment and, correspondingly, protection of water as its main component in **The Law of Georgia on Water (1997).** All residents of Georgia are liable to ensure the rational and sustainable use and protection of water. They have to prevent its contamination, pollution and depletion. The dumping of industrial, household and other garbage and wastes in water bodies is prohibited according to this act. The disposal of industrial, household and other effluents into water bodies is permitted on the basis of a license by the Ministry. With the objective of protecting the Black Sea and preserving its ecological system, all natural and legal persons (including foreigners) are obliged to take measures for preventing pollution of the sea with wastewater from the sources of pollution located on the land. The use of a surface water body for discharging industrial, communal-household, drainage and other wastewater is allowed only under a water use license issued on the basis of the Ministry-approved multipurpose water utilization plans and water management balance-sheet.

44. Under the law, purification of the wastewater discharged in a water body is required up to the fixed standard. In order to protect the quality of water resources, the law requests creation of sanitary protection zone that consists of three belts, each having a special regime. The procedure fixing the water quality standards, the maximum permissible rates of emission of harmful substances (including microorganisms) into ambience, the water abstraction quotas, and the temporary rates (limits) of emission of harmful substances (including microorganisms) into water is defined by the Law of Georgia on the Environmental Protection.

45. Georgian legislation may provide liability for other violations of law in the water protection and use sphere. Water users shall compensate for damages caused by violation of the law on Water in the amount and under procedure established by legislation of Georgia. Under Article 17 (Protection of natural resources of the Black Sea), anadromous fish species (fish species seasonally migrating upstream of a river against the current) within the rivers of Georgia shall be protected by creation of conditions necessary for their reproduction, through conservation of the habitat, determination of procedures for regulating the fishing industry, determination of a total permissible amount of catching these species within the territorial waters, and within and outside special economic zones of Georgia, also through implementation of other measures defined by the legislation of Georgia. Article 20 (River water protection zone) defines protection zone of a river shall be its adjacent territory, where a special regime is established to protect water resources from pollution, littering, fouling, and depletion. This zone may include its dry bed, adjacent terraces, natural elevated and steep riversides, as well as gullies directly adjacent to riversides. The width of a river water protection zone shall be measured in meters from the edge of a riverbed to both sides under the following procedure:

- 10 meters - in the case of a river up to 25 kilometers long,
- 20 meters - in the case of a river up to 50 kilometers long,
- 30 meters - in the case of a river up to 75 kilometers long,
- 50 meters - in the case of a river over 75 kilometers long.

46. Within this zone, it is prohibited to: (i) construct, expand or reconstruct functioning enterprises, except for cases directly determined by law; (ii) spray, by air atomization, perennial plants, sown crops, and forest lands with toxic chemicals; and (iv) keep, collect or place toxic chemicals and mineral fertilizers, as well as any other wastes as defined in the legislation of Georgia. It is requested that hydraulic structures located within a water protection zone shall be normally equipped with appropriate technical facilities to completely exclude the possibility of river pollution and littering.

47. The aim of new law on Waste Management – **Waste Management Code (January 2015)** – is to provide for the legal conditions for implementation of measures aiming at prevention of generation of waste and increased re-use, environmentally-sound treatment of waste (including recycling and extraction of secondary raw materials, energy recovery from waste, as well as safe disposal). The objective of this Law is to protect the environment and human health: by preventing and reducing the adverse impacts of the generation of waste; by introducing effective mechanisms of management of waste; by reducing damage caused by resource use and improving the efficiency of such use. In accordance with the new Waste Management Code in Georgia, legal and natural persons that produce more than 200 tons of non-hazardous waste or 1,000 tons of inert waste or any amount of hazardous waste annually, shall prepare a company waste management plan that must be submitted to Ministry of Environmental Protection and Agriculture of Georgia for approval. It is also necessary to identify an environmental manager and provide information to MEPA. The rule for collecting and processing municipal waste is determined by the Code, as well as the prohibitions related to the management of hazardous waste. The Code obliges to develop a system of segmentation and collection of hazardous waste in the case of the production of more than 2 tons of hazardous waste during the year.

48. The following summarizes the key points of the code.

- **Article 7 - General waste management requirements**
  - Waste, depending on its type, properties and composition, shall be collected, transported and treated in a manner not impeding its further recovery.
  - Waste shall be collected, transported and treated in a manner which excludes, to the maximum extent possible, pollution of the environment and risks for human health.
  - In case of waste pollution caused by waste transport activities, the waste transporter shall be responsible for taking clean up measures.
  - The producer and holder of waste is obliged to treat their waste
  - on their own or hand it over for collection, transport and treatment to persons entitled to carry out such operations in accordance with this Law and legislation of Georgia.
  - Where waste has been submitted for recovery or disposal, the original producer's and/or holder's responsibility shall remain until recovery or disposal is completed.
  - Persons who collect and transport waste shall hand it over for treatment to appropriate

facilities, holding the relevant permit or registration.

- The burning of waste outside permitted incinerators shall be prohibited.

- **Article 14 - Company waste management plan**
  - Legal and natural persons that produce more than 200 tons of non-hazardous waste or 1000 tons of inert waste or any amount of hazardous waste annually, shall prepare a company waste management plan.
- **Article 15 – Environmental Manager**
  - The persons under Article 14 of this Law shall nominate a suitable person as a company environmental manager.
- **Article 17 - General obligations for hazardous waste management**
  - The production, collection and transportation of hazardous waste, as well as its storage and treatment, shall be carried out in conditions providing protection for the environment and human health. It shall be prohibited to
    a) discard hazardous waste outside waste collection containers;
    b) discharge it into the sewerage systems or underground or surface waters, including the sea;
    c) burn it outside waste incinerators permitted for that purpose;
    d) treat it outside waste treatment facilities permitted to treat such type of waste
- **Article 18 - Special obligations for hazardous waste management**
  - Waste producers that produce more than 2 tons of hazardous waste per year shall
    a) create and implement a suitable separation and collection system for such waste;
    b) designate an environmental manager, pursuant to Article 15 of this Law, responsible to make arrangements for the safe management of said waste;
    c) make arrangements for briefing and training for staff handling hazardous waste.
  - Until the exact content of waste is unknown, the waste shall be regarded as hazardous.
  - Hazardous waste for which no appropriate treatment techniques and/or technologies are available in accordance with the requirements of this Law within the territory of Georgia shall be exported for treatment. Until the export is carried out, the waste shall be safely stored at temporary storage facilities.
  - The Ministry may exceptionally once allow for an extended storage period of up to one year if this is justified and does not harm human health or the environment.
  - Hazardous waste may only be collected and transported by a natural or legal person after its registration pursuant to this Law.
- **Article 29 - Obligations for keeping records and reporting on waste**
  - Records on waste shall be kept and waste reports shall be submitted to the Ministry by natural and legal persons:
    a) dealing professionally with collection, transport and/or treatment of waste;

b) which produced more than more than 2 tones non-hazardous (excluding municipal waste) waste or any amount of hazardous waste per year.

49. **The Law of Georgia on Cultural Heritage (2007).** Article 14 of the Law specifies the requirements for 'large-scale' construction works. According to this Article, a decision on career treatment and or extraction on the whole territory of Georgia, as well as on construction of an object of a special importance as it may be defined under the legislation of Georgia, is made by a body designated by the legislation of Georgia based on the positive decision of the Ministry of Culture and Monument Protection of Georgia. The basis for the conclusion is the archaeological research of the proper territory to be carried out by the entity wishing to accomplish the ground works. The entity wishing to do the ground works is obliged to submit to the Ministry the documentation about the archaeological research of the territory in question. The preliminary research should include field-research and laboratory works. In case of identifying an archaeological object on the territory to study, the conclusion of the archaeological research should contain the following information: (a) a thorough field study of the archaeological layers and objects identified on the study territory by using modern methodologies, (b) recommendations about the problem of conservation of the identified objects and planning of the building activity on the design territory, on the basis of the archaeological research.

50. **The Law of Georgia "On the Red List and Red Book" (2003)** regulates the legal relations in the field of developing the Red List and Red Book, protecting and using the endangered species, except the legal issues of the international trade with endangered wild animals and wild plants, which within the limits of the jurisdiction of Georgia are regulated by virtue of the Convention 'On the international trade with the endangered species of wild fauna and flora' concluded on March 3 of 1973 in the city of Washington. According to Article 10 of the Law, any activity, including hunting, fishing, extraction, cutting down and hay-mowing, except particular cases envisaged by the present Law, Law of Georgia 'On animal life' and legislation of Georgia, which may result in the reduction in number of the end. Endangered species, deterioration of the breeding area or living conditions, is prohibited. The Red List of Georgia was approved by the Presidential Decree No. 303 'On approving the Red List of Georgia' (May 2, 2006). The law defines special cases when removal of individuals of the Georgian Red List species from their habitats is allowed. Decisions are made by the Government of Georgia.

51. **The Forest Code (1999)** regulates the legal relations to the maintenance, protection, restoration and use of forest resources of Georgia. The Forest Code of Georgia aims to: maintenance, protection and restoration of forests for the maintenance and improvement of climate, water regulation, protective, cultural, recreational and other useful natural properties; It allows only those activities, which are related to forest resource protection or use such as timber logging, collection of non-timber resources, use of area for agriculture or recreation, establishment of hunting farms, etc. State forestry fund may be used for a special purpose in urgent cases. Decisions are made by the Government of Georgia.

52. **Law on atmospheric air protection (1999)** regulates the protection of atmospheric air from the harmful anthropogenic influence on the entire territory of Georgia. The objective of the law is to ensure the safe environment for the atmospheric air of human health and the natural environment. Four types of pollution are considered (Part II, Chapter IV, Article II.2): (i) Pollution of environment with hazardous matter; (ii) Radiation pollution of atmospheric air; (iii) Pollution with microorganisms and biologically active matter of microbial origin; and (iv) Noise, vibration, electromagnetic fields, and other physical impact. Maximum permitted limits for concentration of hazardous substances into the atmospheric air are defined for each contaminant and represent

maximum concentration of hazardous pollutants, in averaged time span, recurring action of which has not have negative impact on human health and environment. Maximum permitted levels of emission of hazardous matters into the atmospheric air are defined with allowance of prospective of development of the enterprise, physical. geographical and climatic conditions, dispersion of emitted substances, background concentration of pollutants emitted from other neighboring enterprises, taking into account inter-location of existing or planned dwellings, sanatoria and recreation zones. In compliance with the law (Clause 28), in order to restrict pollution from the stationary sources21 of hazardous emissions the limits of emissions are to be set. The limit of pollution from the stationary source of emission is permitted quantity (mass) of emitted hazardous matters (Clause 29). Maximum annual emission level means the maximum permitted limit of discharge. This is annual permitted quantity of emission predetermined by technology in conditions of standard permitted capacity of discharge. Annual maximum capacity is defined for each hazardous substance and is calculated so that for each stationary source of emission cumulative emission from all registered sources of discharge does not exceed relevant maximum permitted value. Discharge of hazardous emissions from the stationary sources of emission without approved limits of discharge is forbidden. The standards of emissions (Clause 30) are to be worked out by the enterprise itself. According to the law (Clause 38) the enterprise is responsible for conducting self-monitoring which includes measurement of emission (evaluation), recording/registration and accounting. Emission which has not been recorded in self-monitoring record is considered illegal. As mentioned in the Clause 51 results of the monitoring and information on pollution of the air with hazardous substances is transparent and accessible for the public.

53. **The aim of the Law of Georgia on Public Health (2007)** is as follows: Promotion of the introduction of a good health and healthy lifestyle of the population; Creation of the environment, which is safe for a human health; Promotion of the protection of the reproductive health of a family; Prevention of infectious and non-infectious diseases. The Law defines the rights and obligations of the population and legal entities in the field of public health. Aiming at establishing the environment safe to the public health, the Ministry sets the qualitative standards for the environment safe for a human health (atmospheric air, water, soil, noise, vibration, electromagnetic radiation), including maximum permissible concentrations and rates of harmful impact. The standards are mandatory. Every person on the territory of Georgia is obliged not to carry out the activity, which causes a hazard of the infectious and non-infectious diseases to spread and helps the origination of the risks to human health; protect the sanitary and epidemiological standards; to supply the information to the public health department about all emergencies caused by the violation of the sanitary norms in the production or technological process, etc. The observance of the standards is controlled by appropriate state structures. The responsibility for the internal and external audits rests with a certified, independent laboratory.

54. **Law on Soil Protection:** The law provides the policy requirements and principles of the protection and preservation of fertility soil resources against negative impacts. Soil protection is the state problem since correct and rational use of all types of soil, including barren soil, saline soils, swamped soil, alkali soil, and aqueous soil are the main reserve of dynamic development of agriculture and of the national economy as a whole. The purpose of the present Law is to establish the rights and the duties of landholders, landowners, and the state in the field of soil protect. The law defines soil protection measures and methods and prohibits certain activities, e.g. use of fertile soil for non-agricultural purposes; implementation of non-agricultural activity without topsoil removal and conservation; any activity, which results in deterioration of soil properties, etc. In addition to this law soil protection issues are regulated by order #2-277 (25.11.2005) of the

Minister of Agriculture on approving Recommendations for Complex Measures for Soil Protection from the Erosion.

55. Laws and regulations related to social aspects and land ownership applicable to the program are presented below.

56. **Law on Agricultural Land Ownership.** Objective of the law is to ensure improvement of the structure of agricultural land based on rational use of resources, avoidance of splitting and unsustainable use of the land plots. The law defined the rules for acquisition and selling the land, participation of the state in agricultural land related relations. The law deals with land ownership issues, restrictions of land alienation in case of co-ownership, sets priority of the state in buying out the agricultural land plots.

57. **Civil Code** regulates contractual relations, describes the rights and responsibilities of natural and legal persons, defines the penalties in the case of violations of the requirements set out in the document. The Civil Code differentiates between movable and immovable property and provides rules for acquiring title over property, as well as any proprietary or obligatory rights thereto. This piece of legislation must be taken into account when entering into contracts in Georgia.

58. **Law on Rules** for Expropriation of Property for Public Needs outlines respective procedures and conditions for expropriation of private property as well as procedures for compensation payment for expropriated property or the transfer of other property with the same market value.

59. **Law on Cultural Heritage** sets out procedures for protection of cultural heritage and permitting arrangements for archaeological investigations.

60. **Law on Public Health** regulates legal relations for ensuring a safe environment for human health. It indicates quality norms of for air, soil and water pollution and restrictions related to ionized radiation, noise, and vibration. The limits must be complied with. Section 7 of the law is dedicated to safety of technological processes.

61. **Law on State Property** regulates relationships on state property management and transfer for use by others, defines special requirements and procedures for transfers. The Ministry of Economy and Sustainable Development is the state authority in charge of the property.

62. **Labor Code** regulates employment relations, unless such relations are otherwise regulated by international treaties that have been implemented in Georgia. Employers are obliged to comply with requirements and clauses of the document for the purpose of ensuring that the rights of employees are protected.

63. **Law of Georgia** on Labour Safety define basic requirements and preventive measures in terms of workplace safety for the employers. The Law applies to jobs considered to be of increased danger, hard, harmful, and hazardous. The employer's compliance with the labor safety regulations in Georgia are overseen by the Ministry of Health, Labor and Social Affairs of Georgia through its respective departments.

64. **Procedures for Obtaining Environmental Impact Permit.** Environmental Assessment Code was adopted in June 2017 and entered into force from January 2018. The new code replaced law on Environmental Impact Permit and Ecological Expertise. Environmental Assessment Code sets up regulations and procedures for Environmental Impact Assessment, Strategic Environmental Assessment, Trans-boundary Environmental Assessment Public Participation and Expertise in the Decision-Making Process. The EIA shall be subject to the activities envisaged by the Annex I of this Code and the activities envisaged by the Annex II of the same Code, which will be subject to EIA on

the basis of screening procedure.

B.2. Environmental Regulations and Standards

65. The project will be implemented in compliance with the national regulations and also in line with the ABD SPS 2009 requirements. Therefore, more stringent requirements of the two are applicable. Georgia has a large set of specific standards that refer to emission, effluent, and noise standards, as well as standard to handle and dispose specific wastes ranging from sewage to hazardous wastes. The following summarizes these laws and standards along with IFC and EU standards.

Ambient Air Quality Standards

66. In accordance with the Law of Georgia on Public Health, the environmental qualitative norms are approved by Decrees of the Minister of Labor, Health and Social Affairs of Georgia (Decrees Nos. 297/N of 16.08.2001, including the changes made to it by further decrees of the Ministry Nos. 38/N of 02.24.2003, 251/N of 09.15.1006, N of 12.17.2007). The quality of atmospheric air (pollution with hazardous matter) is also defined by the order of the Minister of Environment Protection and Natural Resources (#89, 23 October 2001) on approval of the rule for calculation of index of pollution of atmospheric air with hazardous pollution. Maximum permissible concentrations (MPC) for air born pollutants are set by Technical Regulations – Ambient air quality standards (Ordinance #383 - approved by GoG on 27 July, 2018).

67. Table 2 shows the threshold values of the major air pollutants as defined by the GEO, IFC and EU legislation.

Table 2. Ambient Air Quality Standards

Parameter	Averaging Period	Limit (µg/m^3)		
		Maximum Permissible Concentration (MPC) for Air Quality	IFC Guideline Value	EU Ambient Air Quality Guidelines
Nitrogen Dioxide (NO_2)	30 minutes	200	-	-
	1 Hour	200 µg/m^3	200	200
	24 Hours	40	-	-
	1 Year	40 µg/m^3	40	40
Sulphur Dioxide (SO_2)	10 minutes	-	500	-
	30 minutes	500	-	-
	1 Hour	-350 µg/m^3	-	350
	24 Hours	125 µg/m^3	20	125
Carbon Monoxide (CO)	30 minutes	5,000	-	-
	24 Hours	3,000	-	-
	8 hours	10 mg/m^3	-	-
Total Suspended Particulates (TSP) / Dust	24 Hours	150	-	-
	30 minutes	500	-	-
PM10	1 year	40 µg/m^3	20	40
	24 hours	50 µg/m^3	50	50

Parameter	Averaging Period	Limit (µg/m³)		
		Maximum Permissible Concentration (MPC) for Air Quality	IFC Guideline Value	EU Ambient Air Quality Guidelines
PM2.5	1 year	25 µg/m³	10	25
	24 hours		25	-
Ozone	8-hour daily maximum	120 µg/m³	100	120

Note: World Health Organization (WHO) Air Quality Guidelines Global Update, 2005. PM 24-hour value is the 99th percentile. Interim targets are provided in recognition of the need for a staged approach to achieving the recommended guidelines.

68. In general, Georgian standards for ambient air correspond to international IFC/WB standards, however in case of differences more stringent standards are applicable.

Noise Standards:

69. Admissible noise standards of the IFC and Georgian national standards for residential areas are similar. The national standards for noise are set according to the Technical regulation – Acoustic noise limits for rooms/premises in residential houses and public establishments (Document #300160070.10.003.020107, Date 15/08/2017) see Table 3.

70. For IFC noise impacts should not exceed the levels presented in Table 4 or result in a maximum increase in background levels of 3 decibels (dB) at the nearest receptor location off site. This program will comply with both IFC Guidelines and Georgian Standards. Note that Georgian standards refer to the allowable limits indoors, not at the building façade.

Table 3. Georgian Standards for Noise Levels

Purpose/use of area and premises	Allowable limits (A-Weighted Decibels (dBA))		
	L_{day}		23:00 – 08:00 L_{night}, Night
	08:00 - 19:00, Day	Evening 19:00-23:00	
Educational facilities and library halls	35	35	35
Medical facilities/chambers of medical institutions	40	40	40
Living quarters and dormitories	35	30	30
Hospital chambers	35	30	30
Hotel/motel rooms	40	35	35
Trading halls and reception facilities	55	55	55
Restaurant, bar, cafe halls	50	50	50
Theatre/concert halls and sacred premises	30	30	30
Sport halls and pools	55	55	55
Small offices (≤100m³) – working rooms and premises without office equipment	40	40	40
Small offices (≤100m³) – working rooms and premises without office equipment	40	40	40
Conference halls /meeting rooms	35	35	35

Areas bordering with houses residential, medical establishments, social service and children facilities (<6 story buildings)	50	45	40
Areas bordering with houses residential, medical establishments, social service, and children facilities (>6 story buildings)	55	50	45
The areas bordering with hotels, trade, service, sport, and public organizations	60	55	50

Note: 1. in case noise generated by indoor or outdoor sources is impulse or tonal, the limit must be 5dBA les than indicated in the table.

71. Acoustic noise limits given above are set for routine operation conditions of the 'space', i.e. windows and door are closed (exception – built-in ventilation canals), ventilation, air conditioning, lighting (in case available) are on; functional (baseline) noise (such as music, speech) not considered.

Table 4. IFC Noise Level Guidelines

Receptor	One-hour L_{aeq} (dBA)	
	Daytime 07.00-22.00	Night-time 22.00 – 07.00
Residential; institutional; educational	55	45
Industrial; commercial	70	70

For workplace noise the following IFC standards are applicable.

Table 5. IFC Work Environment Noise limits

Type of Work, workplace	IFC General EHS Guidelines
Heavy Industry (no demand for oral communication)	85 Equivalent level Laeq, 8h
Light industry (decreasing demand for oral communication)	50-65 Equivalent level Laeq, 8h

Project Noise Standards

For baseline monitoring, and construction and operational phase noise assessment, IFC guideline limits will be followed. For workplace noise, IFC guidelines shall be followed.

Vibration Standards

72. The Georgian Standards for vibration are designed for human comfort. These are shown in Table6. Note that no standards for building damage exist.

Table 6. Georgian General Admissible Vibration Values in Residential Houses, Hospitals and Rest Houses, Sanitary Norms 2001

Average Geometric Frequencies of Octave Zones (Hz)	Allowable Values X0, Y0, Z0			
	Vibro-acceleration		Vibro-speed	
	m/sec^2	dB	$m/sec\ 10^{-4}$	dB
2	4.0	72	3.2	76
4	4.5	73	1.8	71
8	5.6	75	1.1	67
16	11.0	81	1.1	67
31.5	22.0	87	1.1	67
63	45.0	93	1.1	67
Corrected and equivalent corrected values and their levels	4.0	72	1.1	67

Note: It is allowable to exceed vibration normative values during daytime by 5 dB during daytime In this table of inconstant vibrations, a correction for the allowable level values is 10dB, while the absolute values are multiplied by 0.32.The allowable levels of vibration for hospitals and rest houses have to be reduced by 3dB.

73. The American Association of State Highway and Transportation Officials (AASHTO) (1990) identifies maximum vibration levels for preventing damage to structures. **Error! Reference source not found.**7 summarizes the maximum levels.

Table 7. AASHTO Maximum Vibration Levels for Preventing Damage

Type of Situation	Limiting Velocity (in/sec)
Historic sites or other critical locations	0.1
Residential buildings, plastered walls	0.2-0.3
Residential buildings in good repair with gypsum board walls	0.4-0.5
Engineered structures, without plaster	1.0-1.5

Project Vibration Standards

AASHTO standart will be followed during the construction phase.

Soil Quality

74. In Georgia, soil quality evaluation criteria are determined by instructions on “Level of Chemical Contamination of Soil” (MM 2.1.7. 004-02). Information on maximum admissible concentrations of various substances and elements in soils are given in the Table 8.

Table 8. Maximum admissible concentrations of various substances and elements is soils

Component	Unit	Level
Arsenic	mg/kg	2-10
Copper	mg/kg	3

Component	Unit	Level
Mercury	mg/kg	2.1
Nickel	mg/kg	4
Lead	mg/kg	32
Zinc	mg/kg	23
Compound Hydrocarbons	mg/kg	0.1
Phenol (Compound)	mg/kg	-
Cyanide	mg/kg	-
Sulphate	mg/kg	-
Chloride	mg/kg	-
Ammonium Nitrogen	mg/kg	-
Evaporable Organic Compounds		
Benzoyl	mg/kg	0.3
Toluene	mg/kg	0.3
Ethylbenzene	mg/kg	-
Compound Xylene (ortho,meta,para)	mg/kg	0.3
semi-Evaporable Compounds		
Benzopyrene	mg/kg	0.02
Isopropylen-benzol	mg/kg	0.5
Pesticides		
Atrazine	mg/kg	0.5
Linden	mg/kg	0.1
DDT (and its metabolite)	mg/kg	0.1

Water quality standards

Groundwater quality standards

75. Georgian legislation does not regulate quality standards for groundwater. Quality of groundwater is regulated by norms set for potable water.

76. Potable water quality criteria are determined by technical regulations on potable water (Government Regulation N 58 from January 15, 2014 Potable water quality criteria are given in Table 9.

Table 9. Potable Water Criteria

Index	Measuring unit	Standard not more than:
Common characteristics		
Hydrogen index	PH	6-9
Permanganate oxidation	mg O2 /L	3,0
Nonorganic substance		
Barium (Ba^{2+})	mg/L	0.7
Boron (B, total)	mg/L	0.5
Arsenic (As, total)	mg/L	0.01
Quicksilver (Hg, nonorganic),	mg/L	0.006
Cadmium (Cd, total)	mg/L	0.003
Mangan (Mn, total)	mg/L	0.4
Molybdenum (Mo, total)	mg/L	0.07
Nickel(Ni, total)	mg/L	0.07

Index	Measuring unit	Standard not more than:
Nitrate(short impact by $NO^{-}3$)	mg/L	50
Nitrite (long impact by NO 2)	mg/L	0.2
Selenium(Se, total)	mg/L	0.01
Copper(Cu, total)	mg/L	2.0
Lead (Pb, total)	mg/L	0.01
Fluorine (F)	mg/L	0.7
Chromium (Cr^{6+})	mg/L	0.05
Antimony(Sb)	mg/L	0.02
Cyanide(CN^{-})	mg/L	0.07
Organic substance		
Total content of pesticides	mg/L	0.05

Surface Water Quality Standards

77. The values of Maximum Admissible Concentrations of the harmful substances in surface are provided in the Environmental Quality Norms approved by the Order #297N (16.08.2001) of the Ministry of Labor, Health and Social Protection (as amended by the Order No 38/n of the same Ministry of 24.02.2003). The admissible level of pollutants in surface water is given in **Error! Reference source not found.**10. All effluents shall comply with the Georgian National Standards. However certain parameters are not specified in the national standards for these IFC Guidelines are being used as shown in the Table 10.

Table 10. Applicable Standards for Surface Water Quality

Parameter	Maximum Permissible concentration	Source
pH	6.5-8.5	National
Diluted Oxygen, mg/l	4-6	National
BOD5, mg/l	30	IFC
COD, mg/l	125	IFC
Total Nitrogen, N, mg/l	10	IFC
Total Phosphate, mg/l	2	IFC
Chlorides, mg/l	350	National
Oil Products, mg/l	0.3	National
Zinc (Zn^{2+})	1g/kg	National
Lead (Pb total)	23.0	National
Chrome (Cr^{6+})	32.0	National
Cadmium (Cd, total)	6.0	National
Total Suspended Solids, mg/l	50	IFC

78. Quality requirements depend on category of water body (ref. Technical regulations of protection of surface water from pollution, approved by decree #425 of the government of Georgia, 31/12/2013). The categories are: (a) household water use; (b) domestic water use; and (c) fisheries. The latter, in its turn, splits in highest, first and second categories.

Table 11. Water Quality Requirements by Water Use Category

	Water use category			
	Household water use	Domestic water use	Fisheries	
			Highest and first	Second
	Increase not higher that listed below is allowed			
Suspended solids	0.25 mg/l	0.75 mg/l	0.25mg/l	0.75 mg/l
	For rivers with natural content of suspended solids 30mg/l, around 5% increase is allowed			
	If wastewater contains suspended particles with deposition rate above 0.2mm/sec discharge in water reservoirs is not allowed. Discharge of effluents containing suspended particles with deposition rate above 0.4mm/sec is prohibited.			
Floating matter	Patches and films of oil, petroleum products, fats must not be detectable			
Colour	Must not be visible in water column		Water must not have unusual colour	
	20 cm	10 cm	-	
Odour, taste	Water must not have odour and taste of higher than 1-unit intensity		Water must not result in unusual odour and taste in fish	
	After chlorination of other treatment	Without treatment	-	
Temperature	After discharge of wastewater, temperature in water reservoir must not exceed by more than 5 percent compared to the natural value		For water bodies, representing an habitat for cold water fish such as Acipenseridae, Coregonidae, maximum allowable temperatures in summer and winter are 20°C and 5°C respectively, while for other water bodies - 28°C (in summer), 8°C (in winter).	
pH	Must be in 6.5 - 8.5 interval			
Water mineralization	<1000mg/l, Incl. chlorides – 350mg/l; sulphates - 500mg/l	To comply with requirement given in section related to taste (see above)	In accordance with taxation	
Dissolved oxygen	Must not be lower than			
	4 mg/l	4 mg/l	6 mg/l	6 mg/l
Biological oxygen demand	At 20°C must not exceed			
	3 mg/l	6 mg/l	3 mg/l	6 mg/l
Chemical oxygen demand	Must not exceed			
	15 mg/l	30 mg/l	-	-
Chemical substances	Must not exceed maximum permissible limits			
Pathogens	Must be free for pathogens, including viable helminth eggs, teniaoncosperes and viable cysts of pathogen organisms			
Toxicity	-	-	At the point of discharge and control	

	Water use category			
	Household water use	Domestic water use	Fisheries	
			Highest and first	Second
			section of the river toxic impact must not be observed.	

Sanitary Wastewater

79. Sanitary wastewater from industrial facilities may include effluents from domestic sewage, food service, and laundry facilities serving site employees. Miscellaneous wastewater from laboratories, medical infirmaries, water softening etc. may also be discharged to the sanitary wastewater treatment system. Recommended sanitary wastewater management strategies include:

    i. Segregation of wastewater streams to ensure compatibility with selected treatment option (e.g. septic system which can only accept domestic sewage);

    ii. Segregation and pre-treatment of oil and grease containing effluents (e.g. use of a grease trap) prior to discharge into sewer systems;

    iii. If sewage from the industrial facility is to be discharged to surface water, treatment to meet national or local standards for sanitary wastewater discharges or, in their absence, the indicative guideline values applicable to sanitary wastewater discharges shown in Table12;

    iv. If sewage from the industrial facility is to be discharged to either a septic system, or where land is used as part of the treatment system, treatment to meet applicable national or local standards for sanitary wastewater discharges is required. Sludge from sanitary wastewater treatment systems should be disposed in compliance with local regulatory requirements, in the absence of which disposal has to be consistent with protection of public health and safety, and conservation and long term sustainability of water and land resources. It should be mentioned also that the most stringent standards will apply during construction.

Table 12. Indicative Values for Treated Sanitary Sewage Discharges

Pollutant	Unit	Standards		
		GEO	WB	EU
pH	pH	6-9	6-9	
Biochemical oxygen demand (BOD)	mg/l	35	30	25
Chemical Oxygen Demand (COD)	mg/l	125	125	125
Total Phosphorus	mg/l	2	2	2
Total Nitrogen	mg/l	15	10	15
Total Suspended Solids	mg/l	60	50	35
Coliform bacteria	[1]MPN[b]/100ml		400[a]	

Surface Water Quality and Groundwater Project Standards

Baseline and construction phase water quality monitoring will be assessed against national standards.

Waste Water Discharge Project Standards

Waste water discharge from construction sites and camp shall be assessed against IFC values (for any treated sanitary sewage discharge).

B.3. ADB Policies

80. Superseding the previous safeguard policies (the Involuntary Resettlement Policy, 1995, the Policy on Indigenous Peoples, 1998, and the Environment Policy 2002), ADB, has adopted a comprehensive Safeguard Policy Statement in 2009 (SPS, 2009). The SPS describes common objectives of ADB's safeguards, lays out policy principles, and outlines the delivery process for ADB's safeguard policy. It applies to all ADB-financed, ADB administered projects, and their components including investment projects funded by a loan, grant or other means.

81. With the goal to promote sustainability of project out comes by protecting the environment and people from projects' potential adverse impacts, the objectives of ADB's safeguards are to:

    i. avoid adverse impacts of projects on the environment and affected people, where possible;

    ii. minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible; and

    iii. help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

82. ADB's SPS 2009, sets out the policy objectives, scope and triggers, and principles for three key safeguard areas:

    i. environmental safeguards,

    ii. involuntary resettlement safeguards, and

    iii. indigenous peoples safeguards.

83. Environmental Safeguards. The objective of environmental safeguards is to ensure the environmental soundness and sustainability of project sand to support the integration of environmental considerations into the project decision-making process. All ADB funded projects are screened at initial stages of preparation and categorized according to significance of a project's potential environmental impacts. For screening of projects special Rapid Environmental Assessment (REA) Checklist is used. Projects areas signed to one of the following three categories:

    (i) **Category A**-A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment is required.

(ii) **Category B**–A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination is required

(iii) **Category C**– A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed.

84. ADB's environmental assessment requirement is thus different from the Georgian system of environmental assessment. While Environment Impact Permit as per the Georgian Law is required only for notified activities, ADB SPS 2009 applies to all projects and its environmental assessment requirement varies according to the category of the project depending on the nature and scale of the anticipated impacts.

Accountability Mechanism[2]

85. The Asian Development Bank (ADB) created the Inspection Function in 1995 to provide an open forum for public scrutiny to ensure that ADB complies with its operational policies and procedures. Building on the Inspection Function and benefiting from intensive public consultations, ADB introduced the updated Accountability Mechanism in 2012. The Accountability Mechanism encompasses two mutually supportive functions: problem solving and compliance review.

86. The Accountability Mechanism is designed to:

- Increase ADB's development effectiveness and project quality;
- Be responsive to the concerns of project-affected people and fair to all stakeholders;
- Reflect the highest professional and technical standards in its staffing and operations;
- Be as independent and transparent as possible;
- Be cost-effective and efficient; and
- Be complementary to the other supervision, audit, quality control, and evaluation systems at ADB.

87. The Accountability Mechanism complements other problem solving and compliance systems at ADB audit, evaluation, and learning systems to ensure that its operations are conducted in accordance with operational policies and procedures, and deliver the intended results.

88. It reflects ADB's philosophy that problem prevention and compliance should be maximized in its operations, and also that once problems and noncompliance occur, they should be addressed promptly at the project and operational levels.

Information Disclosure:

89. In line with ADB's Access to Information Policy (September 2018), ADB works closely with its borrowers and clients to ensure two-way communications about ADB projects with project-affected people and other stakeholders. This is done within a timeframe, using relevant languages, and in a way that allows project- affected people and other stakeholders to provide meaningful

[2] ADB,s Accountability Mechanism Policy 2012 is available at: http://www.adb.org/documents/accountability-mechanism-policy-2012

inputs into project design and implementation.

90. ADB will post the following safeguard documents on its website:

    i. for environment category A projects, draft environmental impact assessment reports at least 120 days before Board consideration;

    ii. draft Environmental Assessment and Review Framework (EARF), draft Resettlement Frameworks and/or plans, and draft Indigenous Peoples planning frameworks and/or plans before project appraisal;

    iii. final or updated environmental impact assessments and/or initial environmental examinations, resettlement plans, and Indigenous Peoples plans upon receipt;

    iv. environmental, involuntary resettlement, and Indigenous Peoples monitoring reports submitted by borrowers/clients during project implementation upon receipt.

B.4. Comparison of the National legislation and ADB Requirements

91. The above accounts of national environmental low and ADB policy indicate that the two systems are similar but then there are some aspects in which ADB policy is more specified than the Georgian procedure. The main differences are as follows.

92. Considering ecological risk, cultural heritage, resettlement and other factors, the Bank classifies projects supported by them under categories A, B, C and FI. In the Georgian legislation, EIA is carried out within the scope of the activities provided for by Annex I to the New Environmental Assessment Code, and of the activities provided for by the Annex II to the same Code, according to a screening decision. Asian Development Bank guidelines requires EIA for category A projects, IEE for the B category projects, and an environmental review of projects that are not expected to produce environmental impacts (category C), while According to the Georgian legislation IEE is not required.

93. Georgian legislation does not specify the format of environmental management plans as well (EMPs) and the stage of their provision for projects requiring EIA and does not require EMPs for projects not requiring EIAs. The Asian Development Banks guidelines requires EMPs for all categories of projects and provides detailed instructions on the content.

94. According to Georgian legislation MEPA is responsible for monitoring of project implementation and compliance with the standards and commitments provided in the EIA, and the role of the EMP is less clearly defined. The IPMO or “Project Proponent” is responsible for implementing “self-monitoring” programs for projects requiring EIA. In contrast ADB guidelines stress the role of EMPs, which are important for all categories of projects, and the Project Proponent is required to ensure inclusion of a monitoring scheme and plans into EMPs. Monitoring of performance compliance against EMPs is important element of ADB requirements.

95. The national legislation also does not take into account the issue of involuntary resettlement at any stage of environmental permit issuance. The Georgian legislation considers social factors only in regard to life and health safety (e.g. if a project contains a risk of triggering landslide, or emission/discharge of harmful substances or any other anthropogenic impact). While the Bank’s document establishes the responsibility of a Borrower for conducting an environmental assessment, the national legislation provides for the responsibility of a project implementing unit to prepare EIA and ensure public consultation.

96. Ministry is participating in public consultation required for the adoption of a decision on issuing an EIA permit as established under the new Code of Georgia. ADB carry out project screening and categorization at the earliest stage of project preparation when sufficient information is available for this purpose, also according Access to Information Policy of ADB. The Bank is committed to working with the borrower/client to ensure that relevant information (whether positive or negative) about social and environmental safeguard issues is made available in a timely manner.

97. In regard with consultation: The Bank provides for consultations for A and B Category projects (at least two consultations for Category A projects) and requires a timetable of consultations from the Borrower. The national legislation until recently contained only a brief reference to this issue without providing real tools of its fulfilment.

98. The Bank's guidelines provide a detailed description of procedures for screening, scoping and conducting EIA and explain a complete list of stages, which are not specified under the national legislation.

99. The Environmental Assessment Code, which was adopted in June 2017 and entered into force in January 2018 includes screening, scoping, preparing an EIA report, public participation, carrying out consultations and preparing an expert opinion on the basis of the evaluation of the results obtained, and taking account of the expert opinion in issuing an environmental decision under this Code and/or a respective enabling administrative act as provided for by the legislation of Georgia.

100. Environmental impact assessment falls within the scope of the activities provided for by Annex I to this Code, and of the activities provided for by the Annex II to the same Code, according to a screening decision.

101. Screening Stage: A person carrying out activities shall, as early as possible at the stage of planning an activity, submit to the Ministry an application for the screening of the planned activity and obtain from the Ministry a decision on whether the planned activity is subject to an EIA.

102. Within three days after a screening application has been registered, the Ministry shall have the application placed on its official website and on the notice board of the executive body and/or representative body of a respective municipality, and upon request, shall make a printed copy available under a procedure established by the legislation of Georgia. The public may, within seven days after the screening application has been placed on the website and the notice board, submit to the Ministry opinions and comments with respect to the application under the procedure established by Article 34(1) of this Code. The Ministry shall review the opinions and comments submitted by the public and, if there are appropriate grounds, shall take them into account when making a decision on the screening.

103. Scoping Stage: A person carrying out activities shall, as early as possible at the stage of planning an activity, file with the Ministry a scoping application along with a scoping report.

104. Within three days after a scoping application has been registered, the Ministry shall have the scoping application and the scoping report placed on its official website and on the notice board of the executive body and/or representative body of a respective municipality, and upon request, shall make printed or electronic copies available under a procedure established by the legislation of Georgia.

105. The public may, within 15 days after the placement of the scoping application submit to the Ministry opinions and comments with respect to the scoping report. When issuing the scoping opinion, the Ministry shall ensure a review of the opinions and comments submitted by the public

and, if there are appropriate grounds, take them into account.

106. Not earlier than the 10th day and not later than the 15th day after the placement of the scoping application under the procedure established by Article 8(2) of this Code, the Ministry shall ensure the holding of a public review of the scoping report. The Ministry shall be responsible for organizing and holding public reviews. Public reviews shall be led, and the minutes of public reviews shall be drafted, by a representative of the Ministry. Information on the public review shall be published not later than 10 days before the public review is held, in accordance with Article 32 of this Code. Public reviews shall be open and any member of the public may participate in them.

107. After the Ministry approves the scoping opinion, the person carrying out activities and/or an adviser shall ensure the preparation of an EIA report. The person carrying out activities shall ensure the reimbursement of the costs necessary for preparing an EIA report. the Ministry shall have EIA information on its official website and on the notice board of the executive body and/or representative body of a respective municipality.

108. The public may, within 40 days after the placement of the application, submit to the Ministry opinions and comments under the procedure established by Article 34(1) of this Code with respect to the EIA report, the planned activity and the conditions to be included in the environmental decision. When making an environmental decision or a legal act refusing the carrying out of the activity, the Ministry shall ensure the review of the opinions and comments submitted and, if there are appropriate grounds, take them into account.

109. Not earlier than the 25th day and not later than the 30th day after the placement of the application under the procedure established by Article 11(3) of this Code, the Ministry shall hold a public review of the EIA report. The Ministry shall be responsible for organizing and holding reviews. Public reviews shall be led, and the minutes of public reviews shall be drafted, by a representative of the Ministry. The Ministry shall be responsible for the accuracy of the minutes. Information on the public review shall be published not later than 20 days before the public review is held, in accordance with Article 32 of this Code.

110. Not earlier than the 51st day and not later than the 55th day after the registration of an application for obtaining an environmental decision, the Minister shall issue an individual administrative act on the issuance of an environmental decision or, if there exist grounds provided for by Article 18 of this Code, on the refusal of the carrying out of the activity. When making environmental decisions, the guideline document on Environmental Impact Assessment may be used.

Table 13. Activities and responsibilities in EIA for national law and ADB policy

#	Action	Georgian Legislation	ADB Requirements
1	Screening	Consultant hired by Project Proponent	Bank and Consultant hired by Project Proponent

#	Action	Georgian Legislation	ADB Requirements
2	Scoping	Consultant hired by Project Proponent.	Obligatory. Bank and Consultant hired by Project Proponent
3	Draft EIA	To be prepared by Environmental Consultant.	To be prepared by Environmental Consultant.
4	Public Consultations	Not earlier than the 25th day and not later than the 30th day after the placement of the application under the procedure established by Article 11(3) of this Code, the Ministry shall hold a public review of the EIA report. Public reviews shall be led, and the minutes of public reviews shall be drafted, by a representative of the Ministry. Information on the public review shall be published not later than 20 days before the public review is held, in accordance with Article 32 of this Code	At least two consultations for Category A projects – one at the scoping stage and one for the draft EIA.
5	Final EIA	Consider all comments received during public consultations, incorporate accepted remarks and explain rational when the comments are disregarded.	Consider all comments from Bank and public. Agree with the Bank on each raised point. Incorporate accepted public comments and explain rational when the comments are disregarded
6	Management Plans	clear guidelines content and timing on format,	Incorporate Monitoring and Management Plans in the EIA.
7	Review and Approval	MEPA	Bank and separately – MEPA (if the EIA is required by Georgian legislation)
8	Disclosure of the final EIA	Not requested	Publication (mainly electronic) of the final EIA.

B.5.Harmonization of the ADB and Georgian Legislation Requirements

111. In order to comply with the both regulations – the ADB and Georgian legislation – the content of the EIA should comprise issues required in both regulations, thus complementing each other. The EMPs should therefore be elaborated as required by the ADB regulations. The assessment of the stationary sources of emission (e.g. diesel generators) should be executed according to Georgian regulations: “Inventory of the Stationary Sources of Emission” and “Approval of the Emission Limits”. For the category A projects the first public consultation (requested by ADB guidelines, but not by Georgian regulations) will be held at the Scoping stage. The second one will be executed according to Georgian requirements. Disclosure will be conducted as required by ADB.

B.6. Administrative Framework

112. Municipal Development Fund of Georgia (MDF) – The municipal Development Fund of Georgia is responsible for elaboration of policy and strategic plans related to construction, rehabilitation, reconstruction of the project. Thus, the MDF is responsible for works on construction and rehabilitation of envisaged under the project and is responsible for ensuring compliance with the Georgian legislation and environmental and social requirements of the relevant donor organizations. Control of implementation of the Environmental Management Plan (EMP) is direct responsibility of the MDF. Within the MDF there is Environmental and Resettlement Division dealing with the environmental issues. This division is supposed to review the IEEs and EMPs related to the MDF projects and perform monitoring of compliance of the contractor's performance with the approved EMPs, IEEs, environmental standards and other environmental commitments of the contractor.

113. Ministry of Environment Protection and Agriculture (MoEPA) - is responsible for all environmental protection issues and agriculture in Georgia. The responsibilities of the Ministry as the competent authority are: a) to intermit, limit, or stop any activity having or likely to have adverse impact on the environment, b) to carry our screening of planned development, c) to implement scoping, d) to issue environmental decision for project subject to EIA procedure, c) to control the execution of mitigation measures by the developer, d) to organize public meetings and discussion of an estimation of influence on environment and prepares the documentation (the project of the order of the minister) to let out the permission to influence to environment. The ministry is responsible to supervise the adherence by the construction company to relevant environmental standards during project implementation process.

114. Ministry of Economic and Sustainable Development is responsible for issuing permit for construction V class buildings, which include swimming pools.

115. Ministry of Science, Education, Culture and Sport of Georgia. The ministry is responsible on supervision of the construction activities in order to protect archaeological heritage. In case if construction is to be carried out in a historic sites or zones of cultural heritage, consent of the Ministry of Culture is also required for issuing construction permit (If such is necessary). For presented project no construction permit is needed from this ministry.

116. Local Government of Akhaltsikhe is responsible authorizing certain construction works within the city, as well as issuing acceptance acts for the new buildings. Relevant permission for tree cutting (not included in Red List species), if required, should be issued also by Akhaltsikhe municipality mayor office.

C. PROJECT DESCRIPTION

C.1. Category of the Project

118. According to Environmental Assessment Code of Georgia civil works under the Project do not require Environmental screening and Environmental Impact Assessment. Despite the activities within the project are not subject to the EIA and environmental decision, they shall be implemented in accordance of provisions of different laws and regulations described in Part B.

119. The project triggers the "Safeguard Requirements 1: Environment" of ADB Safeguard Policy Statement. Environmental assessment and screening of the project was carried out in compliance with the requirements of ADB Environmental Safeguards Policy (2009) and based on experience from other similar IFIs funded projects. The IEE of proposed project showed that physical works to be implemented will not have any significant impact on the existing environment. Project envisages construction of new facility in well developed urban area. The environmental impacts is expected to be insignificant and limited to construction areas and duration and can be easily mitigated. However, all potential impacts have been carefully assessed and mitigation measures identified.

120. All works envisaged by the project will be implemented within the land plot registered as municipal property.

121. None of the works within the project will be implemented through or close to protected areas, Emerald sites, forest areas and cultural heritage sites.

122. Environmental screening and preliminary categorization of the project was carried out in accordance with ADB's Safeguard Policy Statement, 2009 (SPS, 2009) and based on experience from other similar projects funded by IFIs, including ADB.

123. The risks, scale and likelihood of anticipated negative environmental impacts related to the project activities varies from low to medium (anticipated risks/impacts and their mitigation measures are described in Part E of this document). Therefore, the project **is classified as Environmental Category B for which Initial Environmental Examination (IEE) is required. EMP for project is developed and included in the following IEE Report.**

C.2. Description of the Project

124. The project envisages construction of the sport complex in Akhaltsikhe. The total area of the land plot allocated for sports complex construction is 13 394 m2, including parking and backyard. The sports complex building will be constructed on the west side of the land plot on the 4000 m2 area. On ground area of the sport complex building is 3551,1 m2 and total area – 7795,4 m2. Height of the building will be 15.6 m.

125. Main vestibule, Large swimming pool (33X25 m), small pool (16X8 m), gym and hall for weight lifting will be located on the first floor of the building. Both pools and halls are directly connected to the dressing rooms with showers. The open-air café and small shop will be arranged in vestibule. Technical rooms, storage and other spaces will be arranged on the first floor as well. Boxing and wrestling halls with dressing rooms and showers will be located on the second floor of the building. Rooms for administration and conference hall will be arranged on second floor as well. Conference hall is connected with open terrace.

126. According to norms, large pool capacity is 80 persons per day. The small pool will serve children under 14 years of age. Capacity - 20 child per shift. Seats for 200 spectators will be arranged within large pool hall.

127. The project includes adaptations for the disabled persons. The special ramps for disabled persons will be arranged. Adapted water closets will be provided. Elevator will be installed.

128. Parking for cars will be arranged for 100 cars and 3 buses. The landscaping of surrounding is envisaged by the project design as well. The sport complex area will be fenced.

129. In order to increase the energy efficiency of the building in the exterior wall will be constructed with concrete blocks with foam inner insulation. Exterior stained glasses windows will be arranged by double glass packages. To ensure thermal insulation of the ceilings stone wool and pumice will be used. The roof will be arranged with sandwich panels.

130. The project envisages installation of power, internal water supply and sewage networks, heating and cool systems, lightening, fire extinguishing system.

131. Estimated consumption of the spot complex for electricity is 400 kW. The transformer and underground cables will be installed on the project site to provide sport complex with electricity.

132. Water demands calculated as 20 m3 per hour. The central water supply pipe (d=220mm, water pressure 3-10 atmospheres) is located near the project area. However, it is unlikely that the requested water will be supplied as Akhaltsikhe suffers from a shortage of potable water. Therefore arrangement of the well is envisaged by the project to provide water supply to the sport complex. Hydrogeological survey of the project area was conducted at the project design phase with the aim to examine hydrogeological conditions of the site and estimate geological and technical conditions for well boring. According to the hydrogeological survey, it will be possible to provide unconfined water supply to the reservoir through the well, with the use of a submersible electric pump. To obtain a sufficient amount of the groundwater, it is necessary to bore 80 meter deep well. The diameter of the collecting tube is selected with the consideration that the installation of the submersible pump and cables is not prevented with its small size and allows to record the dynamic and static water levels during the monitoring period. The well is designed for trial, exploration and operational purposes, with the following design data:

- Boring method: rotary, with the use of clay and water solution;

- Expected piesometric level: 2,5-3,0 meters;
- Design output of well: 10 m^3/hour;
- Well depth: 80 l.m.

133. In order to obtain the design amount of water, based on visual reconfiguration, studies of the archive and literary materials, and theoretical and practical experience, the well will be bored with the following construction:

134. 0,0-80,0 m, d=245 mm; d=160X8 Polyethylene collecting tube and filters will be inserted. The filters will be installed at intervals of 5-72 m, according to the water release intervals. A well screen will be arranged at 72-80 m interval.

135. After completion of drilling operations and flushing of the well, two-day pumping operations (testing and filtration studies) will be carried out, during which groundwater levels, output and other parameters will be observed.

136. After completion of the pumping process, it is necessary to take water samples and carry out a comprehensive hydrochemical and bacteriological study.

137. In the well at a depth of 60 m from the surface of the earth, a submersible electric pump with a capacity of 10-15 m3 / h and lifting height of 80 meters should be installed; Along with the pump, well operational column shall be equipped with polypropylene d=75x10 manufactured water-lifting threaded pipe with couplings (36 l.m. – 20 pieces) and insulated cables (80 x 3 l.m.; S=2,5 mm2). To ensure the safety of the submersible electric pump, an automatic control panel should be installed near the well.

138. For sanitary protection, it is necessary to fence the well with 4 x 4 size wire mesh.

139. Water expenses are calculated for 200 spectators (3 l /day) and 320 sportsmen (100 l/day).

140. Q = 200X3 + 320X100 = 32 600 =l/day Sh 0= 22 683 l / day. Total water expenditure: Q=2.7 l/sec.

141. 4 hours are considered for full recirculation of water in the swimming pool (25X33). The circulation in the pool happens via overflow channel from where water flows into water collecting tank (60m3) The pool size is 6.0X5.0X2.0(H). Then water flows to the filter; cleaned water is heated and flows back to the pool. Daily expenditure of water to fill the pool is 660m3/day (30.0m3/h – 8.34l/sec). Water must be changed once every four hours. For this purpose four filters with capacity of 124m3/h will be installed. The pool is discharged via 5 floor drains. The water volume is measured via water meter.

142. Full recirculation of water in the pool (16.X8.0) takes 2 hours. 67 m3/h capacity filter will be installed. The pool is discharged via 1 floor drainage, water flows into the drain pipeline (located on the territory). Water expenditure is measured via water meter.

143. Revision and clarifier will be installed on the sewerage network. Sewage system of the sport complex will be connected to the central system sewage collector (2,4X2m) located 160 meter away from the project site.

144. Natural gas will be supplied from central pipe (110 mm) located 60 away from the project site.

145. Underground 90 meters cable of JSC Silknet is located on the project site. Relocation of the cable is required that is already agreed with JSC Silknet .

146. Boiler and chillers will be installed. Heating and cooling system is being designed in the halls of

swimming pools, training hall and rooms of administration with floor fancoils. In the shower rooms and toilets will heat with steel panel radiators. For the purpose of energy saving, the central air conditioners will be equipped with recuperates. In the large pool the water temperature should be 260 C and in the small pool – 28-290 C. The pools are served by the central air conditioners, which will be located on the basement floor. The boiler plant stands separately, and is equipped with two boilers. Natural gas is used as a fuel.

Figure 1. Location of project site and access road

Figure 2. Current state of the project site

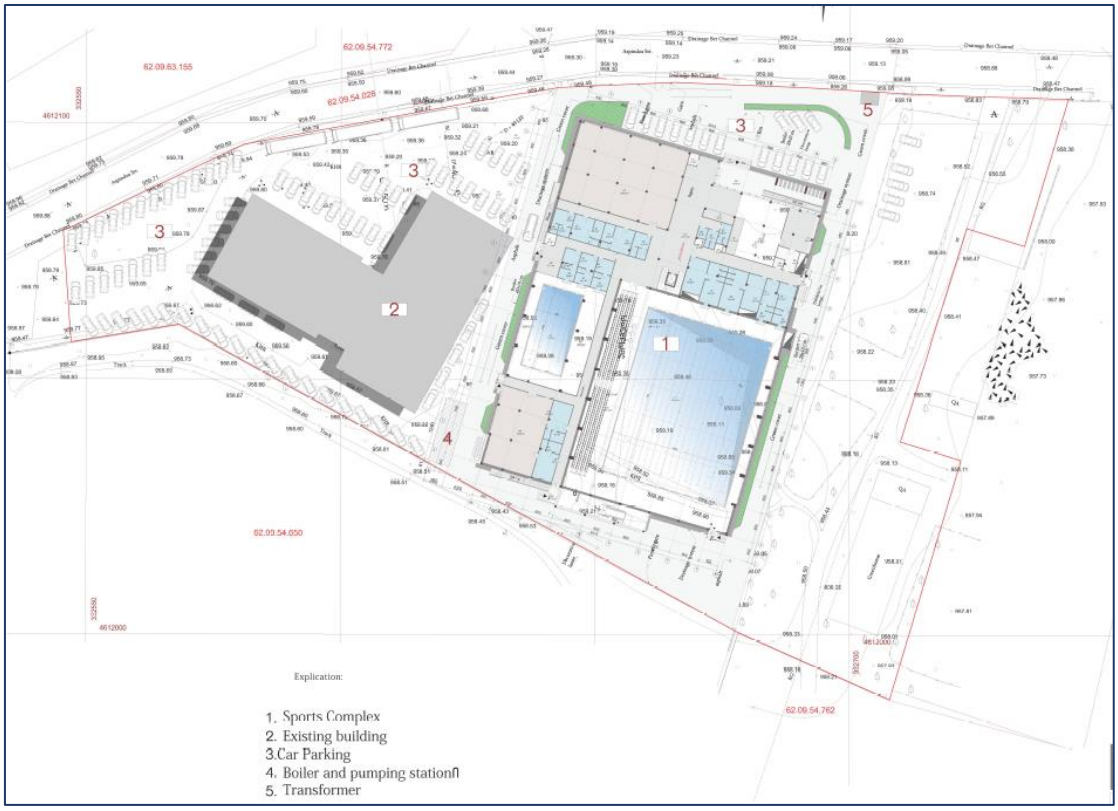


Figure 3. Master Plan of Sport complex Area

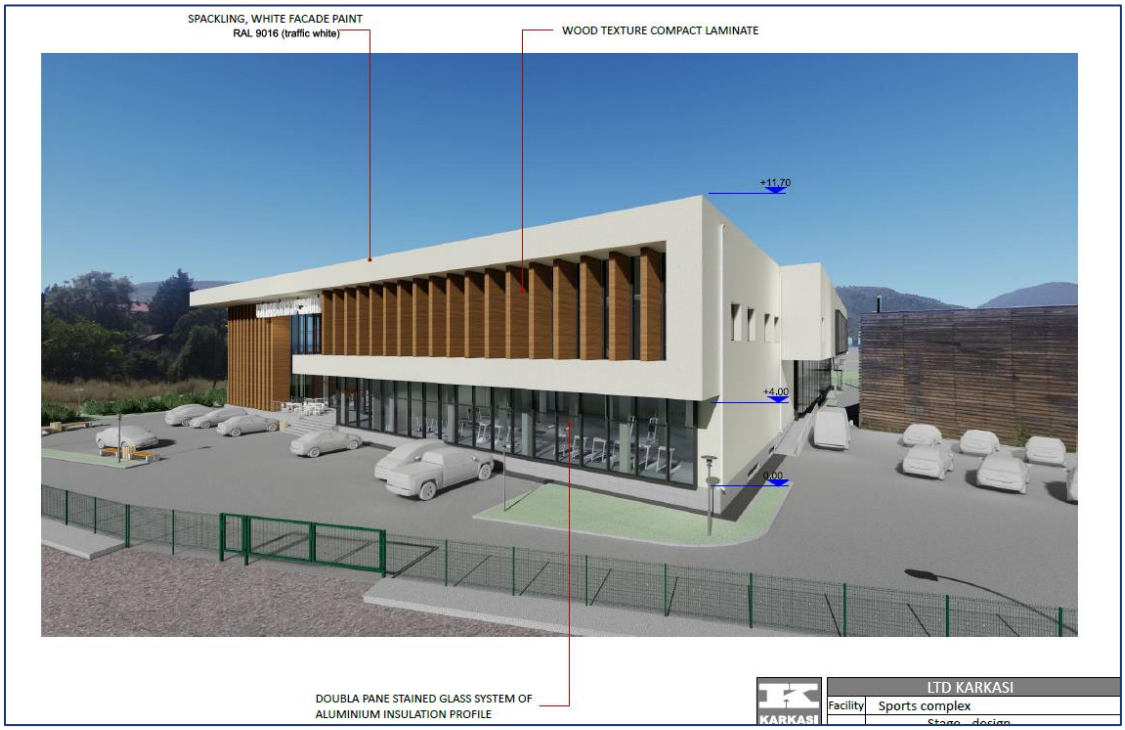


Figure 4. Render of the sport complex building

C.3 Organization of construction

147. Prior to the onset of the core works, the organization and technical issues will be solved to provide a field of construction operations. Preparatory works envisage temporary fencing of the construction area and arrangement of temporary buildings (construction camp). Temporary power and water supply are to be provided to site from local networks. Relevant construction machines/mechanisms will be mobilized, including:

    a. Crane Truck KC-45721 - 2 pieces
    b. Mixer Truck - 2 pieces
    c. Concrete Pump M-16 - 1 piece
    d. Excavator with Two Sided Ladle JCB 1 piece;
    e. Excavator with 1m3 ladle - 1 piece
    f. Bulldozer - 1 piece
    g. Dump Transport - 2 piece
    h. Truck with Sides - 2 piece
    i. Depth Vibrator C-3698 - 1 piece
    j. Vibro Roller - 1 piece
    k. Surface Roller C-697 - 2 pieces
    l. Welding Apparatus - 1 piece
    m. Portable Compressor CO-45 - 1 piece
    n. Metal Inventory Scaffold 800- m2
    o. Electro and Pneumatic Instruments, Borer, Crowbar, Drill, Metal Cutter etc. Set
    p. Pulley Block and Hoist - 2 pieces
    q. Asphalt Laying Machine - 1 piece
    r. Asphalt Carrier Dump Trucks (as needed)
    s. Asphalt Roller 10 t - 1 piece
    t. Asphalt Roller 5 t - 1 piece
    u. Road Watering Truck - 1 piece
    v. Grader Vehicle - 1 piece.

148. The civil works duration is defined as 18 month.

149. Camp and storage areas will be arranged on the project site.

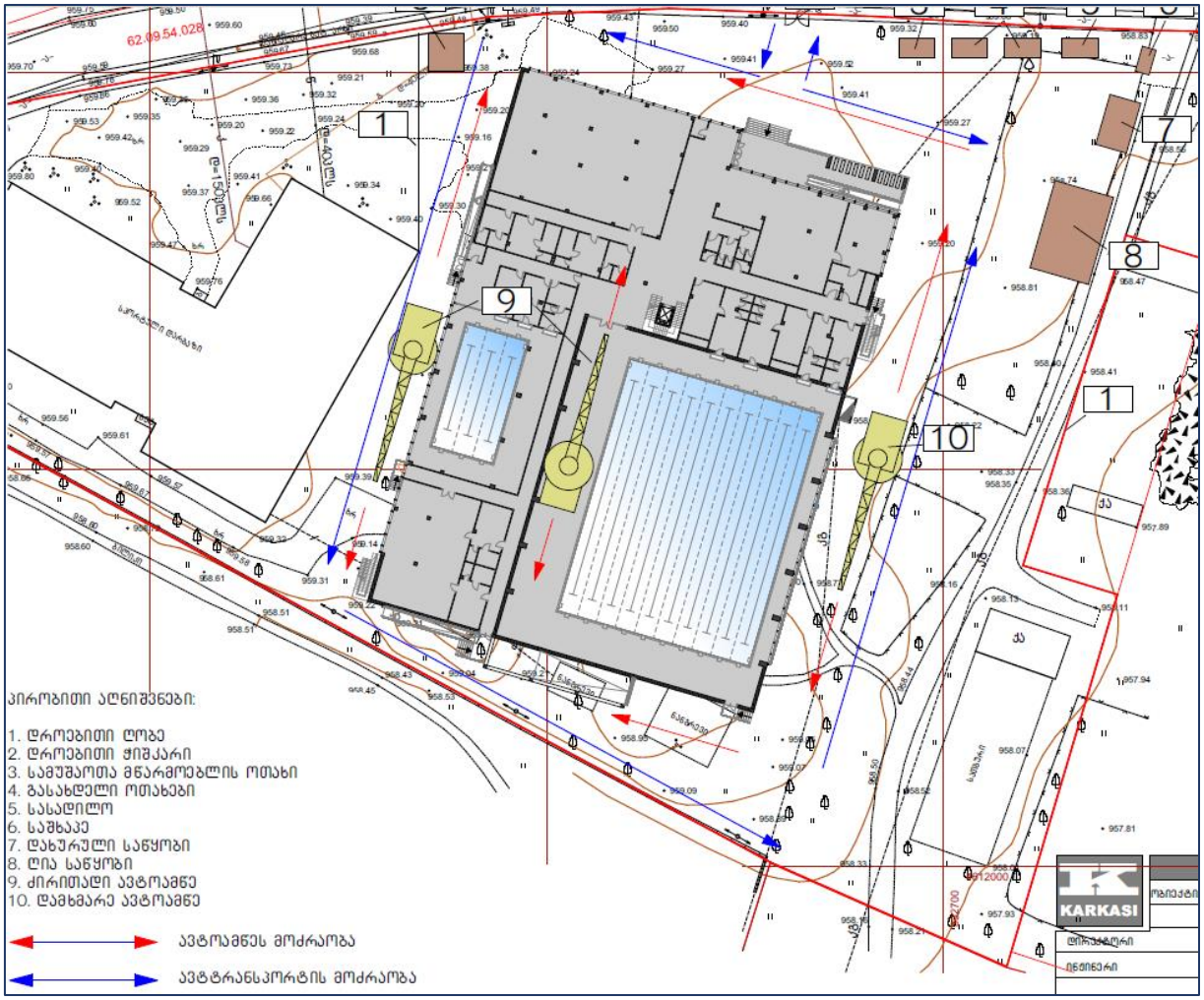


Figure 5. Construction site organization scheme, 1. Temporary fence; 2. Temporary gate; 3.Manager's room; 4. Dressing room; 5. Dining room; 6. Showers; 7. Warehouse; 8. Open warehouse.

150. An important stage of the project implementation is the management of different types of waste originated in the course of the construction. After the construction works are complete, the construction camp and other temporary facilities will be demobilized, the cultivation works will be done and the landscape will be harmonized.

C.4. Dumpsites

151. Dumpsites are not selected yet. There is a municipal solid waste landfill near Akhaltsikhe in village Chacharaki, managed by the Ltd `Solid Waste Management Company of Georgia``.

C.5. Access Roads

152. The land plot has an access from Aspindza Street, which borders the territory from the north (see fig. 1). Access road is in good condition. As already mentioned, the project area is located in urban area: Detailed traffic management plan shall be developed by contractor in accordance with his proposed working methodology and submitted to the engineer for approval.

C.6 Disposal of Spoil Material

153. Approximately 370.68 t construction waste will be generated due to the demolition works and 20 210 t excess soil will be generated due to the excavation works, will be generated due to the earthworks. According to the Waste Management Code of Georgia inert waste can be used for backfilling activities according to written agreement with local authority.

C.7. Camp and Storage Areas

154. Camp and storage areas will be arranged on the project site. Constriction site organization scheme and camp site management plan will be prepared by the construction contractor before commencement of construction activities. Camp sites will be selected keeping in view the availability of an adequate area for establishing campsites, including parking areas for machinery, stores and workshops, access to communication and local markets, and an appropriate distance from sensitive areas in the vicinity. Location of the camp site shall be agreed with supervision company and approved by ADB.

155. The Contractor will provide the following basic facilities in the construction camp:

- Safe and reliable water supply.
- Hygienic sanitary facilities and sewerage system.
- Facilities for sewerage of toilet and domestic wastes.
- Storm water drainage facilities.
- Sickbay and first aid facilities.
- Recreational areas.

D. ANALYSES OF ALTERNATIVES

The following section provides an assessment of different alternatives including the 'no action' alternative.

Specifically, this section of the IEE Considers:

- The 'No Action' Alternative
- Alternative Construction Camp and Laydown Areas

156. The construction site for the sport complex was selected by the local municipality taking into account the following circumstance: convenient location taking into consideration the *existing* infrastructure of the district, transport links, residential areas, enough area for construction of sport complex and parking arrangement. All required communications for swimming pool operation are already provided. The selected area is registered as a municipal property and now resettlement is required.
157. Construction of the sport complex has high importance for maintaining and implementing a healthy lifestyle for the population, which will also reduce youth drug addiction and alcoholism. New sports complexes will lead to the success of the athletes, which will be especially important for the young people living in region, as the representatives of the communities often have significant success in the international arena in a various types of sport, including water polo, synchronized swimming, etc.
158. As for the number of potential beneficiaries, based on the data of the National Statistics Office, according to 2020, 17.90 thousand persons live in Akhaltsikhe, 48% of men and 52% of women among them. The average age of population is 40 years. About 30% of the population are young people, under the age of 25. The share of the urban population is 100%.
159. Unfortunately, as a result of migration, the population of Akhaltsikhe has decreased by 36% compared with 1989. As of 2014, 52,414 people emigrated from Akhaltsikhe. The outflow of human resources from the city and region is still ongoing. Construction of new facilities similar to the one considered under this project, is very important for keeping people, especially young people in the City, that will be not possible in case of the zero alternative.
160. There is no swimming pool in Akhaltsikhe at present. This is why the whole population of Akhaltsikhe will benefit from the new swimming pool, especially as being a public entity, it can become part of municipal program, giving more access to, particularly young people.

E. BASELINE ENVIRONMENT

E.1. General description

161. Akhaltsikhe is located in southwestern part of Georgia, in Samtskhe-Javakheti Region. Akhaltsikhe is situated on the both banks of the river Potskhovi, which separates the city to the old city in the north and new in the south. Akhaltsikhe is situated 1000 m. above the sea level and covers 984 km2 area. To the north, Akhaltsikhe municipality is bordered by Kharagauli and Borjomi municipalities, and to the east by Borjomi and Aspindza municipalities. The southern border coincides with the Georgian-Turkish state border, while the western border is represented by Adigeni municipality. Akhaltsikhe is located 207 km away from the capital city Tbilisi, 168 km from Batumi, 89 km away from the border with Armenia and 12 km from the border of Turkey.

162. In 2014, Akhaltsikhe municipality signed the 'Mayors' Agreement' and joined the European campaign to voluntarily reduce CO2 emissions by 20% by 2020. To fulfil its obligations under the 'Mayors' Agreement', the municipality with the help of the international organizations and funds has implemented many projects, including the reconstruction of the municipal buildings to increase energy efficiency, and the renovation of the outdoor lights system using the LED lights.

163. The land plot allocated for the construction of the sport complex is located in the central part of the Akhaltsikhe. The land plot is owned by Akhaltsikhe municipality. Old building of the training hall and two small buildings without function are situated on the territory. Demolition of this buildings is envisaged by the project.

164. The area is on the right terrain, the maximum difference not exceeding 1 m.

165. The area is bordered by the Aspindza street and green area on the North. The stadium is located to the south-west of the project site. From the east the project site is bordered with non-agricultural lands with buildings owned by the state and used by state agencies.

166. The nearest residential buildings are located 62 m away from the project site.

167. Based on the Rapid Environmental Assessment (REA), no sensitive receptors are present on the project site. Moreover, there are not cultural heritage sites in the vicinity of the project site. According to the letter of National Agency for Cultural Heritage Preservation of Georgia #17/3478, August 22, 2019) no archaeological and cultural heritage site and artefacts are found on the land as a result of survey conducted by the specialists of the Agency. The nearest protected area – Borjomi-Kharagauli National Park is located approximately 15 km north from the Akhaltsikhe. The river Potskhovi flows 50 meters north of the project area. Aspindza street and green area are located between project site and river Potskhovi. Therefore, Construction Company will be responsible for providing baseline measurements before civil works commencement.

168. The Project is expected to have long-term positive impact on the population of Akhaltsikhe, especially young people.

E.2. Geology, Geomorphology and Hazardous Geological Processes

169. From the geotectonic point of view, the object of study is located in the southern subzone of the Lesser Caucasus folded system - Adjara-Trialeti folded zone.

170. According to the hydrogeological zoning, the study area is located in the hydrogeological region of the water-pressure system of Adjara-Trialeti folded zone and in the region of Akhaltsikhe artesian

basin of fissure waters. This basin is located within the Akhaltsikhe structural and morphological depression, which is bordered by the Meskheti, Trialeti and Arsiani ridges. The absolute elevation of Akhaltsikhe Depression reaches 900-1000 m, and of the surrounding ridges - up to 2800 m.

171. Stratigraphically, the area consists of Paleogene-Lower Eocene flysch, above which the volcanic sedimentary rocks of Middle Eocene and the sand clay complex of Upper Eocene are located. Oligocene sand clay sediments as well as Neogene volcanic formations are well represented in the central part of the area. At the tops of the ridges, in some parts, there are erosive residues of andesite-basalt lavas. In the valleys of the rivers Mtkvari, Potskhovi, Koblianis-Tskali, etc., Older Quaternary terraces are observed, and in their floodplains there are loose sand clay sediments.

172. The area is poor in groundwater due to poor hydration and lack of good collectors. The main source is groundwater, which is common in modern alluvial sediments of rivers, in the lava layers of andesite basalts, in the form of fissure waters, and in the eluvial zones of Middle Eocene volcanic formations. These waters are weakly mineralized, have a hydrocarbon-calcium composition; they are not aggressive.

173. A powerful water-containing complex is the volcanic-sedimentary series of Middle Eocene. These sediments crop out in the elevated areas, and within the Akhaltsikhe Depression, they sink under the virtually waterproof clay deposits of Upper Eocene and Oligocene. At the edges of the basin, the horizons of this complex contain weakly mineralized, hydrocarbonate-sodium-calcium waters. The same horizons, in deep-seated areas, contain thermal waters of identical chemical composition (springs of Abastumani, Tskaltbila, etc.); The water temperature in the exits, which mainly belong to the arched parts of the anticlines, reaches 500C. These waters are associated with natural gases, the major part of which is airborne nitrogen.

174. In the central part of the artesian basin, near Akhaltsikhe, in the tectonic fault zone, hydrocarbon-chloride-magnesium-carbonate water is released from alluvion, which covers volcanic sedimentary formations of the Middle Eocene. In general, it should be noted that large amounts of carbon dioxide are present in the area, which is associated with tectonic faults.

175. Based on the scheme of dividing the territory of Georgia into seismic districts Akhaltsikhe city is located on a magnitude 8 area

176. Two engineering-geological elements are distinguished on the territory.

- Layer 1 – embankment that is lithologically represented by stony grounds and filled with loam.
- Layer 2 – diluvial yellow-brown loam with occasional pebbles.

177. Based on geological composition and geomorphological features, the project site is in satisfactory conditions since there are no apparent negative engineering-geological processes (landslides, karsts, collapsing ground etc).

178. No groundwater was found during drilling but it is possible that after opening the basin water will start flowing and it will be necessary to get rid of it.

E.3. Climate and Air quality

179. In most parts of the municipality, mountain steppes climate is represented. Winters are cold and summers are long and warm. The average temperature in January - the coldest month of the year, is 3.80C, and in the warmest month, August - 20.50C. The average annual precipitation is 520-600 mm, the maximum precipitation falls in May and June (64-86 mm), and the minimum in the winter

(20-25 mm). Snowfall is rare.

180. There is no automatic station for monitoring air quality in Akhaltsikhe. Poor quality of the ambient air was observed in November, 2019 at Rustaveli street as a result of indicative measurements (high Indexes of nitrogen dioxide and C6H6) (http://air.gov.ge/).

Table 14. Average annual concentrations of pollutants, results of indicative measurement, 2018, source: National Environmental Agency

	NO_2 (µg/m³)				SO_2 (µg/m³)				O_3 (µg/m³)			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Rustaveli Str	43,08	39,84	29,66	43,94	<2,46	2,36	<2,17	<2,83	50,13	44,85	58,29	14,18
Ioane Atoneli and Antimoz Iverieli Str	10,53	15,79	11,36	21,64	<2,46	2,36			70,03	70,42		
9 April Str	20,01	23,79	21,12	30,06							75,15	19,84

E.4. Noise and Vibration

181. Noise and vibration surveys will be conducted by civil works contractors before starting of civil works to identify background level on each project site. Noise and vibration levels, generated by operation of the various construction machines/mechanisms at various stages of construction will be assessed. Considering the background noise, the expected level of noise, as well as vibration caused by construction will be assessed at the nearest residential buildings. The contractor will develop site-specific noise and vibration management plan. Site-specific noise and vibration management plan will include results of baseline survey, noise and vibration level assessment and appropriate mitigation measures (if any) to be introduced based on the results. The contractor will conduct monitoring of the noise and vibration level during the construction. Based on monitoring results site-specific noise management plan will be updated and appropriate mitigation measures defined and implemented (if needed).

E.5. Soils

182. According to the results of soil pollution monitoring on the territory of Georgia (NEA, 2017), the condition of soil contamination with heavy metals is as follows:

Table 15. Soil pollution by heavy metals (Source: National Environmental Agency)

	Cu, (Mg/Kg)	Zn (Mg/Kg)	Pb (Mg/Kg)	Mn (Mg/Kg)	Fe (Mg/Kg)	PH
Entrance to	27.38	72.22	11.62	280.22	1.09	7.36

the city						
4, Ketskhoveli Str.	24.07	54.16	20.56	414.24	1.16	7.47
At the central station	23.59	58.23	7.53	643.07	1.69	7.62
At "Gulf" petrol station	39.79	80.58	29.53	279.53	1.06	7.40
Exit of the city	21.02	49.55	17.77	197.20	0.67	7.55

E.6. Hydrology

183. Akhaltsike lies on the banks of river Potskhovi. The total length of the river is 64 km. The area of the basin is 1840 km2. River Potskhovi originates in Turkey, on the eastern slope of the Arsiani Range, at 2,720 meters above sea level. Joins to the river Mtkvari from the left. It feeds on snow, rain and groundwater. Characterized by floods in the spring and flashfloods in August-November. About 54% of the annual runoff falls in spring, 25% in summer, 12% in autumn, and up to 9% in winter. Ice Age, Toshi and Dzgifi are from December to mid-March, with an average annual flow at the confluence of 22.4 m / s.

184. The river Potskhovi, flows approximately 50 m away to north from planned sport complex. There are Aspindza street and green area between project site and river Potskhovi.

E.7. Biological Environment

185. The sport complex will be constructed in the urban modified area. Existence of the significant components of biodiversity is less expected on the project site. Additional measures (if needed) to protect flora and fauna species will be defined and included in the SSEMP.

186. The impacts on vegetation during the construction phase will be minor. There are several trees (poplar and willow) within the project area. None of them is included in the Red list of Georgia. Cutting of some trees will be required due to the sport complex construction. The construction contractor will submit all required documentation to Akhaltsikhe City Hall to obtain relevant permit. Contractor will required to implement compensation measures for tree cutting as defined by the permit and ADB policy requirements.

E.8. Socio-Economic Environment

Population

187. Based on the data of the National Statistics Office, according to 2020, 17 903 persons live in the city of Akhaltsikhe, out of which 52.5% women and 47.5% man among them. The demographic situation in the region is negatively affected by internal and external migration, caused by difficult social conditions and unemployment.

188. Majority of population is Georgian (71.7%), followed by Armenians (26.7%) and Russians (0.4%) and others (1.2%).

189. Unemployment, the level of which is still high, remains the city's main socio-economic problem.

The unemployment rate in Samtskhe-Javakheti is 5,5%, which is lower as the national rate.

Economics

190. Judging on statistics about Samtskhe-Javakheti Region as a whole, since 2009 the GDP of this Region has grown significantly: in 2009 its GDP constituted 477.4 million GEL, while in 2019 it made up 1380.3 million GEL.

191. Industry is the leading sector of economy in the district with small enterprises of extractive and manufacturing industries. Agriculture is also developed in the municipality, with leading fields of: fruit-farming, winegrowing, market-gardening, and stockbreeding.

192. The area is rich in minerals such as: agate, diatomite, brown coal, gypsum and more.

193. Akhaltsikhe 500/400/200 kW sub-station and high-voltage transmission lines were recently built within the Black Sea Transmission Network Project (BSTN) frames.

194. The region also has coal reserves in the Vale-Akhaltsikhe basin, with around 71.3 million tons of resources, though the mine is currently not operating.

195. The higher education institute is 'Akhaltsikhe State Educational University'.

E.9. Infrastructure

196. A branch of the Georgian Railway 'Khashuri-Akhaltsikhe-Vale' (60 km in length) is functioning in Samtskhe-Javakheti for cargo and passenger transportation. "Marabda-Akhalkalaki" railway stretch is being rehabilitated (178km).

197. Akhaltsikhe is connected by transportation lines with Georgian capital, using which the freight turnover is performed. Akhaltsikhe is the transit traffic city as well. In particular, transport coming in from the territory of Armenia gets across to Ajara via the Goderdzi Pass. Trailers guiding towards Azerbaijan and Armenia are coming in from Turkey, while transport directed to Turkey through the Vale custom-house has to cross the territory of the city.

198. The city of Akhaltsikhe is administrative, economic, political and cultural center of the Samtskhe-Javakheti Region. This is conditioned by convenient geographic location of the city, being at the crossroad between Kartli, Javakheti, Ajara-Imereti. The highways coming from Turkey and Armenia are joining in Akhaltsikhe, making this city an important transportation junction. The city is permanently overloaded with the local or transit vehicles.

199. The disposition of the city, being at the crossroad of region's central and the state highways, and the lack of circuit road causes the daily traffic of vehicles riding through the Region at the territory of the city. Due to the proximity of Armenia, Turkey and Adjara the number of vehicles is always significant.

200. Presently there are 95 streets, side-streets, blind lanes and highways at the territory of the city with the total length of 51.994 km, from which 49.35% (25.660 km) are coated with asphalt, 6% (8.92 km) are under rehabilitation and 26 km (19%) are planned to be restored.

E.10 Tourism

201. The majority of tourists are interested with the fortress of Rabati and other historical monuments.

Large portion of visitors is arriving from Germany, the Ukraine, Russia, France, Poland, Israel and the United States.

Figure 6. Visitors statistics, 2015-2018, source: *https://www.akhaltsikhe.gov.ge/*

202. Tourism infrastructure within the region is deficient with few accommodation facilities or products – camping places, guesthouses, family hotels or hotels - available.

E.11 Cultural heritage

203. Akhaltsikhe city history dates back to the IX century. However, the city is not mentioned by its name in the Georgian sources of that period. According to Vakhushti Batonishvili, the city was probably given another name – Lomisa. According to 'Matiane Karlisai' (history chronicles), the city was built by Gvaram Mamfal in the IX century. The city occupies both banks of the river. The left bank is mountainous and here lies the old city with the so called Rabati and the Great Fortress, which previously housed the Akhaltsikhe Palace. The right bank is a plain. The city districts were built here in the XIX century, and this area is also surrounded by hills.

204. Some parts of the city are located on the slopes of these hills. Today, Akhaltsikhe city is an important cultural center. Most tourists are attracted to the Rabati Castle. A fortress, a palace, a mosque and a synagogue remain in the old part of the city. The Jakeli Fortress (XIII-XIV centuries), St. Marine Church, Samtskshe-Javakheti Historical Museum, as well as the Akhaltsikhe Eparchy Cathedral are also located in AKhaltsikhe.

205. In case of finding any artefacts of potential archaeological value, following steps are taken:

- Construction workers are obliged to stop works and immediately report to the Supervision Company.
- Archaeological supervisor executes first checking of the finding and the site where finding was made;
- In case the finding has no potential archaeological value, the Archaeological Supervisor reports to the Chief Engineer and the works are restarted. Appropriate record regarding the case is made in record book.
- In case if the finding is estimated as potential archaeological relic, the Archaeological Supervisor reports to Chief Engineer of the Construction Contractor and to MDF Environmental Specialist (and supervising company / Engineer) requesting to stop construction activities and to inform the Ministry of Education, Science, Culture and Sport

of Georgia about the incident.

- Chief Engineer of the Construction Contractor also reports to MDF informing about the stopped operations and requesting immediate engagement of Agency of Cultural Heritage Preservation of Georgia;
- Agency will assign expert or group of experts and conduct necessary archaeological works at the site to identify the problem.
- In simpler cases, after removal of the movable artefacts, fixing materials and conducting other required works, the experts of the Agency will issue decision on recommencement of stopped construction works.
- In exclusive cases of valuable and spatially spread findings, agency may issue request to relocate the project works on a safe distance from the archaeological site.

F. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

F.1. Methodology

206. The IEE process consisted of the six main activities that are common for similar studies conducted according to the international standards:

    1. Collection of baseline data describing biophysical and social environment within the study area; desk studies and field surveys to address identified gaps in the existing data; update of information on topics and areas where significant negative impacts are expected.
    2. Identification of the expected positive and negative impacts of the proposed works; assessment of the likelihood and significance of the potential negative impacts; and development of mitigation measures.
    3. Analysis of alternatives in terms of location, technology, design and operation, including the "no-project" alternative.
    4. Development of the Environmental Management Plan.
    5. Drafting of the IEE report.
    6. Information disclosure and stakeholder consultation

207. The description of each impact will have the following features: (i) Type of activities (ii) scale of activities; and (iii) project area.

208. The general methodology used for impact assessment is described in Attachment 1. It describes the process of impact identification and definition, significance rating, the mitigation, management and good practice measures. Wherever the Project is likely to result in unacceptable impact on the environment, mitigation measures are proposed (over and above the inherent design measures included in the Project description). In addition, good practice measures may be proposed however these are unlikely to change the impact significance. In the case of positive impacts, management measures are suggested to optimize the benefits to be gained.

209. The following mitigation hierarchy will be utilized in selecting practical mitigation measures for unacceptable impacts as follows (in order of preference):

    i. Avoid the impact wherever possible by removing the cause(s).
    ii. Reduce the impact as far as possible by limiting the cause(s).
    iii. Ameliorate the impact by protecting the receptor from the cause(s) of the impact.
    iv. Providing compensatory measures to offset the impact, particularly where an impact is of high significance and none of the above are appropriate

F.2. Summary of Activities and Anticipated Impacts

210. This project will have an important positive impact on population of Akhaltsikhe through modernization of public infrastructure that is important for stimulating the growth of local economy.

211. A local residents living in 60-120 m to the east from the project area are most likely to be impacted by the project's development activities, which is related to the noise and emissions generation and

traffic influx. However impact of this adverse effects can be minimized by proper implementation of mitigation measures.

212. Some temporary impacts associated with construction works will occur. To deal with those impacts during pre-construction, construction and operation phases, mitigation is proposed as necessary and described in this chapter. Activities to be performed within the scope of the Project were examined in 3 phases:

Phase 1: Pre-Construction activities

213. The potential environmental effects of the pre-construction activities, such as contractor office set ups, necessary equipment stacks, sites preparation, and the adequacy of the accesses have been considered and all these activities will not deteriorate the existing conditions of the environment.

214. Number of pre-construction surveys, including noise and vibration, soil contamination, air pollution, flora and fauna species survey will be carried out by contractor prior to the commencement of construction works.

215. During the construction existing roads should be used, including transportation of material to the site.

Phase 2: Construction works

216. Environmental effects likely to occur during the construction of the Project are noise, vibration, dust, solid and liquid wastes. Community health and safety will be an important issue during construction phase as public buildings are located near the project site. Effects likely to occur during the construction phase are short term effects and they cannot deteriorate the existing conditions.

Phase 3: Operation

217. Possible environmental effects during operational phase arise from maintenance of arranged infrastructure and will be related to generation of solid wastes and wastewater.

218. This paragraph provides a brief description of anticipated site-specific impacts related to the different phases of the project (see Table 16).

Table 16. Brief description of anticipated site-specific impacts related to the phases of the project

Construction stage						
Site	Activity	Environmental Aspect	Impact	Probability	Risk	Notes
Sport-Complex Site	Earthworks	Excessive soil	Moderate	High	Moderate	Excessiv soil will be disposed at preliminary selected and agreed sites
	Construction works	Dust, noise, vibration	Moderate	High	Moderate	No sensitive receptors in proximity
		Pollution of surface water	Minimal	Minimal	Minimal	No sensitive receptors in proximity

		Impacts on Archaeological and CH Sites	Minimal	Minimal	Minimal	No sensitive receptors in proximity
		Flora and Fauna	Minimal	Minimal	Minimal	No sensitive receptors in proximity
		Infrastructure and Transport	Moderate	Moderate	Moderate	No sensitive receptors in proximity
		Waste	Moderate	Moderate	Moderate	No sensitive receptors in proximity
		OHS / Community Health and afety	Moderate	Moderate	Moderate	No sensitive receptors in proximity
		Emergencies	Moderate	Moderate	Moderate	No sensitive receptors in proximity
		Landscape visual change	Moderate	Moderate	Moderate	No sensitive receptors in proximity
Construction camp	operation	Solid waste	Moderate	High	Moderate	No sensitive receptors in proximity
Operation stage						
Sport-Complex Site	Operation	Generated traffic	Minimal	Moderate	Minimal	No sensitive receptors in proximity
		Risk related to the waste and wastewater pollution	Minimal	Moderate	Minimal	No sensitive receptors in proximity
		Emissions	Minimal	Minimal	Minimal	No sensitive receptors in proximity
		Noise and vibration	Minimal	Minimal	Minimal	No sensitive receptors in proximity

F.3 Required Environmental Documents

219. The Contractor, prior to the onset of the construction, is obliged to conduct a number of studies and develop plans, including:

1. Site-specific environmental plan (SEMP

2. Traffic management plan

3. Noise and vibration management plan

4. **Inventory of the trees to cut down (if required)**:: must be submitted to Akhaltsikhe municipality mayor office and in case of Red Listed species tree cutting will required - to MoEPA, who will issue relevant permit and specify the tree planting compensation fee.
5. **Waste Management plan** – Generation of significant amount of inert waste is expected during earthworks within the project. Approximately 370.68 t construction waste will be generated due to the demolition works and 20 210 t excess soil will be generated due to the excavation works, which should be transported and disposed outside of the project site. According to the Georgian legislation, inert waste can be used for backfilling operations or constriction purposes in coordination with a state or a municipality authority. Inert waste disposal site for backfilling operation shall be defined by the Akhalstikhe municipality mayor office. Waste Management Plan should be developed and submitted to the MoEPA for adoption if amount generated waste will exceed limits defined by Georgia legislation (more than 1000 t of inert waste, more than 200 t of non-hazardous waste and more than 120 kg of hazardous waste).
6. **Asbestos-Containing Waste Management Plan** will be prepared if the asbestos-containing materials are fixed present at the project implementation stage.
7. **Health and safety management plan and anti-COVID-19 measures;**
8. **Emergency response plan**
9. **Camp site management plan**
10. **Technical report of the stationary sources of harmful substances emitted into the atmospheric air (if necessary)** to be submitted to the MoEPA for approval.

220. The contractor will be required:

- to employ Environmental Consultant responsible for developing and implementing the construction phase SEMPs and other required plans and for providing the corresponding information to MDF and SC.

221. License for extraction of the ground water should be obtained by the Akhaltsikhe municipality at the operation phase.

F.4. Air quality

Impact

222. Construction activities involves the use of heavy machinery, bulldozers, excavators, graders needed for land clearance and other earthworks, vehicles and equipment to transport construction materials, workers, remove debris from the work area. The operation of heavy machinery, vehicles and other construction equipment result in f exhaust emissions of carbon monoxide, NOx, SO2, hydrocarbons, and particulate matter.

223. Dust generation during the construction works is associated with:

1. Earthworks, including topsoil stripping, excavations in cuts;
2. Transportation and storage of excavated ground (topsoil and subsoil to the storage locations; spoil to the disposal sites);
3. Transportation of fine materials (sand, gravel, cement etc.) from supplier sites;
4. Storage of construction materials.

224. Emissions and dust generation may affect buildings located close to the construction site and residential areas along the material transportation routes. The vehicle and equipment emissions and dust are typical for any construction activities. The main receptors are representatives' offices, shops, residential houses located near the project site. A distance of 10-20 m from the border of construction site. This impact is temporary and is estimated to be medium scale if not properly mitigated. In case of application of good construction practices the impacts could be minimized to minor and acceptable level.

Mitigation

225. Relatively high impact is connected with the dust emissions, which hardly can be quantified. However, it is obvious that the earth and demolition works, as well as transportation of gravel and other inert materials from borrow-pits and construction waste to landfill will impose nuisance related with dust. This is temporary impact, and should be mitigated by following measures:

- Damping down using water bowsers with spray bars or other technical means;
- Sheeting of construction materials and storage piles;
- Installation of dust screen enclosure during demolition;
- Materials transported to site will be covered/ wetted down to reduce dust;
- The construction site will be watered as appropriate;
- Protective equipment will be provided to workers as necessary;

226. If deemed necessary in dry conditions or where significant quantities of dust are being or are likely to be produced mitigation additional measures will be arranged with the Construction Manager.

227. Emissions of heavy machinery involved in the construction should be managed by proper engine maintenance practice and usage of good quality fuel. The work of engines in a no-operation mode should be excluded. Vehicle refueling will be undertaken so as to avoid fugitive emissions of volatile organic compounds through the use of fuel nozzles and pumps and enclosed tanks (no open containers will be used to stored fuel). All vehicles will be checked and repaired in case of need to eliminate increased emission due to damaged parts; Defined haulage routs will be used and vehicle speed will be reduced where required. Materials will be transported to site in off peak hours;

Operation Phase

228. In the operation phase, minimal impact on ambient air quality is expected. Boiler to be supplied within the project will aligned to EU specifications on emissions.

F.5. Noise and Vibration

Impact

229. The operation of construction equipment and transport vehicles and the construction methods employed during construction phase will likely cause increase of noise level. The impact receptor are residential houses. The nearest of which is located at a distance of about 25 m from the project site.

230. There could also be noise impacts along routes used by heavy vehicles bringing equipment and materials to site. Access routes to construction sites should therefore be planned with the objective of avoiding any buildings or locations that may be specially vulnerable to noise

disturbance (schools, hospitals, etc).

231. Evaluation of construction related noise relies upon known information on the noise produced by various equipment and activities at individual stages of construction. For example noise levels produced at 50 ft (15.24 m) as provided by the U.S. Department of Transportation, FHWA, CADOT, and SBAG 1993; and Country Sanitation Districts of Los Angeles County 1994 are about:

Souce of noise	Equivalent noise level, dBA
Backhoes	84 – 85
Bulldozers	84 – 85
Graders	91 – 92
Compressors	80 – 88
Jackhammers	85 – 98
pile drivers	96 - 107
Compacters (rollers)	72 – 75
Front loaders	72 – 83
Tractors	78 – 95
Scrapers, graders	80 -95
Pavers	85 – 88
Trucks	83 - 93
Compressors	75 - 88
crane, movable	75 – 85
Hammer drills	82 - 98
Vibrator	82 - 98
Saw	72 - 82

232. These noise levels at the distance of 7 meters from the noise source obviously exceed the allowed standards.

233. Noise generated by mobile sources naturally attenuates at a certain distance. Attenuation follows logarithmic pattern. In case of construction related noise, point source propagation model should be applied. Point-source propagation can be defined as follows:

Sound level 1 – Sound level 2 = 20 log r_2/r_1.

234. This means that for every doubling of distance, the sound level decreases by 6 dBA ("inverse square law").

Distance from the Edge of the Construction Ground, m	Predicted Noise Level Average Value – dBa	Predicted Noise Level Maximum Value - dBa	Allowable Norm [3]
5	80	90	During the day – 50 dBA. During the night time – 40 dBA
10	74	84	
20	68	78	
40	62	72	
80	56	66	

[3]Technical Regulation on Acoustic Noise Standards in Residential Premises and Public Buildings approved by Resolution of the Government of Georgia №398 of 15 August 2017

160	50	60	

235. As a result of rough estimation of construction related noise, we can assume that 68 dB noise (average value) is generated at a distance of 20 m from the work-site and 50 dB (average value) noise at a distance 160 m. Nearest residential houses that are situated at a distance 62 m from construction site will affected by the noise increase during construction phase. Noise level at the residential houses situated at 160 m distance from the project-site will not exceed allowable limits.

236. A number of circumstances should be considered that makes it possible to conclude that the construction activities will not cause a significant negative impact on receivers, namely:

- Construction works will be implemented only during daytime;
- The main sources of noise are less likely to work simultaneously. Even then, it will not be a long-lasting process;
- Impacts caused by noise propagation during the construction phase will be of short term.

237. Noise propagation will cause negative impact on construction stuff. The noise level at the construction site may reach 95 dBA. Personnel employed on the construction (especially when working near the equipment causing significant noise), will be equipped with safety equipment (ear-flaps).

238. It is not possible to eliminate the emission of noise from a construction sites entirely; nevertheless, mitigation measures should be implemented to reduce the impact on public service hall and health care facility.

239. Mitigation measures against noise propagation will be applied during construction phase, allowing to reduce expected “medium” level impact to “low”.

Mitigation

240. It is recommended to implement the following mitigation measures in order to minimize noise levels during the construction phase:

- Ensure proper maintenance of the machinery;
- Implement works that cause noise during the daytime only;
- Limit implementation of noisy works simultaneously;
- Identify the period for the construction works causing the noise, taking into account social (Sunday and holidays) issues;
- The working time and construction schedule must be arranged rationally, and all engineering entities shall make reasonable arrangements for working time, and engineering activities after 22:00 hours through 8:00 hours the next day shall be strictly prohibited, except as required by the proposed project.
- Prior to implementing noisy works, warn the affected population and provide additional explanation if required;
- Locate generators and other noisy equipment away from sensitive receptors;
- Arrange temporary barriers (screens) between a significant noise source and the receivers, if necessary. The screens can be arranged by using a variety of structures (e.g. shields made

from wood materials). The quality of noise protection depends on on the material type and thickness of the boards.

- For instance:
  - Fencing by pine boards (with thickness of 30mm – 12 Dba);
  - Fencing by oak boards (with thickness of 45mm - 27 Dba);
- If necessary, equip personnel with proper protective equipment;
- Frequently switch personnel deployed at noisy works to reduce cumulative exposure;
- Instruction of the personnel prior to the beginning of construction works and then, after every six months;
- Special training can be provided by supervision company related to project-specific noise requirements, specifications, and/or equipment operations, including measurement of construction-related noise levels that may be required to meet the contract specifications.
- As for implementation of the works nearby sensitive receptors including residential, educational and medical facilities, if the noise, vibration and dust level exceeds the permissible level, the construction works must be stopped and additional mitigation actions must be executed. The construction works will not be resumed unless the noise level reaches the norms.
- In case of complaints, record them and take appropriate action to address them.

241. Source control is, in general, the most effective form of noise mitigation and involves controlling a noise source before it is able to emit potentially offensive noise levels. Construction noise is typically generated by two source types: (i) Stationary equipment; and (ii) Mobile equipment.

242. Less noisy equipment: One of the most effective methods of diminishing the noise impacts caused by individual equipment is to use less noisy machinery. By specifying and/or using less noisy equipment, the impacts produced can be reduced or, in some cases, eliminated. Source control requirements may have the added benefits of promoting technological advances in the development of quieter equipment.

243. *Mufflers:* Most construction noise originates from internal combustion engines. A large part of the noise emitted is due to the air intake and exhaust cycle. Specifying the use of adequate muffler systems can control much of this engine noise.

244. *Shields:* Employing shields that are physically attached to the particular piece of equipment is effective, particularly for stationary equipment and where considerable noise reduction is required.

245. *Aprons:* Sound aprons generally take the form of sound absorptive mats hung from the equipment or on frames attached to the equipment. The aprons can be constructed of rubber, lead-filled fabric, or PVC layers with possibly sound absorptive material covering the side facing the machine. Sound aprons are useful when the shielding must be frequently removed or if only partial covering is possible.

246. *Enclosures:* Enclosures for stationary work may be constructed of wood or any other suitable material and typically surround the specific operation area and equipment. The walls could be lined with sound absorptive material to prevent an increase of sound levels within the structure. They should be designed for ease of erection and dismantling.

247. In some situations, such as in urban areas or on isolated sections of a project it may be beneficial and necessary to construct barriers adjacent to the work area or at the right-of-way. These can take the form of natural shielding, temporary shielding, and/or permanent shielding.

248. Temporary abatement techniques include the use of temporary and/or movable shielding for both specific and nonspecific operations. Some mobile shielding is capable of being moved intact or being repeatedly erected and dismantled to shield a moving operation. An example of such a barrier utilizes noise curtains in conjunction with trailers to create an easily movable, temporary noise barrier system.

249. Special training can be provided by supervision company related to project-specific noise requirements, specifications, and/or equipment operations, including measurement of construction-related noise levels that may be required to meet the contract specifications.

250. The working time and construction schedule must be arranged rationally, and all engineering entities shall make reasonable arrangements for working time, and engineering activities after 22:00 hours through 8:00 hours the next day shall be strictly prohibited, except as required by the proposed project.

251. As for implementation of the works nearby sensitive receptors including residential, educational and medical facilities, if the noise, vibration and dust level exceeds the permissible level, the construction works must be stopped and additional mitigation actions must be executed. The construction works will not be resumed unless the noise level reaches the norms.

Operation phase

252. The main source of noise propagation during the operation of sport complex will be pumps and central air conditioners. The main receptor of noise impact will remain the same - the nearest residential houses.

253. To reduce noise level boiler with pumps will be installed in separate space and central air conditioners and pumps will installed in the basement of the pool building. All pumps will be equipped with a vibration damper. Noise suppressions will be installed on the main air vents of central conditioning system.

254. Consequently, there will be no significant noise impact (expected “low” impact). However, certain mitigation measures should be carried out in the operation phase.

255. Though, exceeding of noise levels near the sensitive receptors is not expected during the operation phase, following mitigation measures will be implemented:

- High-quality pump installations will be arranged within the territory of the sport complex. Much less noise is generated from pumps, which are made of stainless steel or cast iron. Low-cost pumps, which are made of thin steel sheets produce more noise;
- During the installation of pumps, noise-insulating material such as foam plastic will be used as far as possible;
- Pumps will be arranged on vibration isolation platforms, for which thick rubber sheets can be used;
- If necessary, equip personnel with proper protective equipment;
- Frequent change of personnel that are employed for noisy works;
- In case of complaints, they should be recorded and appropriate action should be taken.

Vibration

256. According to the project design, the pneumo-wheel excavator, concrete mixers and concrete pump will be used for excavation and constriction works that will be certain vibration sources in the construction phase. Vibration due to excavation and constriction works will principally affect workers and should not have an impact on nearby structures, as they affect areas contiguous to the machine activity within a radius of 5 m. The closest buildings are more than 20 m away from the construction area

F.6. Water quality

Impact

257. During implementation of the project the risk of surface and ground water contamination is of minimum level. The surface and ground water may be contaminated due to improper placement of the excavated soil, poor management of construction camp, and improper storage of construction materials and leakage of fuel and lubricates from construction machinery.

Mitigation

258. The following mitigation measures shall be implemented:

- Where works are in progress, erosion control and sedimentation facilities including sediment traps and straw bale barriers or combinations thereof will remain in place;
- Lubricants, fuels and other hydrocarbons will be stored at least 50m away from water bodies.
- Topsoil stripped material shall not be stored where natural drainage will be disrupted.
- Solid wastes will be disposed of properly (not dumped in streams).

259. During the construction phase the Contractor will be required to construct, maintain, remove and reinstate as necessary temporary drainage works and take all other precautions necessary for the avoidance of damage to properties and land by flooding and silt washed down from the works. The Contractor will responsible for ensuring that no construction materials or construction waste block existing drainage channels within the project site.

Operation phase

260. No risks of surface water contamination is expected during operational phase.

261. License for extraction of the ground water should be obtained by the Akhaltsikhe municipality at the operation phase.

F.7. Soil Quality and Topsoil Management

Impact

262. Soil pollution may occur as a result of spills, improper waste management, oil leakages from the old outdated techniques or other actions.

263. Soil pollution may occur due to the relocation or replacement of the underground infrastructure on the project sites, as a result of an accidental damage of the pipe(s) or improper management of the polluted soil.

264. Topsoil loss may occur as result of earthworks such as land clearance works, grading, excavations.

Mitigation

265. The following practices will be adopted to minimize the risk of soil contamination and topsoil loss:

- The top soil of about 0.3 m depth shall be removed and stored separately during excavation work, and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas;
- In order to avoid the topsoil erosion, the height of fill must not exceed 2 m and the inclination of the fill slope must not exceed 45o;
- Water-diversion channels will be made along the perimeter of the topsoil fill and will be protected against the scattering by the wind blow;
- In case of storing the topsoil for long, measures must be taken to maintain its qualitative properties. Periodic loosening or grass sowing is meant;
- Subject to advance consent of the local self-governance authorities, the excess topsoil if remained will be used at other project sites or handed over to the appropriate authorities.
- Use of non-faulty construction techniques and vehicles;
- In case of spills of oil/lubricants, the spilled product will be localized/cleaned in the shortest possible time.
- The appliances creating the risk of ground water pollution when in operation will be equipped with drip pans;
- The vehicles must be preferably washed at private car washing areas;
- Using temporal water diversion channels;
- Filling the holes in a timely manner.

Operation phase

266. No risks of soil contamination is expected during operational phase.

F.8. Biological Environment

Impacts

267. The impacts on vegetation during the construction phase will be minor. There are several trees (poplar and willow) within the project area. None of them are included in the Red list of Georgia. Cutting of some trees will be required due to the sport complex construction.

Mitigation

268. The construction contractor will submit all required documentation to Akhaltsikhe City Hall to obtain relevant permit. The permission document will include the compensation measures based on the presented inventory. The compensation fees will be paid within the scope of the project as well as compensation activities will be implemented by the construction contractor in accordance with ration provided by ADB.. The trees shall be cut under supervision of designated specialist.

Operation phase

269. No risk of damage of biological environment is expected.

F.9. Waste Management

Non-hazardous waste

270. Non-hazardous construction waste will generate on the construction area and will be collected by contractor's workers. Storage of such wastes in area close to settlement and untimely or improper disposal may impact on air quality, dust generation and disturbance of neighboring settlements. In addition, waste from packing materials and woods also will be generated.

271. **Inert construction waste** will be accumulated during the earth works. Such waste include excess ground, bricks, concrete debris.

272. **Non-hazardous construction waste** shall be managed according to the waste management plan approved by the MoEPA. Inert construction waste can be used for backfilling activities according to written agreement with local authority. All other types of non-hazardous waste must be disposed on the landfill according to the written agreement with landfill management unit.

273. Disposal of construction wastes both on the sites and at the temporary storage facilities has to meet the following requirements:

    - Place of disposal of the waste must be enclosed;
    - The waste must not have access to drainage water;
    - Waste must be immediately removed from the working sites;
    - Waste can be transferred only to a certified contractor.

274. **Municipal solid wastes** and waste waters will be generated at the construction and camp sites. Mainly this is rubbish, plastic or glass bottles, glasses, waste food, etc. Improper wastes management may cause the spread of infectious diseases, emergence of insects and parasites in construction camp sites. In addition, it may lead to conflict with local population.

275. Municipal waste should be collected both by the specially assigned personnel and the workshop workers on the area. The waste will place into 0.24 m3 plastic containers and further a local Sanitary Service will takes it to landfill. The following should be taken into account:

    - Generation of dust should be avoided;
    - Plastic containers should be closed to prevent spread of the smell and also to avoid contact of rodents and insects with the waste.
    - The personnel involved in the handling of hazardous and non-hazardous waste will undergo specific training in waste handling, treatment and storage;
    - Burning of waste on any construction site is forbidden with the exception of stub and small branches from felled trees and bushes, which is better to be burned in order to avoid pest dissemination.

Hazardous waste

276. No large amounts of hazardous waste are expected to originate in the project construction phase. This waste must be handed over to the contractor having the relevant license. During construction phase hazardous wastes may be generated from vehicle operation and maintenance, as well as on construction camp.

277. Hazardous waste should be stored, transferred to licensed companies, transported, and disposed

in compliance with legislative requirements and by following the rules for hazardous waste management.

278. Hazardous waste must be collected and temporarily placed in the pre-selected, agreed area with consideration of requirements applicable to each waste type. The area allocated for temporary storage of hazardous waste shall have special preventive measures implemented, in particular, containers shall have secondary containment and no mixing of hazardous waste with any other waste shall be allowed. Hazardous waste containers shall be checked for tightness. The staff involved in hazardous waste management shall be trained in waste management and safety issues. The waste shall be removed every 3 days.

279. Since there are no landfills for hazardous waste available in Georgia, this category waste must be handed over to authorized contractor for utilization. For hazardous waste agreement with company authorized for treatment (deactivation, incineration) or re-use in other technological processes will be signed.

280. Soil polluted with petroleum hydrocarbons because of accidental small scale fuel/oil spills (leakages) can be remediated onsite (e.g. in situ bioremediation). Larger spills (less likely to be the case from experience with other similar projects) must be localized, contaminated soil removed by authorized contractor for remediation. New, clean soil must be introduced, followed by re-cultivation. It is recommended to involve an authorized company for this service.

281. Construction Company before start construction activities shall prepare a company waste management plan. The plan shall generally include:

    a) information about waste generated (in particular about its origin, and types, composition and amount of waste defined in the List of Waste);

    b) information on the measures to be taken for the prevention of waste generation and its recovery, especially in the case of hazardous waste;

    c) a description of the method for separation of waste generated, in particular of hazardous waste, from the other waste;

    d) methods and conditions for the temporary storage of waste;

    e) waste treatment methods applied and/or information on persons to whom waste is transferred for further treatment.

Asbestos-Containing waste

282. In the construction phase, at the stage of dismantling and moving the underground infrastructure, there may be asbestos-containing pipes or other parts identified in the area. These materials are hazardous materials/waste and need special management. The following actions are necessary to manage the asbestos waste found in the project zone:

    - The amount and content of the waste shall be identified;
    - The asbestos containing waste management plan shall be developed;
    - The waste is to be removed from the area and safely disposed under the prepared plan.

Medical Waste

283. Medical waste may be generated in the Medical Care and Control Point and belongs to hazardous waste category. This waste is collected in special plastic boxes which shall be hermetically closed

and is transferred to a certified contractor for farther incineration.

F.10. Traffic

Impacts and mitigations during Construction

284. **A traffic control and operation plan** will be prepared together with the local traffic management authority prior to any construction. The plan shall include provisions for diverting or scheduling construction traffic to avoid morning and afternoon peak traffic hours, regulating traffic at road crossings with an emphasis on ensuring public safety through clear signs, controls and planning in advance;

115. **Construction sites.** Clear signs will be placed at construction sites in view of the public, warning people of potential dangers such as moving vehicles, hazardous materials, excavations etc and raising awareness on safety issues. Heavy machinery will not be used after daylight and all such equipment will be returned to its overnight storage area/position before night. All sites will be made secure, discouraging access by members of the public through appropriate fencing whenever appropriate.

Impacts During Operation

285. The impact on the operation phase will be related to the increase in traffic on access road to swimming pool parking area, which shall be regulated by installation of clear signs.

F.11. Impacts on Archaeological and Cultural Heritage Sites

286. Land clearance works, grading and excavations are associated with the risks of damaging underground archaeological remnants. Such kind of the impact is minimal on the project site which have been studied by specialists of the National Agency for Cultural Heritage Preservation. The objects of the archeological and cultural heritage or artifacts are not fixed of the project area (letter of NACHP, August 22,2019, #17/3478).

287. In case of finding any artefacts of potential archaeological value, following steps are taken:

- Construction workers are obliged to stop works and immediately report to the Archaeological Supervisor.
- Archaeological supervisor reports to the Chief Engineer at site and requests to stop activities at the site of finding. Archaeological supervisor executes first checking of the finding and the site where finding was made;
- In case the finding has no potential archaeological value, the Archaeological Supervisor reports to the Chief Engineer and the works are restarted. Appropriate record regarding the case is made in record book.
- In case if the finding is estimated as potential archaeological relic, the Archaeological Supervisor reports to Chief Engineer of the Construction Contractor and to MDF Environmental Specialist (and supervising company / Engineer) requesting to stop construction activities and to inform the Ministry of Education, Science, Culture and Sport of Georgia about the incident.
- Chief Engineer of the Construction Contractor also reports to MDF informing about the stopped operations and requesting immediate engagement of Ministry of Education, Science, Culture and Sport of Georgia.

- of Ministry of Education, Science, Culture and Sport of Georgia will assign expert or group of experts and conduct necessary archaeological works at the site to identify the problem.
- In simpler cases, after removal of the movable artefacts, fixing materials and conducting other required works, the experts of the of Ministry of Education, Science, Culture and Sport of Georgia will issue decision on recommencement of stopped construction works.
- In exclusive cases of valuable and spatially spread findings, the of Ministry of Education, Science, Culture and Sport of Georgia may issue request to relocate the project works on a safe distance from the archaeological site.

F.12. Health and Safety Risks for local community

288. There is invariably of safety risks when substantial construction works are conducted in an urban area, and precautions will thus be needed to ensure the safety of both workers and citizens.

1. The civil works contractor will be required to develop health and safety management plan prior to construction works. The management plan also will cover occupational health and safety risks.

289. Community safety has to be maintained during construction and a program for traffic safety needs to be continued during its operations. Below are the impacts and measures concerning over all community safety.

Table 17. Project Potential Impacts on Community Safety

Project Potential Impacts on Community Safety	Recommended Mitigation Measures and Monitoring Activities
Pre-Construction:	
Community awareness for Safety – Local people's safety should be upheld and maintained	For community wealth and safety, it shall be made sure that • drinking water demand will not compete with adjacent communities; • there shall be adequate protection to the general public, including safety barriers and fences and marking of hazardous areas with warning signs and information banners.
Construction Phase:	
Traffic Safety	It is important that truck drivers and equipment operators understand the importance of maintaining road safety especially at road junction points. Safety traffic signs and warning lights should be installed at appropriate locations.
Electrical Systems – Safety in relocating them is important	During construction the Contractor shall ensure that all power lines be kept operational, this may include the provision of temporary transmission lines while existing poles and lines are moved. The only exception to this item will be during periods of blasting when HV power lines will be switched off for safety.

F.13. Occupational Health and Safety risks

290. Worker's safety during construction is important. Health and safety at workplace and during execution of work should be among the Contractor's work policy. The following items address overall worker's safety which is necessary to be considered by the Project (Table 15).

291. Safety measures and regulations associated with Covid 19 prevention and its spread out shall be implemented. General recommendations for the construction sector regarding the infection (COVID 19) caused by the new corona virus (SARS-CoV-2) approved the order #01-227/o of the Minister of Internally Displaced Persons From the Occupied Territories, Labour, Health and Social Affairs of Georgia shall be strictly followed.

Table 18. Worker's Safety Aspect

Project Potential Impacts on Worker's Safety	Recommended Mitigation Measures and Monitoring Activities
Pre-Construction:	
Provision of PPE – Workers should be adequately protected when performing work at the site	For health and safety protection of workers the following shall be provided: • Adequate health care facilities (including first aid facilities) within construction sites; • Training of all construction workers in basic sanitation and health care issues, general health and safety matters, and on the specific hazards of their work; • PPE for workers, such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection in accordance with legal legislation;
Workers Safety Awareness – Workers should know the risks and hazards of the job and should be advised and reminded accordingly	The Contractor shall hire a qualified health and safety expert who will provide safety training to the staff according to the requirements of the individual work place. Prior to the commencement of works, the work site personnel shall be instructed about safety rules for the handling and storage of hazardous substances (fuel, oil, lubricants, bitumen, paint etc.) and also the cleaning of the equipment. In preparation of this the Contractor shall establish a short list of materials to be used (by quality and quantity) and provide a rough concept explaining the training / briefing that shall be provided for the construction personnel.
Construction Phase:	
Worker Health & Safety – Risks and hazards of work are real day-to-day occurrence. Hence, health and safety	The Contractor shall be responsible for provision of: • Safety Training Program. A Safety Training Program is required and shall consist of an Initial Safety Induction Course. All workmen shall be required to attend a safety

should be taken seriously for the general welfare of the workers.	induction course within their first week on Site and Periodic Safety Training Courses. • Safety Meetings. Regular safety meetings will be conducted on a monthly basis and shall require attendance by the safety representatives of Subcontractors unless otherwise agreed by the Engineer. • Safety Inspections. The Contractor shall regularly inspect, test and maintain all safety equipment, scaffolds, guardrails, working platforms, hoists, ladders and other means of access, lifting, lighting, signing and guarding equipment. Lights and signs shall be kept clear of obstructions and legible to read. Equipment, which is damaged, dirty, incorrectly positioned or not in working order, shall be repaired or replaced immediately. • Safety Equipment and Clothing. Safety equipment and protective clothing are required to be available on the Site at all material times and measures for the effective enforcement of proper utilization and necessary replacement of such equipment and clothing, and all construction plant and equipment used on or around the Site shall be fitted with appropriate safety devices. The Contractor shall coordinate with local public health officials and shall reach a documented understanding with regard to the use of hospitals and other community facilities.
Sub-contractor's / Suppliers EMP Compliance – As part of the work force in the project, the sub-contractors should be instructed and contractually compelled to comply with the EMP.	All sub-contractors/ suppliers will be supplied with copies of the SSEMP. Provisions will be incorporated into all sub-contracts to ensure the compliance with the SSEMP at all tiers of the sub-contracting. All sub-contractors will be required to appoint a safety representative who shall be available on the Site throughout the operational period of the respective sub-contract unless the Engineer's approval to the contrary is given in writing. In the event of the Engineers approval being given, the Engineer, without prejudice to their other duties and responsibilities, shall ensure, as far as is practically possible, that employees of subcontractors of all tiers are conversant with appropriate parts of the SSEMP.

F.14. Construction Camp

292. The establishment of contractor's work camp may cause adverse impacts if various aspects such as liquid and solid waste management, topsoil, equipment maintenance, materials' storage, and provision of safe drinking water are not addressed properly. The site for the work yard will be selected by the contractor in agreement with the Municipality, MDF and the supervisor.

293. To ensure that potentially resulting impacts are kept at a minimum the contractor will be required to prepare the following plans or method statements:

- Camp site management plan;
- Layout plan of the work camp including a description of all precautionary measures proposed to avoid potential adverse impacts on the receiving environment (surface and ground water, soils, ambient air, human settlement);
- Sewage management plan for provision of sanitary latrines and proper sewage collection and disposal system to prevent pollution of watercourses or groundwater;
- Waste management plan covering the provision of garbage bins, regular collection and disposal in a hygienic manner, as well as proposed disposal sites for various types of wastes (e.g., domestic waste, used tires, etc.) consistent with applicable national regulations; and
- Description and layout of equipment maintenance areas and lubricant and fuel storage facilities including distance from the nearest surface water body. Storage facilities for fuels and chemicals will be located at a safe distance to the water body. Such facilities will be bounded and provided with impermeable lining to contain spillage and prevent soil and water contamination.
- These plans will be approved by the Engineer prior to beginning of construction activities.

G. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

294. Information about the project was disseminated by the Akhaltsikhe City Hall as well as MDFG.

295. At this stage, activities related to the consultations are underway.

296. As confirmed by social due diligence findings, there are no LAR impacts identified and subsequently the current subproject has no APs. The main stakeholders are local resident(s) living near the project site. All these stakeholders will be contacted using distant communication channels (via personal computer, mobile phone).

297. Due to circumstances formed throughout the world related to the virus outbreak (COVID 19), social distancing has been applied among the population and public consultations in the course of infrastructural projects implementation may become the source of virus spreading. Therefore, it is essential the alternative sources of communication with the stakeholders to be found out in order the recommendations issued by the World Health Organization (WHO) and the Government of Georgia (GoG) not to be violated. It is of high importance also the public and direct consultations with all stakeholders to be held in order the stakeholders and other locals, residing at the Municipality to be thoroughly informed of current and planned infrastructural projects and social and environmental matters related to the referenced projects. Applying of that method will enable them to not only receive the information by means of various sources, but also to participate directly in discussions, ask the questions and be involved in ongoing processes. Due to general development of internet network and its availability in many resided areas throughout Georgia, people have access to many social networks and apply them successfully in their everyday lives. Hence, it is possible the public consultations to be held in the remote mode by applying of available internet social networks and various communication applications. It will depend also on network and internet applications, being used by local residents.

298. In order to discuss sample of Initial Environmental Examination (IEE) and Social Due Diligence Report (SDDR) prepared for the project- “Construction of Sport-Complex in Akhaltsikhe”, on the 8th of July At 15:00, 2020 an initial public consultation meeting was conducted in the social network (via Facebook), as the COVID 19 outbreaks. Prior to the meeting, representatives of City Hall and local residents were informed personally by phone about the planned online meeting by the Communication Consultant – Irakli Japaridze.

299. Individual IEE reports in Georgian and English Languages will be disclosed on MDF and ADB websites and will be made available to Project stakeholders upon approval.

H. GRIEVANCE REDRESS MECHANISM

Objectives

300. Projects implemented by MDF, grievance resolution is viewed as a two-stage process. The first stage involves locally available means, such as discussing the concern with Deputy Resident Engineer or Contractor, on site focal point from Supervision Consultant / Contractor, or/and writing to local municipality for resolution of grievances on the spot. The grievance redress mechanism shall deal with the issues of e.g. amount of compensation, loss of access roads, etc. as well as the losses and damages caused by the construction works, e.g. temporary or permanent occupation of land by the contractor. Therefore, the grievance redress mechanism shall be in place by the time the MDFG starts negotiations with the APs and shall function until the completion of the construction.

Grievance Resolution Process

301. Grievance redress procedures of Stage 1 are an informal tool of dispute resolution allowing the APs and the project implementation team to resolve the disagreement without any formal procedures, procrastination and impediments. The international experience of resettlement shows that such informal grievance redress mechanism helps to solve most of the complaints without formal procedures (i.e. without using the procedures specified in the Administrative Code or litigation). This mechanism enables unimpeded implementation of the Project and timely satisfaction of complaints. If the AP is not satisfied, the grievance redress mechanism should assist them in lodging an official compliant in accordance with the procedures of Stage 2 (the plaintiff should be informed of his/her rights and obligations, rules and procedures of making a complaint, format of complaint, terms of complaint submission, etc.).

302. Stage 2 – review of AP's complaint. Grievance Redress Committee (GRC) for the whole period of the project implementation. GRC shall review the written complaints of APs, which were not satisfied at Stage 1. At stage 2 the AP's complaint shall be resolved and GRC shall make a decision in compliance with the Administrative Code of Georgia.

303. The present Procedures are developed specifically for the purposes of Stage 2 process of grievance resolution by the GRC. The purpose of these GRC Procedures is to make MDF more accessible to project affected communities and to help ensure efficient resolution of project-related complaints.

304. Upon receipt of the complaint it will be registered at the reception of MDF. The complainant shall be given a receipt evidencing submission of his/her complaint with the MDF. The receptionist will direct the complaint to the Director of MDF, who shall screen all incoming claims and within 5 working days of receipt of such claim by the reception office, direct the appropriate claims to the Safeguards Unit. Safeguards unit will register the complaint in its electronic database. Upon registration in the database the complaint will be assigned a number.

305. After registration of the complaint in the database of Safeguards Unit, the Safeguards unit will notify the complainant in writing (letter, and/or email) that the complaint has been received, registered, and forwarded to the project team for action as well as the number assigned to the complaint and the contact information for further queries and clarifications.

306. Within 15 working days of registration of the complaint in the database the Safeguards unit will:

- Determine if additional information and/or documents necessarily need to be provided by

the complainant, and if so, request the complainant in writing to submit such additional information/documents.

- Obtain relevant and necessary information internally, from MDF's various departments or from project partners.
- Decide on the date when the complaint shall be presented to the GRC for hearing;
- Inform the complainant of such date, if necessary;
- Update the status of the complaint in the database.

307. GRC Hearing shall be held at least once a month. Any complaint must be heard within two months after its registration at the MDF reception. The agenda of the GRC hearing, with a list of complaints to be reviewed at that hearing shall be set in advance. Such Agenda, together with a short brief/summary on each complaint shall be sent to each member of the GRC at least 3 working days prior to the date of the GRC hearing.

    - The staff member responsible for each complaint shall first present a short description/summary of the complaint, and then answer any questions the GRC members may have. Final decision based on the deliberations and discussions is made by the Committee by the majority of votes. If needed, the complainant may be invited to the hearing to present evidence related to the case. Copy of the minutes from the hearing shall be provided to the relevant IFI.
    - The decision adopted by the committee shall be signed by the Executive Director within 5 working days of such hearing. The final decision shall contain a timeline of its implementation.
    - The information letter (regarding the decision) to the complainant shall be sent in writing within 2 working days after signing of the resolution by the Executive Director. The response provided to complainant(s) should be informative and include relevant details.
    - Safeguards Unit will update the status of the complaint in the database accordingly.
    - MDF's appropriate Unit shall be responsible for the follow up and implementation of the GRC decision in accordance with the resolution. Safeguards unit shall report to each following GRC meeting on the progress and status of implementation of the previous GRC meeting decisions.
    - Implementation time frame will be case specific but should not normally exceed 100 days. GRC secretary will monitor implementation of the actions.
    - When all actions decided at the GRC hearing have been taken the complaint is considered closed. The GRC will inform the complainant that all actions have been taken and the problem has been resolved and closed, and/or that the complaint has been rejected and is closed. If no response is received from the complainant during three weeks, the complaint shall be considered officially closed.

308. If the MDFG decision fails to satisfy the aggrieved APs, they can pursue further action by submitting their case to the appropriate court of law.

309. The complaints and grievances will be addressed through the process described below in figure 6.

310. Complaints will also be accepted by any ADB office such as a resident mission, regional office or representative office, which will forward them unopened to the CRO.

Complaints Receiving Officer, Accountability Mechanism
Asian Development Bank Headquarters
6ADB Avenue, Mandaluyong City 1550, Philippines
Email: amcro@adb.org, Fax+63-2-636-2086

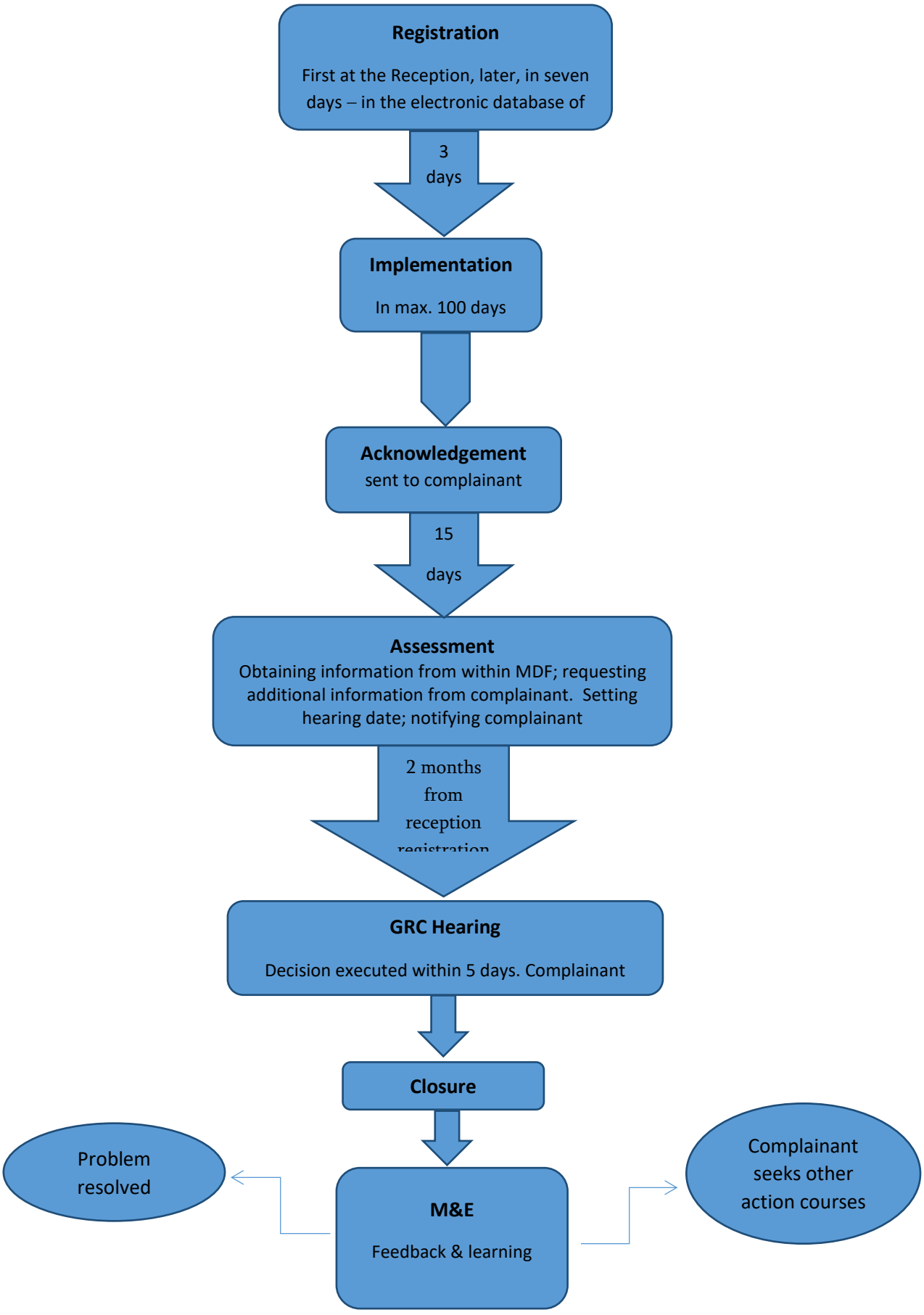

Registration
First at the Reception, later, in seven days – in the electronic database of
3 days
Implementation
In max. 100 days
Acknowledgement
sent to complainant
15 days
Assessment
Obtaining information from within MDF; requesting additional information from complainant. Setting hearing date; notifying complainant
2 months from reception registration
GRC Hearing
Decision executed within 5 days. Complainant
Closure
Problem resolved
M&E
Feedback & learning
Complainant seeks other action courses

Figure 7. Grivence Redress Mechanism

Grievance Form

#	
Full Name, Surname	
Contact Information **Please, fill in how you want to be contacted (post, telephone, e-mail)**	☐ **Post: please indicate your postal address: _____ _____ _____** ☐ **Telephone: _____** ☐ **E-mail:_____**
Preferred contact language	☐ **Georgian** ☐ **English** ☐ **Russian**

Description of Grievance/ Claim:	What happened? What you claim?
Negotiation Date:	Decision after the negotiation:

What is the reason of your claim?	

Signature: _____

Date: _____

I. ENVIRONMENTAL MANAGEMENT PLAN

Introduction

311. The Environmental Management Plan (EMP) documents the impacts identified in the report, the actions required to mitigate those impacts to acceptable levels in accordance with the Georgian legal requirements and the ADB safeguard policy, and the monitoring activities that are to be undertaken as part of the project to confirm that the mitigation actions have been effective in achieving their objectives or to initiate corrective actions required.

312. The EMP also details the institutional arrangements and capacities that currently exist, or that will be put in place as part of the project implementation, to ensure that the environmental due diligence (including the EMP) has comprehensively considered both the national and ADB requirements for environmental protection, has identified all likely environmental impacts and proposed appropriate mitigation measures, and has the systems in place to ensure that effective procedures for environmental monitoring and control of the project impacts and mitigation measures are implemented throughout the life of the project.

313. The environmental impacts associated with project have been detailed above in the chapter E of this IEE. Mitigation measures required to address the impacts identified in the IEE have been summarized in each of the relevant sections covering the physical, biological and socio-economic environment affected by the project (chapter E). The impacts identified and the specific mitigation measures proposed to address them have been consolidated into the environmental mitigation plan presented in Table in a form of matrix, which includes time frames, responsibilities and where applicable, estimated costs for each measure.

314. The environmental mitigation plan specifies the need for the civil works Contractor to provide its own detailed Site Specific Environmental Management Plan (SSEMPs,) based on current EMP, but supplemented with the description of the schedule of planned activities, persons responsible for implementation of EMP and monitoring, as well as with method statements for spillage control and construction waste management.

Implementation Arrangements and Responsibilities

315. The main institutions that will be involved in implementation of the SSEMP and monitoring are the executing agency (EA), the Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environmental Protection and Agriculture. EA and SC are responsible for ensuring monitoring of the project implementation at the construction stage. Ministry of Environmental Protection and Agriculture has the authority for periodic audits but should not be considered as a party responsible for monitoring according to this IEE and EMPs.

316. **MDF** as the executing agency will be responsible for the day to day management of the project including implementation of the SSEMP. Management of environmental issues is carried out by the MDF through Environmental and Resettlement Unit, established in October 2014. From that time, number of Environmental and Resettlement team members has increased from 6 to 11 and currently consists of: Head of Unit, 3 environmental safeguards specialists, one social safeguards and gender specialist, one Beneficiary Relations Specialist, one resettlement and GIS specialist, 2 resettlement specialists and two ADB's individual consultants (one on resettlement issues and the other for communicaton matters), who also are the members of Environmental and Resettlement Unit.

317. The MDF's Environmental and Social Specialists responsibilities in respect of implementation of the SSEMP are as follows:

    1. Ensure that all relevant EMP requirements (including environmental designs and mitigation measures) are duly incorporated into the project bidding documents;
    2. Ensure that Contractor obtains necessary permits and/or clearance, as required, from MoEPA and other relevant government agencies. All necessary regulatory clearances should be obtained before commencing any civil work on the project;
    3. Ensure that contractor has access to the EMP and IEE report;
    4. Ensure that contractor understands its responsibilities to mitigate environmental problems associated with their construction activities and facilitate training of their staff in implementation of the EMP;
    5. Approve the Site-Specific Environmental Management Plan (SSEMP) prepared by the Contractor before he takes possession of construction site;
    6. Monitor the contractor's implementation of the SSEMP in accordance with the environmental monitoring plan;
    7. Prepare and submit semi-annual Environmental Monitoring Reports to ADB;
    8. In case unpredicted environmental impacts occur during the project implementation, prepare and implement as necessary an environmental emergency program in consultation with MoEPA, any other relevant government agencies, and ADB;
    9. Ensure that Contractor hires specialized companies to manage asbestos waste disposal and safe operations on dismantling, transportation and storage of oil contaminated equipment of gas filling stations. The other choice is to request Construction Contractor to hire the mentioned waste and pollution Management Company and to insert this requirement in Civil Works Contract.

318. **The supervisor company (SC)** of works commissioned by MDF is responsible to establish strong field presence in the Project area and keep a close eye on the course of works. Along with ensuring consistency with the design and ensuring quality of works, the supervisor is mandated to track implementation of EMP by the contractor, reveal any deviations from the prescribed actions, as well as.

319. The SC will include environmental specialist to assist the EA supervise and monitor implementation of the EMP during construction. A Non-Compliance Notice will be issued to the contractor if the SC requires action to be taken. The contractor will be required to prepare a corrective action plan which is to be implemented by a date agreed with the SC. Non-compliance will be ranked according to the following criteria:

    1. Non-Compliance Level l: A situation that is not consistent with requirements of the EMP, but not believed to represent an immediate or severe social or environmental risk. Repeated Level I concerns may become Level II concerns if left unattended. •
    2. Non-Compliance Level II: A situation that has not yet resulted in clearly identified damage or irreversible impact, but which demonstrates potential significance. Level II requires expeditious corrective action and site-specific attention to prevent severe effects. Repeated Level II concerns may become Level III concerns if left unattended;

3. Non-Compliance Level III: A critical situation that will result in significant social or environmental damage occurring or a reasonable expectation of very severe impending damage. Intentional disregard of Non-Compliance Notices or specific prohibitions is also classified as a Level III concern.

320. The failure to prepare a corrective action plan or to implement it within the required timeframe will result in the Employer undertaking the work at the Contractor's expense (as will be specified in the Contract).

321. **Construction contractor** is obligated to follow IEE/EMP and good construction practice. In order to meet this obligation, a contractor shall establish environmental management team and procedures. The Contractor will appoint a full time Environmental Manager (EM) to be a senior member of the construction management team based on site for the duration of the contract.

322. Key responsibilities of the Contractor (through the EM) are as follows:

    1. Preparing the Specific Environmental Management Plan (SSEMP) for endorsement by Supervision Consultant and approval by the Employer (EA) prior to the Contractor taking possession of the construction site (see below);

    2. Ensuring the SSEMP is implemented effectively throughout the construction period. (iii) Coordinating community relations issues through acting as the Contractor's community relations focal point (proactive community consultation, complaints investigation and grievance resolution)

    3. Establishing and maintaining site records of: (i) weekly site inspections using checklists based on SSEMP; (ii) environmental accidents/incidents including resolution activities; (iii) environmental monitoring data; (iv) non-compliance notifications issued by the SC; (v) Corrective action plans issued to the SC in response to non-compliance notices; (vi) Community relations activities including maintaining complaints register; (vii) Monitoring reports; (viii) Routine reporting of SSEMP compliance and community liaison activities (see below); (ix) Adhoc reporting to the Employer's Engineer of environmental incidents/spillages including actions taken to resolve issues of Specific Environmental Management Plan (SSEMP).

323. Following the award of the contract and prior to construction commencing the Contractor will review the EMP and develop this into a detailed Specific Environmental Management Plan (SSEMP) that amplifies the conditions established in the EMP that are specific for the project, the tasks involved and schedule of construction activities. The SSEMP will identify persons who will be responsible for supervising the work within the contractor's team. The SSEMP will include a matrix of mitigation measures corresponding to specific activities. As a stand-alone documents the SSEMP will be supplemented with method statements for spillage control and construction waste management. The spillage control method statement includes proper location and organization of fuel storage, filling stations and vehicle washing sites.

324. The SSEMP will also include a monitoring plan and a reporting program corresponding to the requirements of the EMP.

325. In addition to creating the SSEMP additional topic specific EMPs will be developed by the contractor (e.g. waste management plan, traffic management plan, oil spill management plan, camp management plan, etc.). In addition, at key locations a location specific EMP may also be developed.

326. Prior to the onset of the construction, the Construction Contractor must hire a consultant or a group of consultants to prepare the Traffic Management Plan. The developed plan must be agreed with the supervising company. The construction permit will be issued only if the plan developed by the Construction Contractor is approved by the supervising company and MDF. In case of absence of such a plan, the Construction Contractor will not be allowed to start the works

327. Following approval of the SSEMP by the EA, the Contractor will be required to attend a site induction meeting with the SC's International Environmental Specialist whereby the SSEMP is confirmed with the Contractor to ensure that all compliance conditions are clearly understood. Following confirmation of the SSEMP with the Contractor the SC's International Environmental Specialist advises the SC Team Leader that the Contractor is now cleared to take possession of the Site and may commence moving equipment to the Site.

328. The Contractor will be responsible for ensuring that all sub-contractors abide by the conditions of the SSEMP.

Reporting

329. Bi-annual Environmental Monitoring reports (EMRs) to be submitted within 1 month at the end of each reporting period by the EA to ADB. Quarterly project progress reports also should have a section on environmental safeguard compliance. Bi-annual EMRs should be a concise report in respect of compliance with EMP/SSEMP requirements that will be submitted by the EA with assistance from the SC. The report will contain the following sections:

    1. Details of any environmental incidents;
    2. Status of all non-conformance identified during audits and inspections that are identified by non-compliance notices;
    3. Complaints from the public and proactive community relations activities;
    4. Monthly Accident Report;
    5. Waste volumes, types and disposal;
    6. Details of any contaminated areas that have been identified and rehabilitated;
    7. Details of any archaeological discoveries;
    8. Details of any ecological issues;
    9. Other relevant environmental issues;
    10. Action plan for corrective measures.

330. The Contractor will have a duty to immediately report to the SC if any serious environmental breach has occurred during construction e.g. clearing of sensitive areas, serious oil spills etc.

331. The SC provides EA with monthly reports including review of the environmental and social aspects of the Contractor's performance, as well as HSE issues. In case of any serious accident or repeated violation requiring immediate reaction of the EA and authorities, SC sends appropriate notice to EA immediately.

332. MDF as the Executing Agency will submit semi-annual monitoring reports to ADB reflecting project progress and compliance with the safeguards requirements. The quarterly reports will include SC monthly reports and short explanatory note of MDF specialists.

333. ADBs responsibilities in regard to implementation of environmental safeguards requirements for the project include: undertaking of occasional auditing of the SSEMP implementation and due diligence as part of an overall project review mission; and if required, provide advice to MDF in carrying out its responsibilities to implement the SSEMP for the project. Institutional Capacity Building Requirements for MDF.

334. Within MDF, is the environmental and social specialist and several monitoring officers are included in the staff. Although day-to-day quality control of works will be outsourced to the engineering supervisor of works, MDF should have in-house human resources to oversee performance of such technical supervisor and to work out decision to address issues which the supervisor may bring up for MDF's attention.

Environmental documents and records

335. After identifying the Construction Contractor and issues of construction organization, the construction contractor, in line with the national legislation, is obliged to develop the following environmental documents and submit them to the MoEPA for approval:

    1. Technical report of the stationary sources of harmful substances emitted into the atmospheric air (if necessary);
    2. Waste Management Plan.
    3. Inventory of trees (if Red listed tree species cutting will be required).

336. The construction contractor is obliged to submit and agree the following documents and records to the Supervision consultant:

    1. Site specific environmental management plan (SEMP)
    2. Traffic management plan;
    4. Health and safety site-specific management plan;
    5. Noise and vibration site-specific management Plan;
    6. Asbestos contained waste management plan (if required);
    7. Emergency response plan.
    8. Camp site management plan.

337. In addition, the Construction Contractor shall keep and use the following records in practice during the construction:

    1. Plan and schedule of the works to accomplish;
    2. List of the machines and equipment needed for construction;
    3. Records related to the occurring environmental problems;
    4. Records about the waste management issues;
    5. Written marking of the areas of waste disposal and waste transportation instructions issued by the local authority;
    6. Records about the supplies of necessary materials and their consumption;

7. Complaints log books;
9. Incident registration logs;
10. Reports about the correction actions;
11. Logs of equipment control and technical maintenance;
12. Reports about the personnel training.

338. License for extraction of ground water shall be obtained by the Akhaltsikhe Municipality at the operation phase.

Costs of Implementation

339. **Waste Management.** According to "Waste Management Code" (Article 14-Waste Management Plan of the Company), Contractor have to prepare Waste Management Plan of the Company (describing in details hazardous waste management) and submit it to the MoEPA for approval. In addition, according to the same law (article 15) – the Contractor should hire Environmental Manager and submit contact information to the MoEPA. All types of waste must be managed according to the approved waste management plan. Waste must be transported for disposal on identified landfill or transferred to licensed companies. Transportation, waste disposal on landfill, as well as transfer of hazardous waste to licensed companies is associated with certain costs.

340. **Monitoring.** The Construction Contractor must undertake permanent noise and emissions monitoring. In addition, temporary noise barriers will be necessary to install at the construction objects. Monitoring results should be included in the monthly and quarterly reports.

341. **Occupational and Community H&S.** The Contractor shall hire a qualified health and safety specialist who will provide safety training to the staff according to the requirements of the individual work place. Prior to the commencement of works, the work site personnel shall be instructed about safety rules for the handling and storage of hazardous substances (fuel, oil, lubricants, bitumen, paint etc.).

342. **Staff.** The Contractor will appoint a full time Environmental Manager (EM) to be a senior member of the construction management team based on site for the duration of the contract. The SC's will appoint a Part time International Environmental Specialist.

343. Construction company will be responsible for envisaging the implementation cost of EMP, including the proposed mitigation measures (and additional activities (if any), surveys (if required by the MDF and IEE) in his project budget. Implementation of IEE/EMP is obligatory for contractor. Contractor shall be aware that the IEE will be updated.

Table 19. Tentative Environmental Management Cost

Item	Unit Cost	Total Cost	Remarks
Updating the IEE for the detailed design	-	-	-
Baseline Parametric Measurements(at least 2 points)	100USD	200USD	To be conducted by the Contractor for noise-vibration, air emissions, dust (and water, if necessary) measurements
Monthly Parametric Measurements (at least 2 points)	200 USD	Monthly for the entire construction period	Tests to be conducted by the Contractor at 2 points
Environmental Management Specialist (SC)	2,500 USD	Monthly for the entire construction period	The costs are included in the contract signed between MDF and SC and no additional costs will occur.
Environmental specialist (Contractor)	1, 500 USD	Monthly for the entire construction period	The costs will be included in the contract signed between MDF and Contractor.
Construction dust and noise barriers (if needed)	5 000 USD	5 000 USD	To be installed by Contractor at the Sport-Complex construction Site temporarily if needed
Anti-COVID measures (hiring of doctor and nurse for the regular check-ups and establishing designated quarantine area, purchasing of necessary PPEs, sanitizers, handwashing facilities, face masks, etc.)	400 USD	Monthly for the entire construction period (depending on COVID situation in the country and globally)	Training should be conducted for all persons involved in construction process

Table 20. Environmental Management Matrix

PRE-CONSTRUCTION

Type of work	Potential negative impact	Mitigation Measures	Responsibility	Supervision	Cost
Pre-construction survey of project site	Disruption of construction works and damage to environment due to unforeseen circumstances on project sites revealed at construction phase	Survey of all new infrastructure locations including quarry, camp, construction yard. Prioritize areas within or nearest possible vacant space in the project location; If it is deemed necessary to locate elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, and drinking water supply systems; Do not consider residential areas. Take extreme care in selecting sites to avoid direct disposal to water body (river near intake) which will inconvenience the community. The constriction contractor shall conduct the following surveys: 1. Noise and vibration – baseline, assessment and monitoring; 2. Soil contamination on the site; 3. Air pollution – baseline and monitoring; 4. Flora and fauna species, additional measures if need to protect flora and fauna species will be identified and included in the SSEMP,	Contractor	Supervision Company, MDF	Extra costs are not expected.
Development of required plans	Damage to environment due to the absence of requiredplans	Site Specific Environment Management Plan (SEMP); Site Specific health and safety plan. Traffic management plan; Noise and vibration management plan; Waste management plan; Asbestos containing waste management plan (if needed); Emergency response plan Camp site management plan Inventory of the trees to cut down (if required)	Contractor	Supervision Company, MDF	Extra costs will be related to plans elaboration. To be considered in the total contract value

		Technical report of the stationary sources of harmful substances emitted into the atmospheric air (if necessary)			
Obtaining of all required permits, licenses and approvals	Damage to environment due to unauthorized use of natural resources, waste disposal, pollution	Licenses for inert material extraction Approval of Waste management plan by the MoEPA (if needed) Approval of Technical report on inventory of atmospheric air pollution stationary source by the MoEPA (if needed) Agreement on construction waste disposal on the nearest landfill Agreement on hazardous waste disposal Trees inventory report and permit for tree cut issued by local authority or by the MoEPA in case of Red listed species (if required)	Contractor	Supervision Company, MDF	Extra costs will be related to obtaining of licenses and preparation in plans and report. To be considered in the total contract value
Designation of safeguards staff and providing of required trainings	Environmental, social and H&S non-compliances	Designation of Environmental and H&S specialists; Providing of trainings as defined by IEE.	Contractor	Supervision Company, MDF	Extra costs will be related to safeguards specialist recruitment and providing of trainings. To be considered in the total contract value
Notification of local population on civil works commencement	Potential conflicts with local residents	Arrangement of information banner regarding project and indicate contact persons; Dissemination of information regarding duration of upcoming works.	Contractor	Supervision Company, MDF	Extra costs will be related to banner arrangement. To be considered in the total contract value

CONSTRUCTION

Type of work	Potential negative impact	Mitigation measure	Responsible entity	Supervision	Costs
Preparatory works: mobilization of the temporal infrastructure, transport and construction appliances and equipment and mechanisms needed for construction.	Emissions of harmful substances into the atmospheric air, propagation and noise propagation	1. Equipping the concrete unit with relevant air-cleaning systems. 2. Making noise-protection barriers if necessary between the noise sources and the receptors (population).	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
	Risks of pollution of surface and ground waters and soils	1. Use of non-faulty construction techniques and vehicles. 2. The machines/equipment and potentially polluting materials will be placed far from the surface water objects, in the areas protected against the atmospheric precipitations. 3. Equipping the territory with sewage, storm-water and treatment systems at the initial construction stages. 3. Limiting the perimeter of the oil products supply reservoirs to prevent the propagation of the pollutants in case of emergency spills. 4. Discharge of any kind of untreated wastewater into the rivers is to be prohibited. 5. Making the water-proof layers over the surfaces of the storing areas.			
	Negative visual- landscape change	1. Temporal structures, materials and waste will be placed at locations far and not visible from the visual receptors. 2. The color and design of the temporal structures will be chosen to suit the environment. 3. Demobilization of the temporal infrastructure and recultivation works following the completion of the works.			
	Risks of safety of local people and personnel	1. Use of non-faulty construction techniques and vehicles; 2. Fencing the camp territories right at the initial stage of the construction;	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value

Type of work	Potential negative impact	Mitigation measure	Responsible entity	Supervision	Costs
		3. Installing the safety signs along the perimeter of the territory. 4. Protecting the perimeter of territory and controlling the movement of foreign people in the area. 5. Equipping the personnel with PPE. 6. Equipping the camps with first aid kits; 7. Ensuring electrical safety. 8. Keeping an incident registration log. 9. Personnel training at the initial stages.			
Cleaning the corridor off the vegetation cover and accomplishing the earth works. The removal of the topsoil	Cutting down the vegetation cover, habitat	1. Obtaining the permit as required 2. Cutting down the trees and plants under the supervision of the specialists an authorized agency; 3. The expected impact is partly compensated at the expense of re- cultivation and landscaping works. 4. Protecting the project perimeter to prevent excess harm to the plants.	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
	Noise propagation, emissions of dust and combustion products	1. Use of non-faulty construction techniques and vehicles; 2. Accomplishing the noisy works during the day as far as possible; 3. Running the vehicle drives at minimal speed.	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
	Vibration	1. In vibration persists for some time at a location (but below the threshold), mitigation in the surrounding properties should be done in terms of regular consultations and disseminating information leaflets consisting of construction activities schedule	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
	Loss of topsoil and degradation of sites	1. Cutting the topsoil and piling it in isolation from the lower soil layer and other materials. 2. In order to avoid the topsoil erosion, the height of fill must not exceed 2 m and the inclination of the fill slope must not exceed 45^{o}.	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value

Type of work	Potential negative impact	Mitigation measure	Responsible entity	Supervision	Costs
		3. Water-diversion channels will be made along the perimeter of the topsoil fill and will be protected against the scattering by the wind blow; 4. In case of storing the topsoil for long, measures must be taken to maintain its qualitative properties. Periodic loosening or grass sowing is meant.			
	Risks of pollution of surface and ground waters.	1. Use of non-faulty construction techniques and vehicles; 2. In case of spills of oil/lubricants, the spilled product will be localized/cleaned in the shortest possible time. 3. The appliances creating the risk of ground water pollution when in operation will be equipped with drip pans; 4. The vehicles must be preferably washed at private car washing areas; 5. Using temporal water diversion channels; 6. Filling the holes in a timely manner.	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
	Accidental damage to the archeological monuments	1. In case of finding any strange item, stopping the works immediately and informing the technical supervisor or the Client; 2. Renewing the works only after the formal instruction is received from the technical supervisor or the Client.	Construction Contractor	Supervision Company, MDF National Agency to protect cultural environment	To be considered in the total contract value
	Personnel safety risks And anti-COVIDD measures	1. Using relevant ventilation system during digging; 2. Observing labor safety rules during the drilling; 3. Equipping the personnel with PPE; 4. Develop an emergency action plan outlining the measures to be taken to prevent the spread of the virus, as well as the measures to be taken in case of suspicion of the virus.	Construction Contractor		To be considered in the total contract value

Type of work	Potential negative impact	Mitigation measure	Responsible entity	Supervision	Costs
		5. Post information about COVID-19 prevention measures in the workspace; 6. Place de-barriers at the entrance of the living room / dining room, as appropriate; 7. Ensure hand hygiene in the workplace and inform employees; 8. Periodically, several times a day, provide natural ventilation of enclosed spaces / storerooms; 9. Disinfect frequently used work equipment, inventory, work tools and workplaces at regular intervals; 10. Ensure that the workspace is arranged in such a way that employees and / or other persons in the workspace do not encounter any obstacles during the work (including timely cleaning of the facility and timely removal of construction waste); 11. Placement of containers for wipes or other hygienic waste used by employees and visitors.			
Transportation	Noise propagation, emissions of dust and combustion products	1. Use of non-faulty construction techniques and vehicles; 2. Limiting the driving speeds; 3. Maximally limiting the use of public roads and searching for and using alternative routes. 4. Watering the working surfaces in dry weather. 5. Duly covering the vehicle body during the transportation of dusty materials. 6. Informing the population about the forthcoming intense vehicle movement.	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
	Damage to the local road surfaces	1. Limiting the movement of heavy techniques along the public road as much as possible;	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value

Type of work	Potential negative impact	Mitigation measure	Responsible entity	Supervision	Costs
		2. Restoring all damaged road sections as much as possible to make the roads available to the people;			
	Overloaded transport flows, limited movement	1. Selecting an optimal bypass to the working area; 2. Installing road signs and barriers at necessary locations; limiting the movement of heavy techniques along the public road as much as possible; 3. Using flagmen in case of intense traffic; 4. Making temporal bypasses; 5. Informing the population about the time and periods of intense transport operations.	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
	Risks of safety of local people and personnel	1. Use of non-faulty construction techniques and vehicles; 2. Driving the vehicles with admissible speeds. 3. Minimizing the use of the roads crossing the settled areas; 4. Limiting the traffic on holidays	Construction Contractor	Supervision Company, MDF	
Demolition works	Deterioration of ambient air; Noise and vibration	1. Use water spray or install dust screen enclosures; 2. Timely removal of all debris and construction waste from the site; 3. Watering or cover temporary storage waste; 1. Use of non-faulty construction techniques and vehicles; 2. Accomplishing the noisy works during the day as far as possible; 3. If vibration persists for some time at a location (but below the threshold), mitigation in the surrounding properties should be done in terms of regular consultations and disseminating information leaflets consisting of construction activities schedule			To be considered in the total contract value

Type of work	Potential negative impact	Mitigation measure	Responsible entity	Supervision	Costs
Construction works	Deterioration of ambient air; Noise and vibration	1. Use water spray or install dust screen enclosures; 2. Timely removal of all debris and construction waste from the site; 3. Watering or cover temporary storage waste; 1. Use of non-faulty construction techniques and vehicles; 2. Accomplishing the noisy works during the day as far as possible; 3. If vibration persists for some time at a location (but below the threshold), mitigation in the surrounding properties should be done in terms of regular consultations and disseminating information leaflets consisting of construction activities schedule	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
Paving surface around sport complex including parking and facing works	Pollution of soil and surface waters	1. Laying the surface only in dry weather; 2. The surface must be laid only by taking the relevant safety measures: the materials or waste must not dissipate over the site, etc.	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value
Waste management	Irregular propagation of waste, environmental pollution	1. Delivering the construction and other necessary materials only in needed quantities. 2. Re-using the waste as much as possible. 3. Arranging the temporal waste storage areas and equipping them with relevant signs. 4. Assigning the duly qualified personnel for waste management. 5. Instructing the personnel. 6 Identification of dump sites for inert and construction waste disposal and ensuring proper permissions;	Construction Contractor	Supervision Company, MDF	To be considered in the total contract value

Operation stage

Type of work	Expected negative impact	Mitigation measure	Responsible entity
Exploiting the rehabilitated infrastructure in a common mode	Noise propagation	1. Implementing relevant noise standards and requirements in populated areas.	Akhaltsikhe municipality
	Waste propagation; propagation of oil products.	1. Regular cleaning of the rehabilitated infrastructure; 2. Regular cleaning and repairing of water channels and pipes	Akhaltsikhe municipality
	Emergency risks	1. Permanent control of the technical state of the infrastructure and accomplishing the relevant rehabilitation measures immediately after any damage. 2. Equipping the access road with relevant road signs;	Akhaltsikhe municipality
Planned repairs and preventive works	Propagation of polluting substances (water, soil pollution) during the repairs and replacement	1. In order to avoid the dissipation of the materials used to reparation, the relevant works must be planned in an expedient manner.	Akhaltsikhe municipality
Operation of well	Damage to environment due to the absence of required license	Obtaining of the license for ground water extraction	Akhaltsikhe municipality

J. ENVIRONMENTAL MONITORING PLAN

344. As the previous chapters of the IEE report note, there are risks of certain impacts on some environmental receptors during the activity. One of the preconditions for reducing the negative nature and value is the correct management of the strict and well-planned activity under strict supervision (environmental monitoring).

345. An environmental monitoring plan is presented in Table 17, which outlines the activities and responsibilities associated with monitoring the effectiveness of the proposed mitigation plan and ensuring compliance with the recommendations of the IEE.

346. The monitoring methods incorporate visual observation and measurements (if needed). The monitoring program describes the monitoring parameters, time and frequency of monitoring, and collection and analysis of monitoring data. The size of monitoring depends on the value of the expected impact/risk.

347. The environmental monitoring plan must cover the issues, such as:

- Assessment of the baseline of environment;
- Identification of the reasons for changes in the environment and evaluation of the outcomes;
- Identification of the correction measures when the target values cannot be reached;
- Regular supervision over the degree and dynamics of the impact of the activity on the environment;
- Compliance with the legal requirements for impact intensity;
- Control over the set parameters associated with significant ecological aspects;
- Prevention and timely identification of the possible violations related to ecological aspects or emergencies during the activity.

348. The following are subject to the regular observation and evaluation in the course of environmental monitoring:

- Atmospheric air and noise;
- Water;
- Soil;
- Labor conditions and meeting the safety standards, etc.

Table 21. Environmental monitoring plan

What? (Is the parameter to monitor)?	**Where?** (Is the parameter to monitor)?	**How?** (Must the parameter be monitored)?	**When?** (Frequency or duration of monitoring)	**Who** (Is responsible for monitoring)?
Dust propagation, exhaust fumes	1. Construction camp; 2. Construction site; 3. Transportation routes; 4. The nearest Buildings	Instrumental measurement	1. Checking dust propagation – during the intense operations and vehicle movement, particularly in dry and windy weather. 2. Checking the technical state - at the start of the working day; 3. Instrumental measurement - in case there are complaints	Contractor EHS specialist; SC
Water pollution	Water body near the project site	Visual observation	Checking pollution of river bad by dumping of construction waste	Contractor EHS/ environmental specialist; SC
Noise and vibration propagation	The nearest residential houses and public offices	Instrumental measurement	According to the noise and vibration monitoring plan	Contractor EHS specialist; SC
Traffic	Along the materials and waste transportation routes	Visual observation	Permanently	Contractor EHS specialist; SC
Engineering-geological stability	Sensitive instable sections	1. Visual observation; 2. Periodic examinations by the engineering geologist.	Particularly after the periods with precipitations;	Contractor EHS specialist; SC
Soil and ground quality	1. Areas adjacent to the construction camps; 2. Construction sites; 3. Materials and waste storage areas.	Visual observation: 1. No significant oil spills are observed; 2. Laboratory control	Visual observation - at the end of the working day; Laboratory examination - in case of large spills	Contractor EHS specialist; SC

What? (Is the parameter to monitor)?	**Where?** (Is the parameter to monitor)?	**How?** (Must the parameter be monitored)?	**When?** (Frequency or duration of monitoring)	**Who** (Is responsible for monitoring)?
Temporal storage of the removed ground and topsoil	1. Construction sites; 2. Ground storage areas.	Visual observation: 1. The lower soil layer and topsoil are piled separately. 2. The height of the topsoil pile does not exceed 2 m. 3. The inclination of piles does not exceed 45°. 4. The soil is placed far from the surface water objects. 5. There are water diversion channels along the perimeter of the storage area; 6. The soil is stored temporarily at places preliminary agreed with the technical supervisor.	Every day following the completion of ground works.	Contractor EHS specialist; SC
Vegetation cover	1. Construction sites	Visual observation: 1. The works within the limits of the marked zone and no additional harm or plants or illegal cuttings take place.	Visual observation - at the end of the working day;	Contractor EHS specialist; SC
Waste management	1. Construction camps; 2. Construction sites; 3. Temporal waste storage areas;	Visual observation: 1. The sites of temporal waste disposal are assigned in the construction area and are duly marked. 2. The storage areas for hazardous waste are protected against the penetration of strangers and against the weather impact; 3. On the territory, at due locations, there are marked containers to collect domestic waste.	1. Visual observation - at the end of each working day;	Contractor EHS specialist; SC

What? (Is the parameter to monitor)?	**Where?** (Is the parameter to monitor)?	**How?** (Must the parameter be monitored)?	**When?** (Frequency or duration of monitoring)	**Who** (Is responsible for monitoring)?
		4. The sanitary condition of the territory is satisfactory – no dissipated waste is observed. 5. The waste is not stored on the territory for long;		
	1. Construction Contractor's office	1. Checking the waste registration log, 2. Checking the documented agreement about waste disposal	1. Document check - once a month	Contractor EHS specialist; SC
Oils and oil products management	1. Construction camps; 2. Warehousing facilities	1.Visual observation: The protected areas for oils, oil products and other liquid products marked in a due manner; 2.Checking of documents about amounts and types of oil products	1. Visual observation - at the end of each working day;	Contractor EHS specialist; SC
Technical state of the access road, possibility of free movement	1. Corridors of the transportation routes	Visual observation: 1. The vehicles move along the routes specified in advance, bypassing the settled areas as far as possible. 2. The state of the driving routes is satisfactory. 3. Free movement is not limited. 4. Driving speeds are observed.	1. During the intense transport operations	Contractor EHS specialist; SC
Labor safety	1. Working area	Visual observation: 1. The territory is fenced and protected against the illegal penetration of strangers, 2. The personnel are equipped with PPE. 3. The technical state of the exploited equipment and mechanisms is satisfactory.	1. Visual observation- before the onset of each working;	Contractor EHS specialist; SC

What? (Is the parameter to monitor)?	**Where?** (Is the parameter to monitor)?	**How?** (Must the parameter be monitored)?	**When?** (Frequency or duration of monitoring)	**Who** (Is responsible for monitoring)?
		4. Electrical and fire safety is ensured. 5. The safety, prohibiting and information signs are installed on the territory and along its perimeter. 6. There is a banner on the territory with the basic safety rules. 7. Smoking areas are specially assigned. Checking of documents about amounts and types of oil products		
		Unscheduled control (Inspection): 1. The personnel observe the safety rules and use the PPE.	Inspection - regularly.	Contractor EHS specialist; SC

K. CONCLUSIONS AND RECOMMENDATIONS

349. Based on results of the conducted IEE the following conclusions could be done:

350. The proposed project was assessed against the laws of Georgia and ADB's safeguard. At the stage of the document preparation, possible environmental impacts were identified and relevant mitigation measures were developed.

351. Due to the circumstances occurring throughout the world related to the virus outbreak (COVID 19) and forced social distancing, no field visits were possible during the preparation stage of the IEE. Thus, in order to achieve the IEE objective, the team conducted online consultations with the representatives of Akhaltsikhe Municipality for obtaining relevant information and carried out desktop survey. Representatives of city hall of Akhaltsikhe municipality visited the project site, took pictures reflecting the existing situation that were provided along the additional information. Namely, the team of consultants reviewed the project background documents, analyzed the relevant legal laws and technical standards, and undertook online meetings with people who possessed the information, additional to the received document, required for sound analyses of the situation and drafting of the document.

352. Temporary disturbance of local population is expected during the construction works, which will be connected with the construction activities and transportation of the construction materials and equipment. In other cases, the impact on the social environment shall be positive, because temporary employment of the local population is expected;

353. During the functioning of the sport complex the negative impact on physical environment and biological systems is not expected;

354. Only positive impact on the social system is expected during the sport complex functioning. Whole population of Akhaltsikhe will benefit from the new swimming pool, especially as being a public entity, it can become part of municipal program, giving more access to, particularly young people.

355. The Construction Contractor is obliged to conclude the contract only with the companies holding the license to extract inert materials. If the company decides to extract the inert materials itself and opens a quarry, it is obliged to obtain the license from the National Agency of Mines.

356. Technical characteristics and decision about dumpsites and quarries have not been made currently. Detail characteristics of these infrastructures will be provided in the site specific environmental management plans.

357. Generation of significant amount of inert waste is expected during earthworks within the project. Approximately 370.68 t construction waste will be generated due to the demolition works and 20 210 t excess soil will be generated due to the excavation works, which should be transported and disposed outside of the project site. According to the Georgian legislation, inert waste can be used for backfilling operations or constriction purposes in coordination with a state or a municipality authority. Inert waste disposal site for backfilling operation shall be defined by the Akhaltsikhe City Hall. Waste Management Plan should be developed and submitted to the MoEPA for adoption if amount generated waste will exceed limits defined by Georgia legislation (more than 1000 t of inert waste, more than 200 t of non-hazardous waste and more than 120 kg of hazardous waste).

Recommendations

358. The EMP, its mitigation and monitoring programs, contained herewith will be included within the Bidding documents for project works for all Project components. The Bid documents state that the Contractor will be responsible for the implementation of the requirements of the EMP through his own SSEMP which will adopt all of the conditions of the EMP and add site specific elements that are not currently known, such as the Contractors borrow pit locations. This ensures that all potential bidders are aware of the environmental requirements of the Project and its associated environmental costs.

359. The EMP and all its requirements will then be added to the Contractors Contract, thereby making implementation of the EMP a legal requirement according to the Contract. He will then prepare his SSEMP, which will be approved and monitored by the Engineer. Should the Engineer note any non-conformance with the SSEMP (and the EMP) the Contractor can be held liable for breach of the contractual obligations of the EMP. To ensure compliance with the SSEMP the Contractor should employ an Environmental Manager to monitor and report Project activities throughout the Project Construction phase.

360. The management of the Construction Contractor will provide periodic training and testing regarding the observance of the environmental protection and job safety rules by the personnel engaged in the project implementation activities.

361. A strict control over the observance of the safety requirements and hygienic norms by the personnel will be introduced.

362. Before starting the construction works, the contractor shall conduct the following surveys: noise and vibration soil contamination, air pollution and flora and fauna species to identify baseline situation;

363. Prior to the commencement of the construction works, the Construction Contractor is obliged to prepare the following environmental plans: (i) Site-specific environmental plan. (ii) Noise and vibration management plan; (iii) Traffic management plan; (iv) Waste management plan; (iv) Health and safety management plan, (v) Emergency response plan; (vi) Camp site management plan. Inventory of trees shall conducted if required. Technical report of the stationary source of harmful substances emitted into atmospheric air shall be prepared if required.

364. The Construction Contractor must undertake all mitigation measures in order to reduce the impact of noise emissions on the sensitive receptors.

365. In the project operation phase, periodical monitoring of noise level and air quality is necessary. If the noise and air pollution levels increase against the admissible standards, it will be necessary to develop and implement additional mitigation measures

Attachment 1. Impact Assessment Criteria

Table 22. Noise and vibration propagation – Impact Assessment Criteria

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
Noise propagation	Noise levels at the border of the settled area exceed 55 dbA during the day and 45 dBA at night, or exceeds50 dBA during the day and 40dBA at night at sensitive receptors. Excess noise levels are intense. Population's dissatisfaction is inevitable.	Noise levels at the border of the settled area little exceed 55 dbA during the day and 45 dBA at night; however, the impact is expected only in some cases or is temporal. The noise levels at the sensitive receptors are admissible; however, additional preventive measures are recommended.	The noise background levels have deteriorated a bit near the settled areas or sensitive receptors. In any case, no levels in excess of the admissible levels are expected. It is sufficient to take standard mitigation measures.
Vibration	Due to the use of heavy technique and other methods, vibration spreads to great distances. There is a probability of damage or destruction of buildings and premises, monuments of cultural heritage or disturbance of geological stability.	Vibration does not spread to far places, or the impact is short-term. The probability of damage of buildings and premises, monuments of cultural heritage or disturbance of geological stability is very little. Minor and periodic discomfort is expected.	Vibration propagates only in the working zone. No damage of buildings and premises, monuments of cultural heritage or disturbance of geological stability is expected. No addiitonal mitigation measures are needed.
Condition of the working area (noise and vibration)	It is impossible to work. Using ear-plugs or other protective equipment is less inefficient. It is necessary to change the service staff frequently.	Noise and vibration is a nuisance in the working area; but working is possible provided the relevant protective equipment are used or other measures are taken (e.g. cutting the working hours and the like).	The noise and vibration levels in the working zone are not high. No PPE is needed, or if needed only for short periods. An 8-hour-long working day is permitted.

Table 23. Assessment Criteria of the expected impact on water

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
Changed flow rate of the surface waters	Under the project impact, the natural river flow rate is strongly changed (either for the year, or temporarily); it is difficult to maintain the present state of the water eco-system. Other water-consuming unit has a limited access to water, Or due to the increased water flow, the risk of developing hazardous hydrological events has increased.	Under the project impact, the natural river flow rate reduced to 70%(either for the year, or temporarily); however, the water eco-system is mostly maintained. The access of another water-consuming unit to water has not changed, or Under the project impact, the natural river flow rate increased to 110%. The risks of developing the hazardous - hydrological events are possible to eliminate by using relevant protective measures.	Under the project impact, the natural river flow rate reduced to 70% (either for the year, or temporarily). The access of another water-consuming unit to water has not changed, or the unit is not used for other purposes. The river flow rate will not increase under the impact of the project.
Deterioration of the surface water quality, origination of the sewage	Fishing or drinking-and-industrial water object is under the impact, or Significant amount of sewage is expected. Despite building the treatment plant, there is a probability of discharging the excessively polluted waters, or the probability of emergencies is high. Due to the near location of the water body, there is a possibility for the solid remains and liquid mass to enter the water body.	An industrial-household water unit is under the impact. Sewage is originated; however, at the expense of relevant preventive measures (arranging the duly efficient treatment plant, etc.) it is possible to maintain the qualitative state of the surface water. The existing quality may be changed a bit what will have a minor impact on the water biodiversity, or the probability of emergencies to occur is not high. In such a case, the distances are so great that the risks of the polluting substances flowing into the water are minimal.	There are no surface waters near the water object. Therefore, there is only the possibility of indirect impact, which is not major. No sewage is expected to originate, or the small amounts of liquid remains can be managed by using the methods safe for the water environment (e.g. by an evaporating pond, recycling the liquid remains, etc.).
Ground water pollution	The activity implies using the methods creating the risks of excess pollution of the ground waters (e.g. burying the materials containing polluted substances,	The activity implies using the methods creating certain risks of pollution of the ground waters; however, using the	The risks of the ground water pollution are associated with the unforeseen cases only (minor oil product leakages from technique or equipment and the like.). No large amounts of

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
	etc.); mitigation measures are less efficient, or the probability of emergencies to occur is quite likely with the infiltration of the large amounts of oil products or other polluting substances into the ground layers.	mitigation measures is efficient and significantly reduce the risks, or there is probability of emergencies to occur; however, relevant preventive measures are taken.	liquid polluting substances are stored or used in the area threatening the ground waters in case of accidents.
Impact on the flow rate of the ground waters, changed infiltration properties of the grounds	The activity envisages arranging deep engineering facilities, with which it is possible to cross the underground water-bearing infrastructure. As a result, the outflows of the underground waters may decrease, or The activity envisages using large land areas/cutting down the forests what will deteriorate the ground infiltration properties. This may reduce the intensity of the underground water alimentation with the atmospheric precipitations.	The activity does not envisage arranging deep engineering facilities, and in addition, there are no particularly significant water-bearing horizons spreading on the territory. Despite this, cultivation of land areas or the used building and exploitation methods may have a certain impact on the outflows of less valuable springs.	By considering the small project area, used building and exploitation methods and existing hydro-geological conditions, the impact on the flow rate of the underground waters will be minor. No impact on either drinking, or industrial water is expected.

Table 24. Assessment Criteria of the expected impact on the soil

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
Damage and erosion of the fertile soil layer	The project envisages using over 12,5 ha of agricultural plots or other land areas highly valuable in respect of fertility, or the methods used during the building and exploitation promote the activation of the soil erosion processes over significant areas.	The project envisages using less than 12,5 ha of agricultural plots or other land areas valuable in respect of fertility, or the area to manage is more than 12,5 ha, but this is not an agricultural land or is not otherwise valuable, or	The project envisages using less than 12,5 ha of non-agricultural plots or other land areas less valuable in respect of fertility. Provided the fertile soils layer is duly managed, the impact will be minimal. No erosion beyond the used perimeter is expected.

Kind of impact	Assessment criteria		
	Significant (high) impact	*Average impact*	*Insignificant (low) impact*
		The methods used during the building and exploitation promote the activation of the soil erosion processes in some areas, but they can be prevented by using the relevant mitigation measures.	
Soil/ground pollution	Due to the methods used during the building and exploitation, the risks of polluting the fertile layer of the agricultural land of any area (exceeding MAC) are quite high or virtually inevitable or the probability of developing such emergencies leading to the pollution of over 100 m2 area or over the depth of 0,3 m of soil and ground is quite high.	Due to the methods used during the building and exploitation, there are risks of polluting the less valuable surface layer of lands (exceeding MAC) or there is a probability of developing such emergencies leading to the pollution of less than 100 m2 area or less than the depth of 0,3 m of soil and ground.	Only minor local pollution of soil/ground is expected, mostly in unforeseen cases. The technology of local cleaning the polluted soil can be used.

Table 25. Assessment criteria of the expected impact on the geological environment

Kind of impact	Assessment criteria		
	Significant (high) impact	*Average impact*	*Insignificant (low) impact*
Violation of the stability of the geological environment under the project impact, activation of hazardous processes	The project is planned to implement in the relief with the III degree of complexity in engineering-geological respect. During the earthworks, the probability of activation of such hazardous geodynamic processes, as landslide, rock fall, mudflow, etc. exists, or the risks of activation of the same processes exist in the operation phase of the object (hydrotehcnical facilities, underpass, etc. can be considered as such object). It is necessary to build the protective facilities of complex structures or to make corrections to the project.	The project is planned to implement in the relief with the II degree of complexity in engineering-geological respect. During the earthworks or in the operating phase, the probability of activation of hazardous geodynamic processes. However, provided the protective measures in terms of simple-structure facilities these can be prevented.	The project is planned to implement in the favorable relief. No significant resources to build protective structures are needed. Only local, minor erosive processes may develop.

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
Impact of the existing engineering-geological conditions on the project facilities	The engineering-geological properties of the grounds are not favorable needing building deep foundations to establish the facilities on the cliffy rocks, or hazardous geodynamic processes threaten the stability of the object. It is necessary to build the protective facilities of complex structures or to make certain corrections to the project.	The engineering-geological properties of the grounds allow founding the object, but under certain conditions. The degree of the environment (ground and ground waters) aggressiveness to the reinforced concrete is satisfactory, or hazardous geo-dynamic processes pose a certain threat to the object's stability; however, the risk may be eliminated by taking protective measures of a simple structure.	The object is not a facility of a complex structure. The engineering-geological properties of the territory-constituent grounds are satisfactory. Consequently, there is no need for either deep foundations, or significant measures to protect the engineering facilities.

Table 26 Assessment criteria of the expected impact on the biological environment

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
Generic and quantitative changes in the vegetation cover	The project implementation will lead to the destroy of the endemic or Red-Listed species or the project implementation will lead to the use of the forested area over 1 ha or there is a risk for invasive kinds to spread	Following the project implementation, the risks of direct or indirect impacts on the endemic or Red-Listed species are minimal or the project implementation will lead to the use of the forested area less than 1 ha	Following the project implementation, there is no risk of impact on the endemic or Red-Listed species. Only the destruction of the homogenous low-value vegetation cover is expected. There is no risk for invasive species to spread.
Deterioration of the animal habitats, habitat loss or fragmentation endemic and Red-Listed animal	The project implementation will lead to the destroy, reduction or fragmentation of the area of the endemic and Red-Listed animal species or certain species may be reduced or certain population may disappear in the project implementation area or	Following the project implementation, the impact on the endemic or Red-Listed species is less likely. The area of such living organisms with no ability to migrate to long distances may decrease, or quantitative changes of certain species are expected in the project implementation area, but their destroy is not likely.	The project area is under the anthropogenic impact and is not a shelter for animal species. Only the animals adapted to the human activity live in the area with high ecological valency. The object is not a barrier hampering the migrating animals.

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
	the object is a linear object creating a kind of barrier for migrating animals or there is a risk for invasive kinds to spread.		
Immediate impact on fauna specie s	Due to the project implementation, there are some cases of animal perish (including endemic or Red-Listed species) during the year, or increased probability of poaching.	Due to the project implementation, there are few cases of animal perish (less valuable species) during the year	Perish of the animal species is less likely. The impact is short-term. The probability of increased poaching is minimal.
Direct or indirect impacts on the protected areas	Due to small distance and following the methods used at the building and exploitation stages, there are risks of long-term direct or indirect impacts on the territory.	Following the methods used at the building and exploitation stages, there is a risk of indirect impact on the protected area, but the impact is not long.	Due to a great distance, an impact on the protected area is less likely.

Table 27. Assessment criteria of the expected impact on the visual-landscape environment

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
Landscape impact	The project implementation is planned within the limits of the rare and high-value landscapes, or the landscape and its components are in fact intact and have high degree of naturalness.	The project implementation is planned within the limits of a regional or local landscape or the landscape and its components are partially transformed due to the human actions. They have an average degree of naturalness.	The project implementation is planned within the limits of a low-value landscape, which can be substituted, or the landscape and its components are quite devastated due to the man's economic activity.
Visual changes	The project area is easily seen from many locations. Implementation of the activity will have a significant impact on the visual effect for the local people or tourists.	The project area is seen from some observation points having no touristic value.	The project area is almost invisible. The building and exploitation will have a minimal impact on the visual effect for the local people or tourists.

Table 28. Assessment criteria of the expected impact on the social environment

Kind of impact	Assessment criteria		
	Significant (high) impact	**Average impact**	***Insignificant (low) impact***
Positive impact			
Increased budgetary flows	Increased central budgetary flows	*Increased budgetary flows*	Increased central budgetary flows
Employment and growing income of the population	The possibility to hire 70% of workforce from local population or The possibility to hire 40% of workforce from local rural residents or the possibility to hire 20% of workforce from local population in the high-mountain villages.	A total of 30 to 100 people employment opportunities. or Local villagers from 10 to 30 people employment opportunities. or Highland status of rural residents few employment opportunities.	10 persons employment opportunity.
Improvement of transport infrastructure	Improvement of the technical state of the international, state and regional roads, high probability of distress of transport intensity.	Improvement of the technical state of the roads in some or high-mountainous village and easy transportation.	Simplified rehabilitation of rural roads and transportation
Other social-economic benefit	At a country, regional or municipal level, or for several high-mountainous villages: 1. Improved waste management conditions. 2. Improved water-supply and water-drainage conditions. 3. Improved power supply and gas supply conditions. 4. Improved accessibility to other kinds of resources.	For several or high-mountainous villages: 5. Improved waste management conditions. 6. Improved water-supply and water-drainage conditions. 7. Improved power supply and gas supply conditions. 8. Improved accessibility to other kinds of resources.	Only some families (homesteads) receive various social-economic benefits.
Negative impact			
Resettlement, need to use private property	One of several cases of physical resettlement, or over 10 cases of economic resettlement, or	Up to 10 cases of economic resettlement. Provided the compensation measures are taken, no population's dissatisfaction is expected	No physical or economic resettlement is expected. Temporal use of the privately owned land plots and units may be needed, with the relevant compensation measures planned.

Kind of impact	Assessment criteria		
	Significant (high) impact	**Average impact**	***Insignificant (low) impact***
	one or several cases of economic resettlement in a high-mountainous village		
Deterioration of transport infrastructure	Deterioration of the technical condition of the international, state and regional roads, significant increase of transport intensity.	Deterioration of the technical condition of the roads in some or high-mountainous villages or significant increase in vehicle movement; however, the impact is temporal.	No deterioration of local roads or significant increase of transport intensity is not expected.
Other negative social-economic effects	At a country, regional or municipal level, or for several high-mountainous villages: 9. Deteriorated waste management conditions and landfill overload. 10. Deteriorated water-supply and water-drainage conditions or overloaded relevant systems 11. Limited accessibility to other resources.	For several or high-mountainous villages: 12. Deteriorated waste management conditions and landfill overload. 13. Deteriorated water-supply and water-drainage conditions or overloaded relevant systems 14. Limited accessibility to other resources.	For several families 15. Deteriorated waste management conditions and landfill overload. 16. Deteriorated water-supply and water-drainage conditions or overloaded relevant systems 17. Limited accessibility to other resources. However, the problem can be solved by searching alternative routes.

Table 29. Assessment criteria of the expected impact on the historical-cultural monuments

Kind of impact	Assessment criteria		
	Significant (high) impact	***Average impact***	***Insignificant (low) impact***
Damage to the historical-cultural monuments	Due to the small distance and following the methods used in the building and exploitation phases, there is a probability of damaging the monuments of the international or local historical-cultural heritage.	Due to the small distance and following the methods used in the building and exploitation phases, there is a probability of damaging the monuments of the local historical-cultural heritage.	Due to the great distance, the probability of damaging the monuments of historical-cultural heritage is less likely.
Unforeseen damage to the archeological monuments	Following the historical designation of the project area, there is a probability of the late identification of the archeological monuments.		The area is quite anthropogenic. Therefore, identification of the recent archeological monuments is less likely.

Attachment 2. Minutes of Online Meeting with Stakeholders

Construction of Akhaltsikhe Sport Complex

Minutes of Online Meeting with Stakeholders

In order to discuss environmental and social documentation (Initial Environmental Examination (IEE) and Social Due Diligence Report (SDDR) prepared for the project- "Construction of Sport Complex in Akhaltsikhe", on the 8th of July At 15:00, 2020 a public consultation meeting was conducted in the social network (via Facebook), as the COVID 19 outbreaks and there are existing related restrictions. Prior to the meeting, representatives of City Hall and local residents were informed personally by phone about the planned online meeting by the Communication Consultant – Irakli Japaridze.

The meeting aimed at keeping stakeholders abreast of the sub-project related planned activities, the expected negative impacts on the natural and social environment and the ways and means of preventing them.

Those present at the meeting:

Locals: Zigmund Zilrbeshtein; Grigol Tabatadze

Representative of Akhaltsikhe Municipality: Ilia Zardiashvili

Representatives of Municipal Development Fund of Georgia:

Environmental Specialist- Niniko Isakadze

ADB Communication Consultant – Irakli Japaridze

Project Manager – Zura Chinchaladze

Construction of Akhaltsikhe Swimming Pool is one of the projects, implemented under the Livable Cities Investment Program. The project area is located in Akhaltsikhe, at 44 Aspindza str. (Cadastral code: 62.09.63.183).

The land plot selected for the project is owned by Akhaltsikhe Municipality, but is not free of buildings. There is a functional municipal building – Training Hall situated on the territory. The building will not be dismantled. The Training Hall has a separate access road. The land plot area in question is 13,394.0 m^2. The area under construction of the new swimming pool building is 3,351.1 m^2. The complex includes two pools with the dimensions of 33mX25m and 16mX8m, and includes the following additional facilities: gym and weightlifting halls, dressing rooms and showers, an open cafe, a small shop, working rooms, a boxing and wrestling hall with its own dressing rooms and showers, as well as an administrative

block and a conference room. The total area of the building is 7,795.4 m^2. The project also envisages arranging other facilities – parking lot, backyard, pumping stock, water reservoir within the allocated land plot of 13,394 m^2.

The city of Akhaltsikhe is located in southern Georgia, on the Akhaltsikhe cave, on both banks of the Potskhovi River, at 1000 m above sea level, 214 km from Tbilisi. The project site is located in the city center, on the right bank of the Potskhovi River, 40 m away from the motorway.

The project area is located in the center of Akhaltsikhe, at Aspindza str. At 44. The facility will be constructed on the plot of 13,394 m^2, area that is agreed with the representatives of Local Government. The plot has an entrance on the north side, (cadastral code is 62.09.63.183). The area is on the right terrain, the maximum difference not exceeding 1 m. The area is bordered by the Potskhovi River on the North, Green Line and the City on the South.

The area under construction of the new swimming pool building is 3,351.1 m^2. The complex includes two pools with the dimensions of 33mX25m and 16mX8m, and includes the following additional facilities: gym and weightlifting halls, dressing rooms and showers, an open cafe, a small shop, working rooms, a boxing and wrestling hall with its own dressing rooms and showers, as well as an administrative block and a conference room. The total area of the building is 7,795.4 m^2. The project also envisages arranging other facilities – parking lot, backyard, pumping stock, water reservoir within the allocated land plot of 13,394 m^2.

Civil works under the project does not envisage demolition of the old existing building and construction of new one. For the purpose of not hindering functioning of the exiting Training Hall, there are two separate access roads to the project site. Both roads are in good condition (paved with asphalt cover) and no rehabilitation of these roads is planned within the project.

The project area will have temporary fence during the construction period and permanent 1.8 meter high concrete and metal fence after the construction is completed. No utility relocation activities and/or rehabilitation of access roads are envisaged under the project and associated screening.

Although at the moment there is one private swimming pool functioning in Akhaltsikhe, it is not meeting necessary technical requirements and cannot be widely used by the population. This is why the whole population of Akhaltsikhe will benefit from the new swimming pool, especially as being a public entity, it can become part of municipal program, giving more access to, particularly young people.

Communication Consultant Irakli Japaridze opened the meeting, reported in brief the objective of the meeting and then turned it over to the next speaker - Project Manager Zurab Chinchaladze. Project Manager familiarized the meeting attendees with the project, as well as with specifics of works to be carried out and reviewed in detail the assignment of Akhaltsikhe Sport Complex. Then the speech was delivered by Communication Consultant Irakli Japaridze. Mr. Japaridze provided detailed information related to measures to be taken as per Due Diligence Report. Irakli Japaridze explained that the Due Diligence report considers provision of compliance with the safety standards as much as possible. Mr. Japaridze showed also the photos to the attendees, reflecting the access roads to the construction site, as

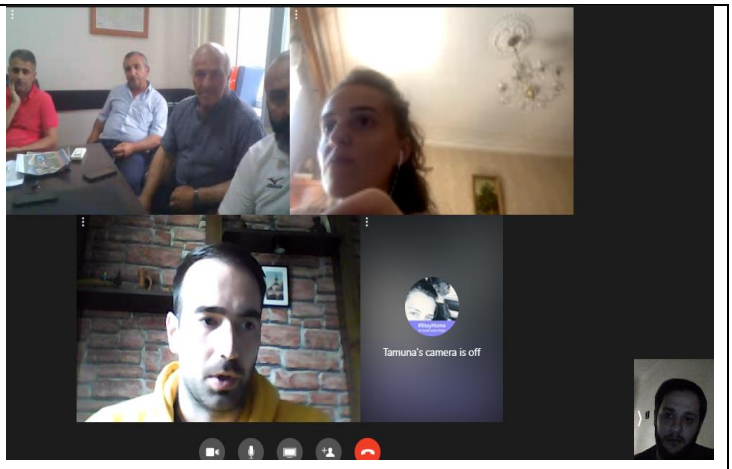
well as how the construction machinery is to move in the course of construction. Irakli Japaridze notified the attendees of the meeting that during construction there will be installed the special fence. Irakli Japaridze clarified also how and in which form the grievances can be accepted and reviewed by Akhaltsikhe City Hall and MDF.

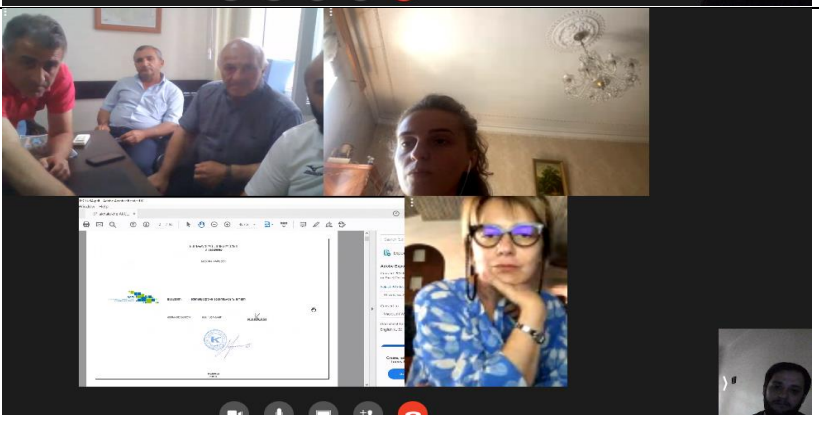
Then the speech was delivered by MDF environmental specialist Niniko Isakadze. Niniko Isakadze informed the attendees about the IEE prepared for the project. She shortly explained to the public about the social and environmental screening procedures applied for the ADB and environmental and requirements of the presented project. The mitigation measures were also discussed in order to minimize the potential negative impacts, which may arise during the project implementation process. N. Isakadze mentioned that according to the Georgian law on Environmental Impact Code the project does not require any kind of permits and agreements from the Ministry of Environmental Protection and Agriculture. N. Isakadze discussed the structure and content of IEE/EMP and briefly discussed public relationship and labor management measures. She noted that IEE/ EMP forms an integral part of the contract made with the civil works contractor. The last one is obliged thoroughly implementation of the measures specified in the IEE/EMP to protect social and natural environment.

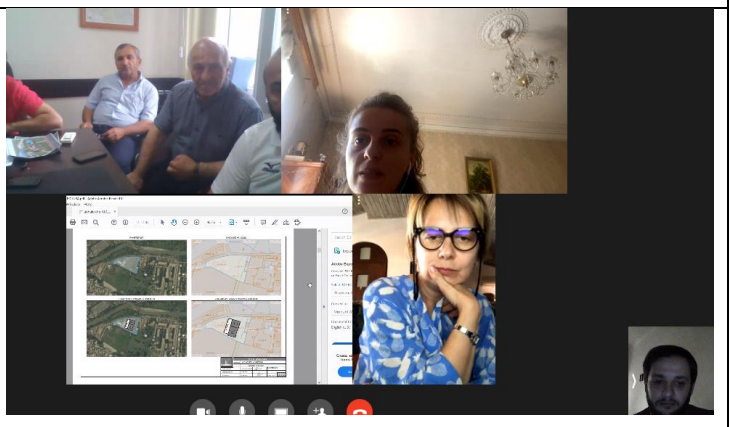
After the presentation, the audience was given a possibility to express their opinions and/or participate in Q&A session concerning presented issues, they posed the following question. Zurab Chinchaladze, Irakli Japaridze and Niniko Isakadze responded to all the questioned asked.

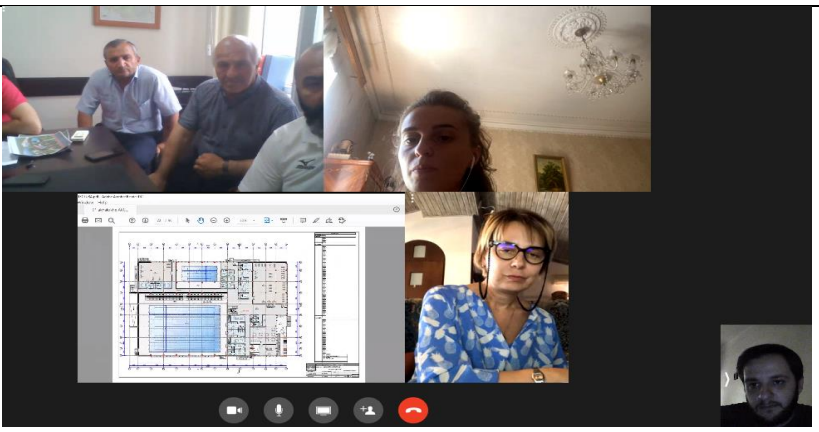
Question	Response
Does the project envisage dressing room	Project envisages individual dressing rooms and showers
Will the be in compliance with modern standards of sport complexes	No, it will

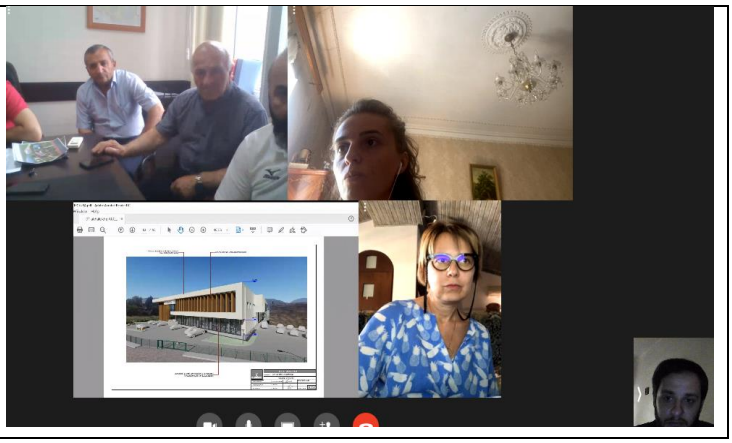
Photos of the Meeting











Attachment 3 Rapid Environmental Assessment (REA) Checklist

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES) for endorsement by Director, RSES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

COUNTRY/PROJECT TITLE: GEORGIA: CONSTRUCTION OF SPORT COMPLEX IN AKHALTSIKHE

SECTOR DIVISION: CWSS

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area adjacent to or within any of the following areas:			
▪ Cultural heritage site		**X**	
▪ Protected Area		**X**	
▪ Wetland		**X**	

Screening Questions	Yes	No	Remarks
▪ Mangrove		**X**	
▪ Estuarine		**X**	
▪ Buffer zone of protected area		**X**	
▪ Special area for protecting biodiversity		**X**	
▪ Underground utilities		**X**	
B. Potential Environmental Impacts Will the Project cause…			
▪ Encroachment on historical/cultural areas?		**X**	There will be no encroachment on historical or cultural areas. The construction of the sport complex will not result in a change in the landscape of the area.
▪ Encroachment on precious ecology (e.g. sensitive or protected areas)?		**X**	The proposed development will not encroach on precious ecology or environmentally sensitive areas

Screening Questions	Yes	No	Remarks
▪ Impacts on the sustainability of associated sanitation and solid waste disposal systems?	**X**		There will be certain amount of spoil material and construction waste arising due to the excavation and construction works. Waste management plans (if required) for compliance with environmental legislation in Georgia (Waste Management Code of Georgia) will be prepared and approved by the MoEPA, if amount of generated waste exceeds limits defined by Georgia legislation (more than 1000 t of inert waste, more than 200 t of non-hazardous waste and more than 120 kg of hazardous waste). The best international practices will be applied during the project implementation period.
▪ Dislocation or involuntary resettlement of people?		**X**	The project will not displace or dislocate any person. The proposed site is municipal-owned land.
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		**X**	There are no disproportionate impacts on poor, women and children, indigenous peoples, or other vulnerable groups.
▪ Accident risks associated with increased vehicular traffic, leading to loss of life?		**X**	It is not projected that such risks will be present during the implementation of the proposed development.
▪ Increased noise and air pollution resulting from increased traffic volume?		**X**	The operation of heavy equipment and service vehicles during the project implementation may cause acute, short-term and temporal elevated levels of ambient noise and suspended particulates.

Screening Questions	Yes	No	Remarks
▪ Occupational and community health and safety risks?	**X**		Due to the fact that the project site is in the city, located near residential buildings, there is a community health and safety risk during construction works. The EMP prescribes measures to mitigate, or if at all possible, eliminate the risks from accidental and natural hazards.
▪ Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	**X**		There is an insignificant risk and vulnerability related to the occupational health and safety due to physical hazards during project construction. Occupational health and safety will be a concern, in particular working at heights, live power lines, and any treatment chemicals during construction. Appropriate safety measures will be specified in the EMP
▪ Generation of dust in sensitive areas during construction?	**X**		Dust generation is expected during excavation and construction works. However, it is short term and limited to construction site.
▪ Requirements for disposal of fill, excavation, and/or spoil materials?		**X**	Generation of some amount of inert waste is expected during earthworks within the project. According to the Georgian legislation, inert waste can be used for backfilling operations or constriction purposes in coordination with a state or a municipality authority. Inert waste disposal site for backfilling operation shall be defined by the Akhaltsikhe Municipality. Waste Management Plan (if required) should be developed and submitted to the MoEPA for adoption if amount generated waste will exceed limits defined by Georgia legislation (more than 1000 t of inert waste, more than 200 t of non-hazardous waste and more than 120 kg of hazardous waste).

Screening Questions	Yes	No	Remarks
▪ Noise and vibration due to blasting and other civil works?	**X**		Blasting will not be used, but noise and vibration will be short-term localized impacts, which can affect local population living near the project site. The construction contractor will responsible to develop noise and vibration surveys and prepare related documents and mitigation measures. Noise and vibration levels monitoring will be provided as well in the process of the construction works.
▪ Alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?		**X**	Surface and groundwater pollution can be caused by accidents, improperly operated works and incorrect management of the generated waste. As a result of the planned works on the project territory, the risk of ground water pollution is small, however, in order to minimize the expected adverse impact on groundwater, mitigation measures should be reflected in management plans and accordingly implemented.
▪ Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction?		X	
▪ Long-term impacts on local hydrology as a result of building hard surfaces in or near the building?		**X**	
▪ Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		**X**	A construction workforce is likely to be from the local area.

Screening Questions	Yes	No	Remarks
▪ Social conflicts if workers from other regions or countries are hired?		**X**	Conflict is possible but unlikely as there will be a limited number of workers from outside the local area. Moreover, proper planning and management can avoid such conflicts. Furthermore, staff will be sensitized with local cultural norms to avoid any conflicts.
▪ Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation?		**X**	It is not projected that such risks will be present during the implementation of the proposed development.
▪ Risks to community health and safety caused by management and disposal of waste?		**X**	The EMP will include control measures for the transport, storage, use and disposal of hazardous wastes and materials. Any communities residing within the project area of influence will be consulted throughout the project cycle and informed on Community Health and Safety Risks.
▪ Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		**X**	Community Safety risks are not expected, as the fencing of the construction site is envisaged under the project, additional no unauthorized access is allowed and it's prohibited within the construction site. Any communities residing within the project area of influence will be consulted throughout the project cycle and informed on Community Health and Safety Risks. Appropriate controls for hazardous materials will be adopted to minimize exposure risks

A Checklist for Preliminary Climate Risk Screening

Country/Project Title:

Sector :

Subsector:

Division/Department:

Screening Questions		**Score**	**Remarks[4]**
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?	0	
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc)?	0	
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?	0	
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s) ?	0	
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?	0	

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

[4] If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response, will be categorized as high risk project.

Result of Initial Screening (Low, Medium, High):_____Low_____

Other Comments:_____

_____

Prepared by: _____