Scoping Presentation
Closure of Existing Landfill and Construction of New Regional Non-Hazardous Waste Landfill in Zugdidi Samegrelo Zemo Svaneti Region

June 2020

Funding Partner:

Beneficiary:

LTD "SOLID WASTE MANAGEMENT COMPANY OF GEORGIA"

Implementation Partner:

Contents of the Presentation

1. Project Information, Objectives and Project Team
2. Objectives of the Scoping Process
3. Legal Framework
4. Project Description
5. Environmental and Social Baseline
6. Stakeholder Engagement
7. Potential Impacts and Mitigation
8. Next Steps in the ESIA process

Project Information

Project name	**Integrated Solid Waste Management Programme II, - Kakheti and Samegrelo Zemo Svaneti Regions, Georgia**
Project Owner	**Solid Waste Management Company of Georgia (SWMCG)**
Project Commencement	**14.October 2019**
Project Duration	**53 months / Jan. 2024**

Implementation Consultant (IC) Team:

- Lead International Company: CDM Smith Germany
- Local Partner : Saunders Group
- Sub-Contractor: GEO (Georgia's Environmental Outlook)

Project Objectives

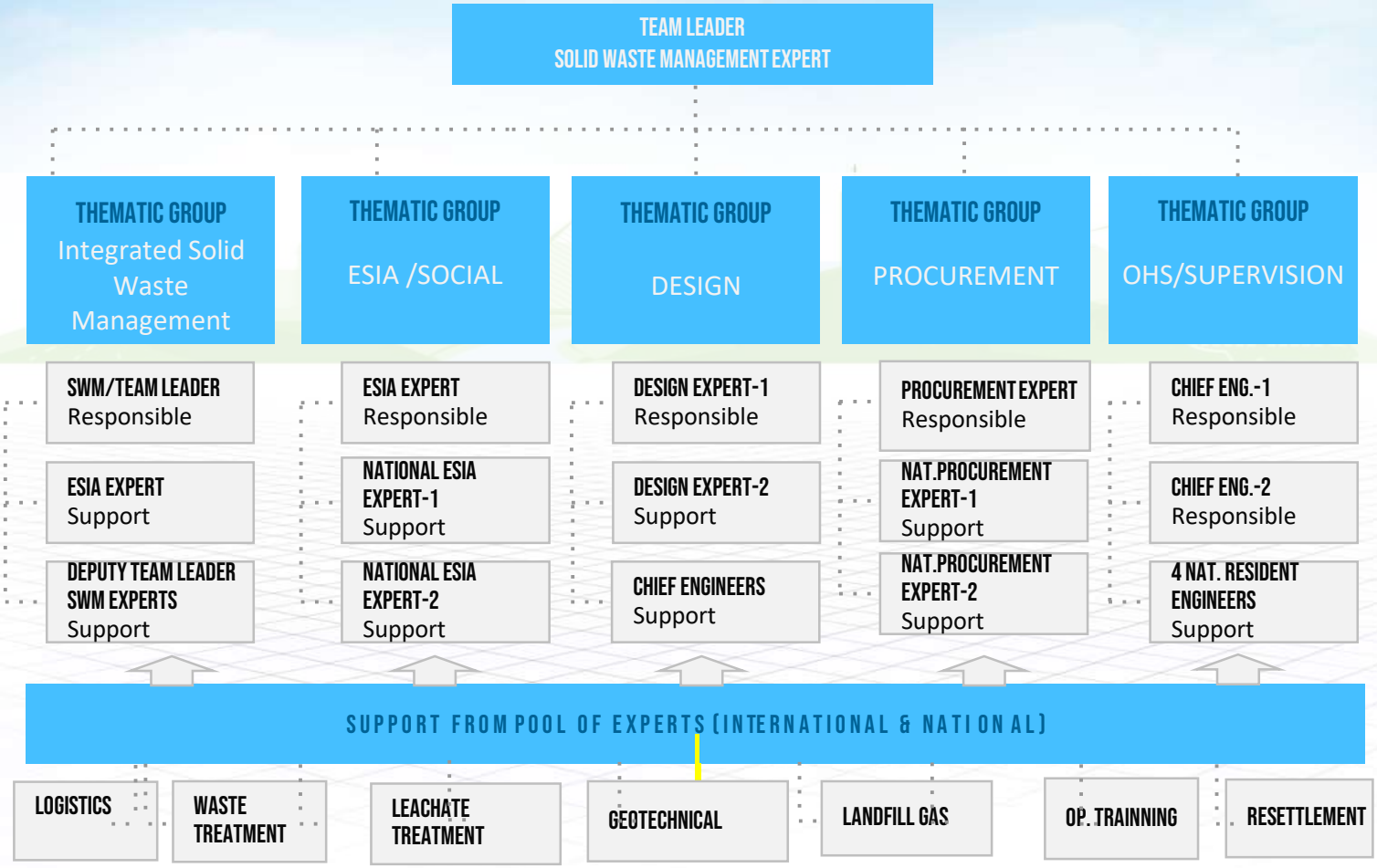
The Implementation of:

- Construction and equipping of a New Regional Non-Hazardous Waste Landfills for Municipal Solid Waste
- Construction of Transfer Stations and Provision of Long-Distance Transport Equipment
- Provision of Equipment for Street Sweeping, Waste Collection/transportation
- Environmentally Sound Closure of Existing Landfills (existing Zugdidi and Poti landfills)
- Support the SWMCG in Investment process and strengthen Municipal Technical Capabilities

Main Project Components in SZS Region

- **Logistics**: waste collection trucks, containers and street cleaning machines for various volumes of waste
- **Transfer stations**: 3 transfer stations (Poti, Tsalenjikha, Lakhani) and **long distance transport trucks**
- **Construction of new Regional Non-Hazardous Waste Landfill according to International Standards**: location of the existing landfill in Zugdidi (with a period of 20 years)
- **Closure of 2 existing landfills:** (existing landfills in Poti and Zugdidi)

Organisational Structure of Experts Team: experienced and multi-disciplinary team to ensure state-of-the art delivery of the project



THE SCOPING PROCESS

Objectives of the Scoping Process

- Provide an overall **description of the project** design and components
- Define the **environmental and social legal framework** related to the project
- Identify and evaluate **project alternatives**
- Establish **environmental and social baseline** conditions at the project's site and **gaps in information** that need to be filled during the ESIA
- Ensure an **early identification of possible impacts and mitigation measures** to avoid, reduce or compensate the negative impact and enhance the positive impact.
- Establish **methodologies for impact assessment**
- Provide an **early opportunity to engage with stakeholders ,** to consider their opinion in implementation of the project

Main objective of this presentation

LEGAL FRAMEWORK

Summary of Legal Framework relevant to the Project – National Legislation

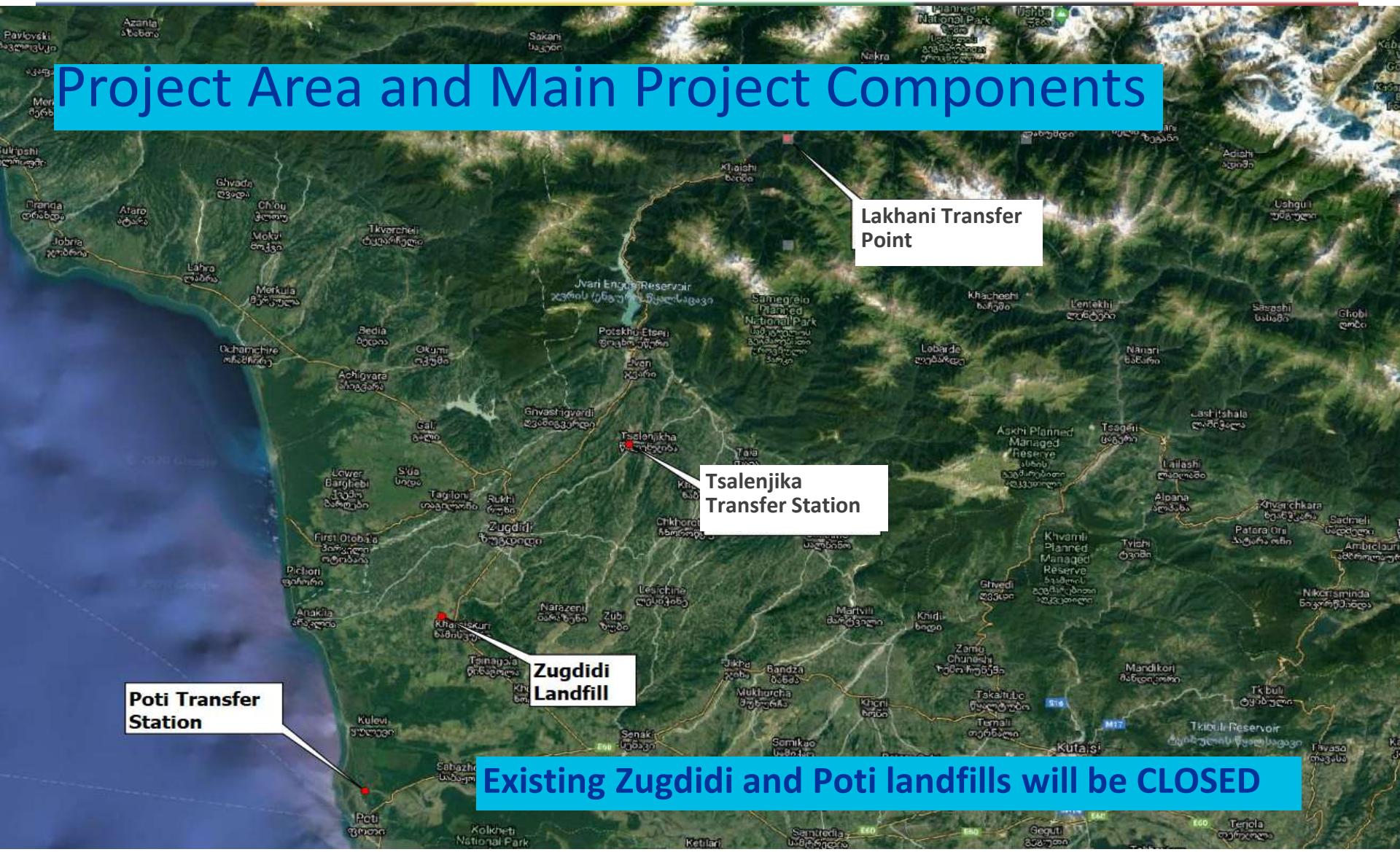
- The Government of Georgia has very comprehensive legislation related to waste management and the protection of the Environment
- Some of these Laws are the Environmental Assessment Code (EAC), the Waste Management Code, Law on Environmental Protection, Laws on Ambient Air Protection, Water, Soil Protection, Wildlife and Cultural Heritage
- GoG has also several Social and Land Ownership related Laws
- GoG has also detailed secondary legislation some of which being:
  - Decree #421/2015: *On the construction, operation, closure and after-care of landfills*
  - Resolution #425/2013: Technical regulation for protection of surface waters from pollution
  - Resolution #414/2013: Technical regulation for the calculation of limit values for emissions of pollutants discharged into the surface water bodies
  - Order #297/N: On the approval of environmental quality norms

Summary of Legal Framework relevant to the Project – International Standards

- The project is financed by KfW and therefore needs to align to KfW Sustainability Guideline (*Guideline of KfW Entwicklungsbank for Conducting Business in an Environmentally, Socially and Climate Friendly Manner)*
- These guidelines are in line with the following international standards:
  - Environmental and Social Standards (ESS) of the World Bank (ESS1 to ESS10)
  - Federal Ministry for Economic Cooperation and Development (BMZ) Human Rights Guideline
  - UN Basic Principles and Guidelines on Development-Based Evictions and Displacement
  - General Environment, Health and Safety (EHS) Guideline of the World Bank Group
  - Sector specific EHS Guideline of the World Bank Group for "Waste Management"
  - International Finance Corporation (IFC) Performance Standard 2 and ILO-norms for occupational health and safety issues.

PROJECT DESCRIPTION

Project Area and Main Project Components



Solid Waste Collection, Street Sweeping & Mobile Equipment for Samegrelo Zemo Svaneti Region

- Solid Waste Collection and Street Sweeping equipment will be provided to the municipalities
- Long distance transport vehicles for Transfer Stations and Equipment for Landfill will be provided to the SWMCG

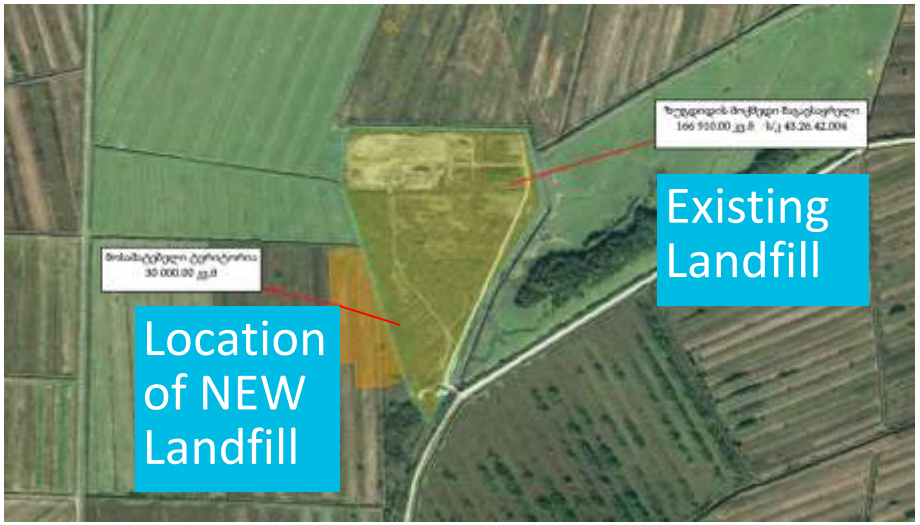







Existing and New Regional Non-Hazardous Waste Landfill Site in Zugdidi

New Regional Non-hazardous Waste Landfill site for the SZS region is the plot already used partly as the current landfill site in Zugdidi (42^{0}24’25.23’’N and 41^{0}46’2.03’’E)



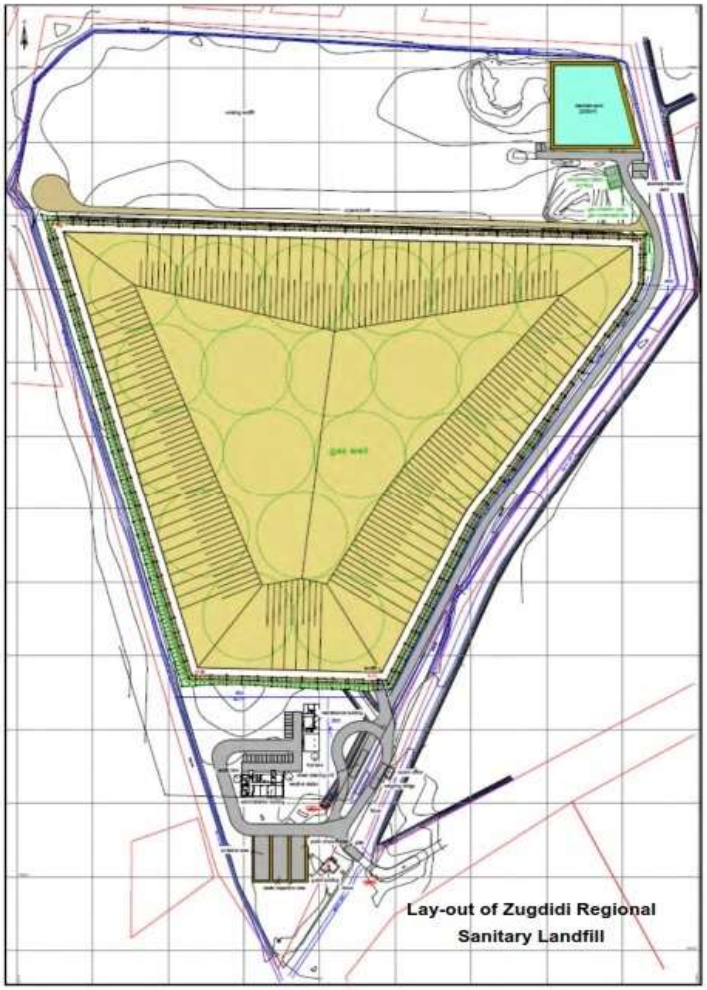
The New Regional Non-Hazardous Waste Landfill site is located 18 km in road distance and to the southwest of Zugdidi City Centre, And 1050 m from the nearest settlement

The plot of land is under the ownership of the SWMCG

Accessibility to the new Non-Hazardous Waste Landfill Site in Zugdidi

Access to the landfill site is ensured through Tbilisi-Senaki-Leselidze highway and lies about 2 km from the Anaklia-Khobi intersection

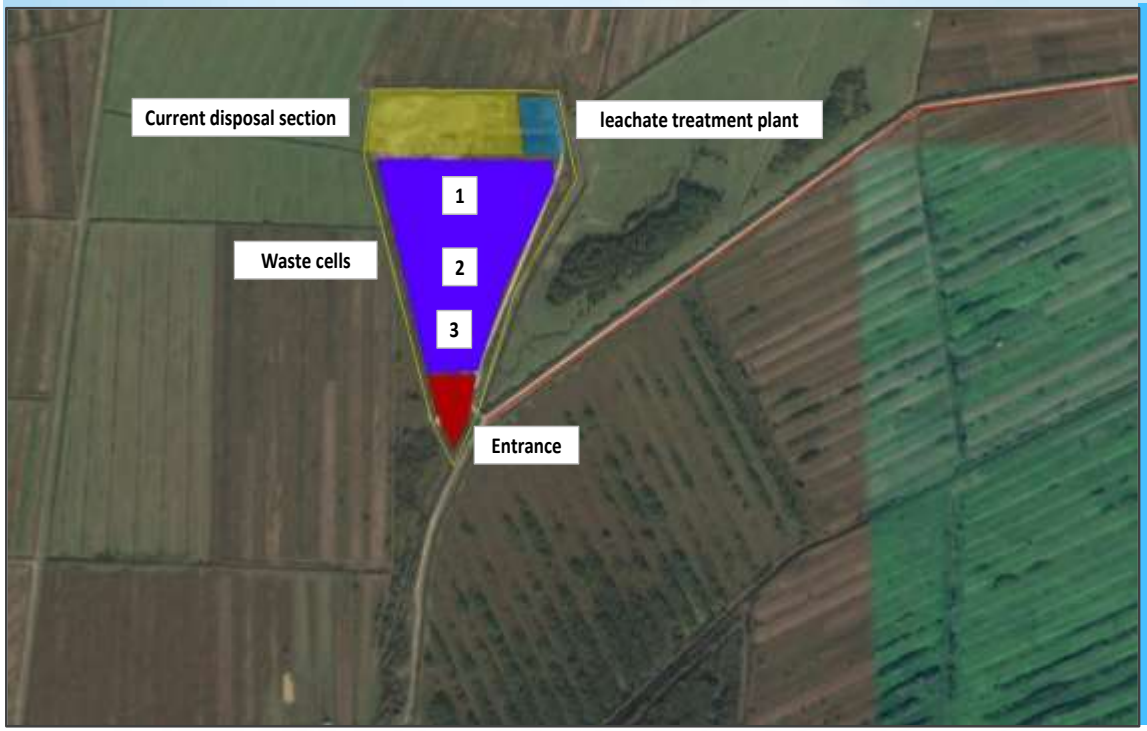
Conceptual Layout of New Regional Non-Hazardous Waste Landfill in Samegrelo-Zemo Svaneti Region



New Regional Non-Hazardous Waste Landfill:

- Total landfill volume: 1.000.000 m^3
- Maximum height : 25 m
- Waste Disposal Area (3 phases) : 12 ha

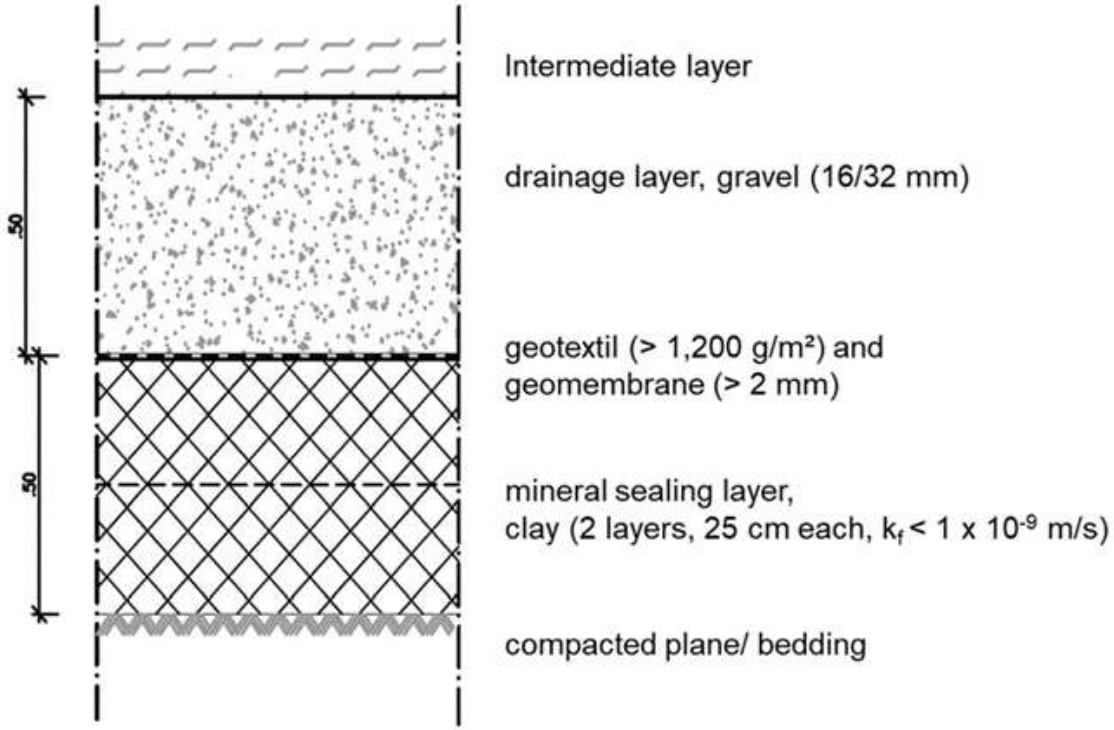
Cells Development and Leachate / Biogas management



- Landfill will be developed in 3 consecutive cells
- Leachate will be treated using the proven Reverse Osmosis (RO) technology
- Biogas will be collected via a gas collection system and will be flared. If and when sufficient biogas is produced, it can be used for electricity generation

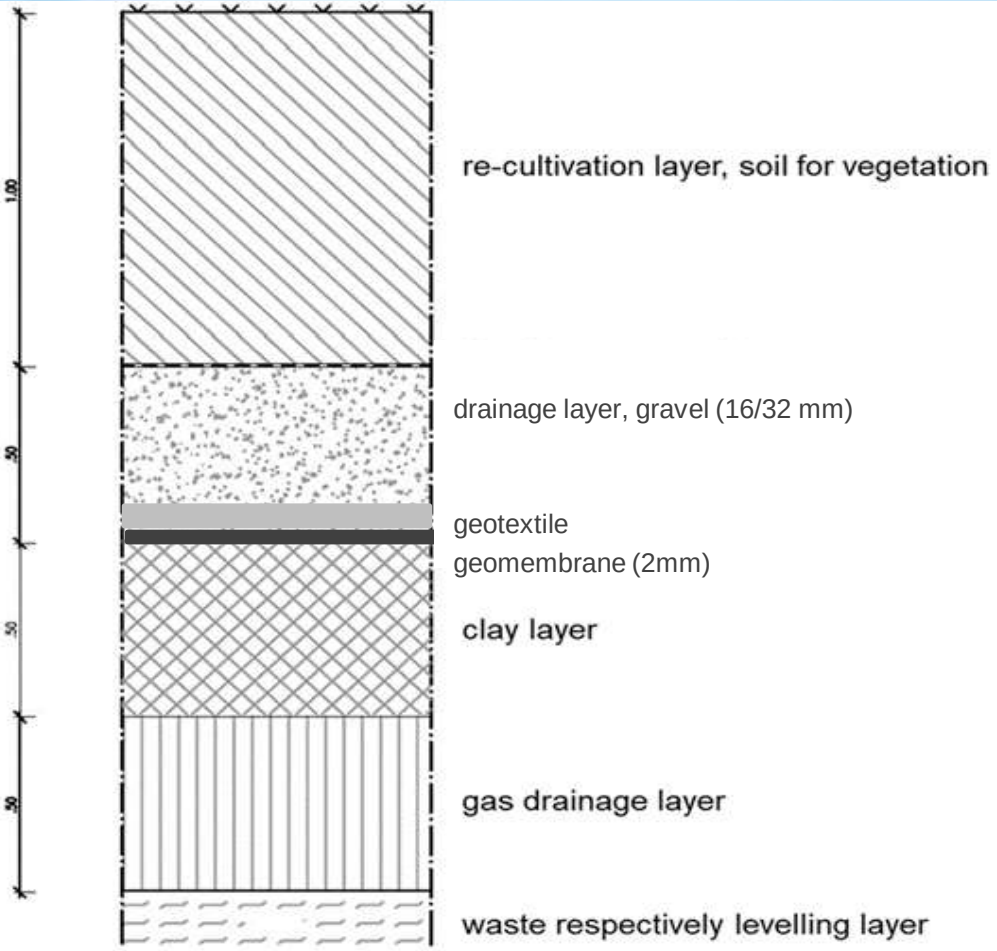
- The landfill base will be raised a minimum of 0.5 m above ground to ensure enough separation from groundwater
- For this purpose, a total of 152,000 m^3 of filling materials will be brought to site for earth works

Base Ceiling System



- The design of the base ceiling system is in line with national regulations (Decree of GoG #421) and international standards
- It aims at isolating wastes and leachate from the soil and groundwater and protecting the environment

Surface Ceiling System and Surface Water Drainage



- The design of the surface ceiling system is in line with national regulations (Decree of GoG #421) and international standards (e.g. EU Landfill Directive)
- It aims at isolating the waste body and safely close the landfill to avoid generation of leachate; this concept will also be used to close the existing Zugdidi landfill
- The landfill design includes measures to manage surface water during landfill operation to avoid soil and water pollution

Landfill Operation Equipment

In order to ensure a sound operation of the landfill, the following equipment will be provided:

- One steel wheeled compactor (28 t)
- One bulldozer (18 t)
- One tipper truck (20 t)
- One wheeled loader (3m^3)
- One pick-up truck (1.5 t)

The situation at Zugdidi landfill until 2013, before it was transferred to the management of the solid waste management company

Current Site Conditions

Existing Landfill Site

Modern Non-hazardous Waste Landfill (1)

Overview of a modern landfill

Base protection system

Preparation of a Cell

Geotextile

Modern Non-hazardous Waste Landfill (2)

Placement of Geomembrane

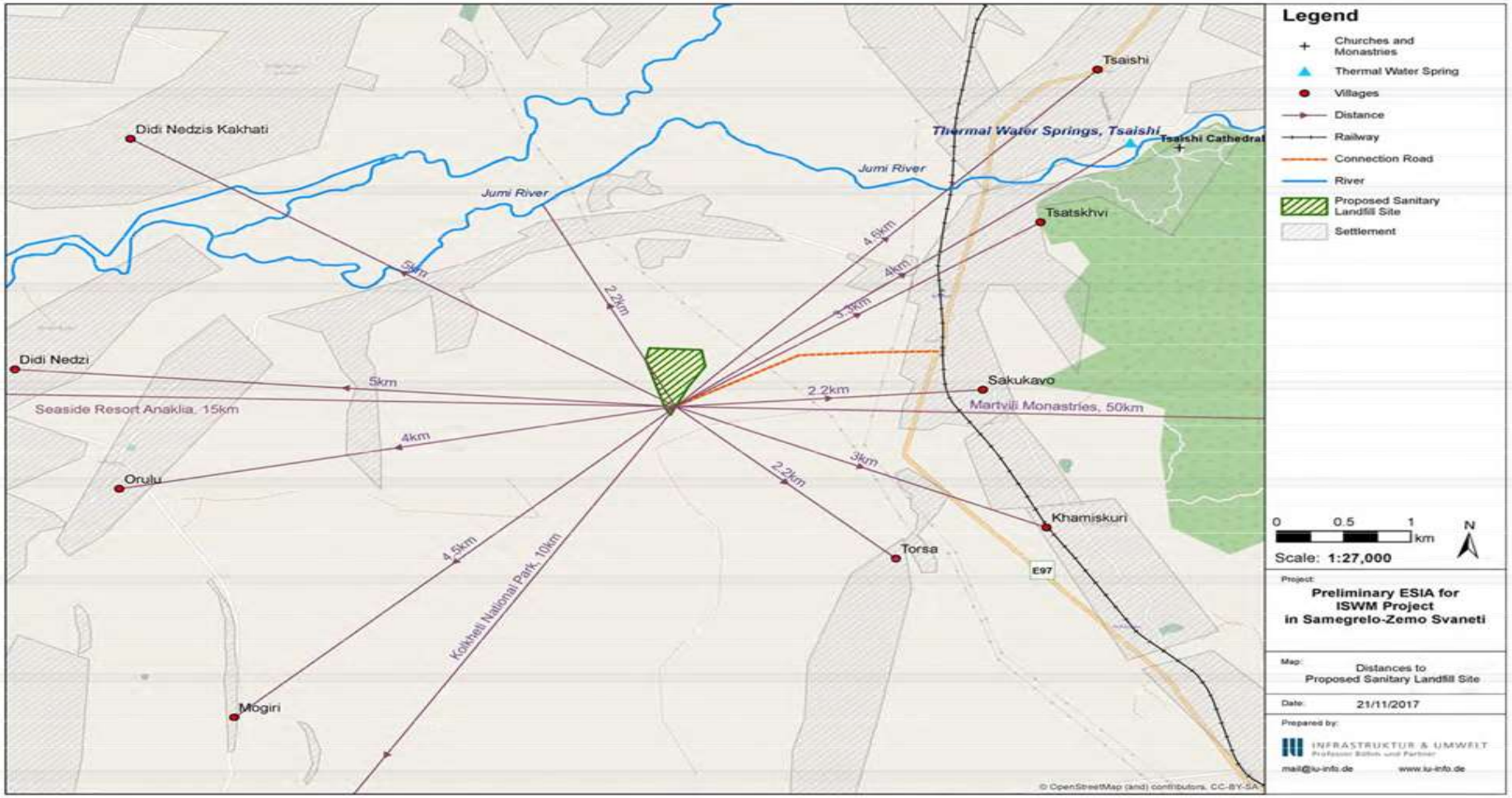
Leachate collection system

Flaring and management of collected gases

Alternative (1)

Alternative		Conclusion
Zero Alternative or "No Project" Alternative	<=>	Zero alternative, or no-project alternative, means that the envisaged regional landfill project would not be implemented. Consequently, the current unsatisfactory situation of the existing disposal site will be maintained and the modern international waste management system will not be introduced in the region. This alternative is not acceptable.
Alternative Location	<=>	A systematic site selection process for the identification of a new landfill site had been conducted including negative mapping, evaluation of 11 possible sites, and detailed assessment of 3 sites (existing Zugdidi site, former dumpsite near Urta village, and area near former dumpsite in Khobi). The Zugdidi site was ranked as the preferred site.

Alternative (2)



Distance of the proposed Site to the nearest villages Centres in the Region

Alternative (3)

Alternative		Conclusion
Alternative Waste treatment and disposal options	<=>	Several treatment options were evaluated during the feasibility study. Based on the analysis, it was found that the proposed project was the most suitable given existing conditions.
Alternatives for Leachate treatment	<=>	Various leachate treatment alternatives were analysed during the feasibility study. The Reverse Osmosis (RO) technology was found to be the most suitable option to treat leachate given its reliability and capacity to treat leachate to very stringent levels irrespective of incoming quality.

Overall Schedule – Key Dates

Project Phases	Until the end of
Inception Phase	November 2019
Scoping Opinion	July, 2020
Environmental Decision	February 2021
Start of operation	November 2022

*Dates are tentative, depending on the Pandemic situation

Environmental and Social Baseline

Environmental and Social Components

Environmental and Social Components were reviewed based on available information during the Scoping stage to:

- Ensure early identification of possible issues of concern, if any, that could affect project design and implementation
- Assess whether there are gaps in information that require further study during the ESIA phase to ensure a credible assessment is performed

E&S Components: Summary of Findings

E&S findings very favourable for the project:

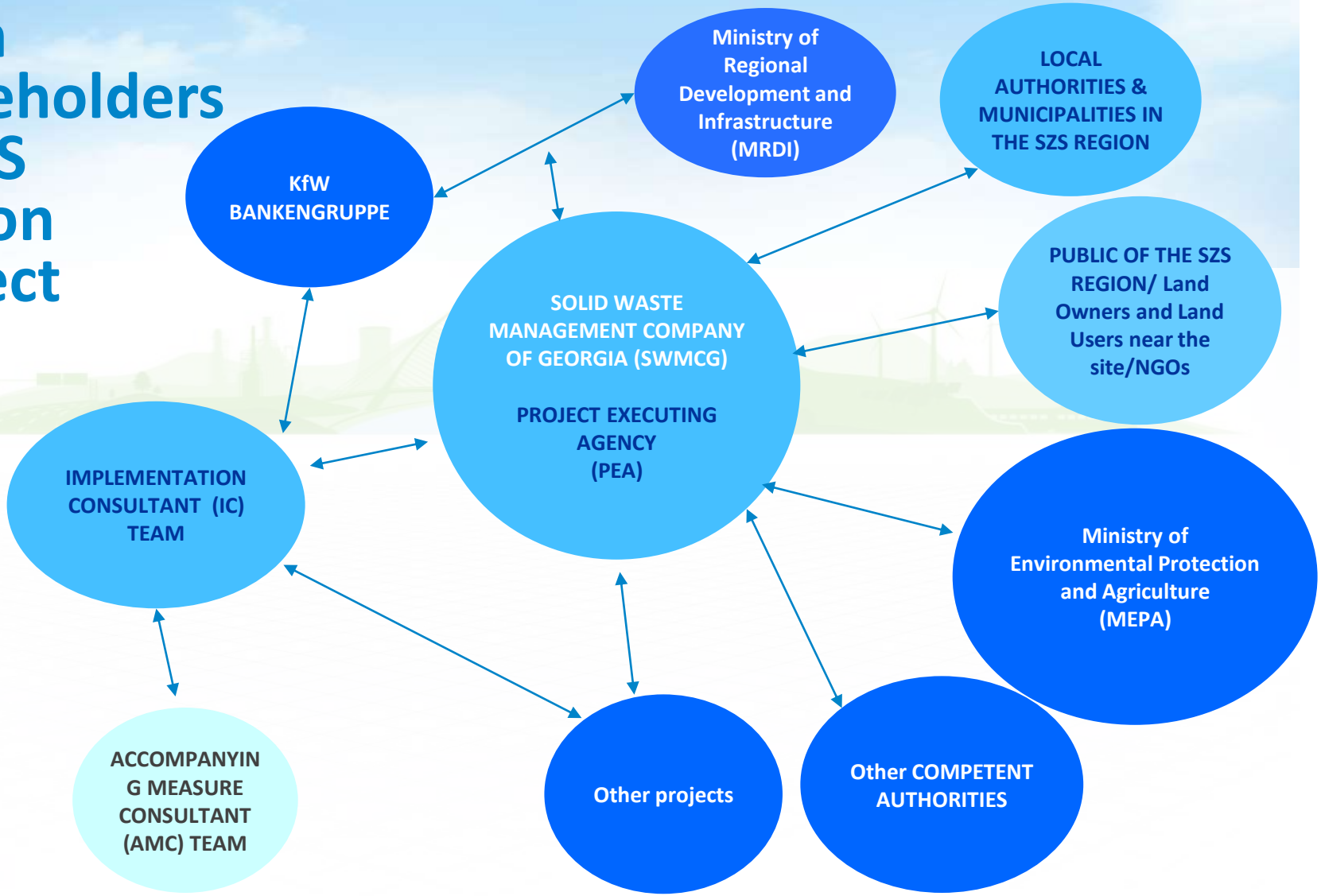
- Area is flat
- There is already an existing landfill causing various impacts to local communities; its rehabilitation and establishment of modern landfill will significantly improve environmental conditions
- The site is far from Protected Areas
- The site is far from cultural heritage
- The site has good access conditions
- The land is owned by SWMCG
- A layer of clay is present under the site
- Habitats in the area are mostly degraded and there is no evidence of the presence of species of high conservation value

E&S findings that need further investigation in the ESIA stage:

- Groundwater is shallow and requires elevating the base of the landfill
- Average rainfall is relatively high amounting to 1500 to 2000 mm per year; the project design duly accounts for this in the surface water drainage design
- Quality of soil, groundwater and surface water are not known; samples need to be taken and analysed to establish a proper baseline
- There are private land owners adjacent to the site and most of the land is used for pasture and maize cultivation; they will be engaged and informed of the project's benefits and how negative impacts will be avoided/minimized

Stakeholder Engagement

Main Stakeholders in SZS Region project



Stakeholder Engagement-Initial Survey

- Stakeholder engagement has been initiated
- A stakeholder survey was conducted to better understand the current environmental and social impacts due to the existing landfill as well as possible community concerns towards the proposed project to inform the ESIA process
- The research methodology was based on a qualitative research method, in particular the approach of in-depth interviews
- Fieldwork was carried out between March 13 and 15, 2020 in the villages of Didi Nedzi and Orulo (which are the closest villages to the landfill site)
- A total of 12 interviews were conducted so far
- In-depth interviews were also conducted with representatives of the mayor office of the village of Didi Nedzi and Orulo, as well as with the employees of the existing landfill and mayors/residents of other surrounding villages

Reasons for dissatisfaction / concern of stakeholders regarding the existing landfill and the positive impact of the new facility

Opinions on the possible negative impact from the existing landfill

- Impact on pasture due to littered wastes
- Health impacts
- Odour – possible spread in nearby settlements, especially in summer
- Insects abundance (there is a possible connection with the existence of the landfill)
- Abandoned dogs (there is a possible connection with the existence of the landfill)
- Road safety – speedy trucks

The positive impact of the new landfill:

- The project is expected to have significant positive impacts on the environment and local communities by closing the existing landfill and establishing a new modern landfill according to international standards
- The project will eliminate waste littering, avoid impacts on soil and water resources, and avoid generation of odours by adopting enhanced operational practices and lead to improvement of public health and hygiene conditions in the region
- The high protection of the facility will prevent the possibility of abandoned animals entering the area
- The project will reduce generation of Greenhouse gases from waste management in the region
- Road safety will be controlled
- The project will create jobs both during construction and during the 20-year operation

Stakeholders' Opinion about the Proposed Project

- General attitude towards the new project is positive; it is seen as a solution to improve the current situation and eliminate the impacts associated with the existing landfill.
- The existing landfill has been there for many years; local communities have been waiting for a long time for the improvement of the current situation.
- Local communities should be informed about the details of the project to build trust and avoid creating an information vacuum.
- Local communities should be informed how the landfill closure and establishment of a new modern landfill will solve the current environmental impacts of the existing landfill.
- Investments by SWMCG and/or other state agencies in the nearby communities would be welcome and contribute to further increasing project acceptability.

Stakeholder Engagement- Next Steps

- In line with the Environmental Assessment Code, MEPA will provide the opportunity to the public and stakeholders to review the scoping report and provide their comments
- Given the current COVID-19 situation, public review of the Scoping Report will be done in line with new procedures set by MEPA
- A Stakeholder Engagement Plan (SEP) is also being prepared to inform future engagements to be conducted during the EIA phase; additional stakeholder surveys and engagement will be conducted during the EIA phase
- Once the EIA report is finalized, it will be submitted to MEPA and a public hearing will be organized to discuss the findings with the communities and stakeholders

Potential Impacts and Mitigation

Impacts and Mitigation(1)

The proposed project can have several impacts, both positive and negative, and mitigation measures are integrated in project design to **avoid and minimize** negative impacts and **enhance** positive impacts.

Impacts and Mitigation (2)

- The following perceived negative impacts will be avoided/minimized as follows:

Perceived Impacts	How will these impacts be avoided/minimized by the new project
Soil and water will be polluted by leachate and contaminated runoff	- Existing landfill will be permanently covered according to national and international standards - Leachate generated in new landfill will be collected, diverted to a lined storage pond and treated using a proven Reverse Osmosis system - Groundwater is protected by a base ceiling system (Slide 20) composed of impermeable layers to avoid infiltration of leachate on the ground - Landfill has a drainage system to avoid runoff of contaminated surface water into the environment - Water resources will be periodically monitored during operation to ensure the landfill protection measures are operating properly
Odors will be generated causing nuisance to the surrounding population	- Existing landfill will be permanently covered and will no longer be a source of odours - New landfill is equipped with a gas collection and flaring system that will eliminate sources of odour - Daily and intermediate soil covers will be placed on top of deposited wastes - Odour-neutralizing sprays will be used if needed

Impacts and Mitigation(3)

- The following perceived negative impacts will be avoided/minimized as follows:

Perceived Impacts	How will these impacts be avoided/minimized by the new project
Waste littering will impact the pasture lands	- Daily covers will be placed on top of new landfill which will avoid waste littering - Catch fencing and netting will be installed to trap windblown litter - SWMCG will provide more frequent removal of littered wastes; frequency of occurrence of littering will be significantly reduced
Waste trucks reaching the site will cause nuisance and pose safety concerns to local communities	- Large long-distance trucks will be used to transfer the wastes to the site leading to reduced number of trucks coming to the site every day - Operation of Long-distance trucks will be the responsibility of SWMCG and will transport wastes from transfer stations to the new landfill sites following strict speed limits and driving behaviour rules. Drivers of waste trucks hired by the municipality will also be trained on road safety norms.
Increased number of insects	- Closure of existing landfill and use of daily covers and other measures in new landfill site will minimize incidence of insects

NEXT STEPS IN THE ESIA PROCESS

Next Steps (1)

- We want to make sure your concerns are taken into consideration

- The Ministry of Environmental Protection and Agriculture of Georgia will review the scoping Report and issue the Scoping Decision considering your comments/suggestions

- ESIA study will be conducted based on Scoping Opinion

- Once ESIA study is finalized, it will also be subject to public opinion before an Environmental Decision is issued by MEPA

Next Steps (2)

- The following additional surveys are proposed to be conducted to fill gaps in environmental and social information:

  - Air quality: If local capacity and equipment is available, ambient air quality measurements will be made at up to four (4) locations to establish baseline levels of NO_2, SO_2, O_3 and H_2S; this will help understand air quality in the study area including odor and set the mitigation measures accordingly
  - Noise: Noise measurements will be made at three (3) locations around the site and to establish baseline noise levels during a normal week-day and a non-working day
  - Soil: soil samples will be taken from various locations and analysed for environmental contaminants as per the regulatory requirements
  - Groundwater: groundwater samples will be collected from sub-surface water and, if possible, from aquifers under the clay layer to establish a groundwater quality baseline according to the parameters set in national regulation #416 and according to the parameters defined by other relevant legislative acts.

Next Steps (3)

- The following additional surveys are proposed to be conducted to fill gaps in environmental and social information:
  - Groundwater levels in three (3) locations will be measured to determine groundwater flow direction.
  - Water wells used within a radius of 1 km around the site will be surveyed to determine their depth, aquifer tapped, and use
  - Surface water: Up to five (5) samples will be taken from the Utora River and measured for regulatory parameters to assess its existing quality according to national regulation #416
  - The hydrological parameters of the river will also be measured
  - One (1) sediment sample will also be collected and analysed in the laboratory.
  - If possible, up to two (2) leachate samples from the existing landfill will be collected and analysed in the laboratory
  - Biodiversity: A confirmatory ecological survey will be conducted in a study area around 1 km from
    the site to further document the possible presence of species of high conservation value.
  - Detailed information on migratory bird routes, species and their use of the landfill site will be documented

Next Steps (4)

- The following additional surveys are proposed to be conducted to fill gaps in environmental and social information:
  - Land ownership and land use: landowners and land users in plots adjacent to the site will be engaged and informed of the enhancements made in landfill site and how it will improve local conditions
  - Land use: Present and planned land use within a 1 km radius from the landfill site will be documented (including land classification and land tenure)
  - Issues related to Waste Pickers (if applicable)
  - Public health: More details on the population's health profile will be collected based on available data from healthcare facilities
  - Gender issues: Any differences in attitudes towards waste, responsibilities for waste, labour market participation/livelihood opportunities will be documented in the ESIA study
  - Vulnerable groups: Presence and condition of vulnerable groups within a radius of 1 km around the site, if any, will be documented
  - Community needs: community needs will be further investigated to identify opportunities for possible investment in local infrastructure and livelihood projects

Your opinion is important to us. We look forward to receiving your comments and any concerns you have so we consider them in the project

Thank you!

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