# SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT

**#1 Semiannual Report**

(Reporting Period: July-December 2021)

Project Number: 51132-002

## GEORGIA: SUSTAINABLE WATER SUPPLY AND SANITATION SECTOR DEVELOPMENT PROGRAM

## (Financed by the Asian Development Bank)

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**For:** The Ministry of Regional Development and Infrastructure of Georgia and the Asian Development Bank

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## ABBREVIATIONS

| | |
|---|---|
| **ADB** | Asian Development Bank |
| **DC** | Design Consultant |
| **DEPRP** | Department of Environmental protection, Resettlement and Construction Permit |
| **DFPMD** | Donors Funded Project Management Department |
| **EA** | Executing Agency |
| **EARF** | Environmental Assessment and Review Framework |
| **EHS** | Environmental Health & Safety |
| **EIA** | Environmental Impact Assessment |
| **EIP** | Environmental Impact Permit |
| **EMP/ SSEMP** | Environmental Management Plan/ Site-Specific Environmental Management Plan |
| **ES/ SES** | Environmental Specialist/ Senior Environmental Specialist |
| **GoG** | Government of Georgia |
| **GRC** | Grievance Redress Committee |
| **GRM** | Grievance Redress Mechanism |
| **IA** | Implementing Agency |
| **IPMO** | Investment Program Management Office |
| **IEE** | Initial Environmental Examination |
| **MFF** | Multi-tranche Financing Facility |
| **MEPA** | Ministry of Environmental Protection and Agriculture |
| **MoRDI** | Ministry of Regional Development & Infrastructure |
| **NEA** | National Environmental Agency |
| **OJSC** | Open Joint Stock Company |
| **SC** | Supervision Consultant |
| **SDP** | Sustainable Water Supply and Sanitation Sector Development Program |
| **UWSCG** | United Water Supply Company of Georgia |
| **WHO** | World Health Organization |
| **WSS** | Water Supply & Sewerage |

# 1. INTRODUCTION

## 1.1 Preamble

**1.** This report represents the Semi-annual Environmental Monitoring Review (SAEMR) for the Urban Services Improvement Investment Program, Tranche 3 and describes the period of July-December 2021.

**2.** This report is the 1st Environmental Monitoring Review (EMR) of SDP/Tranche 3.

## 1.2 Headline Information

**3.** The Project commenced 04th October 2021, UWSCG-OCB-TEL-01-2020 actual construction activities started on 12th October 2021, main activities covered setting up the Construction Camp area and minor earth works. The report describes the activities performed within the framework of these projects.

**4.** Progress of the construction activities were affected by the COVID-19 pandemic. There were no travel restrictions as well and the EH&S specialist of Supervision Company and the Environmental specialist of SDP monitored construction sites on a regular basis. Workers complied with all regulations, including social distancing from the COVID-19 pandemic.

## 2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

### 2.1 Project Description

**5.** The Government of Georgia has requested assistance from the Asian Development Bank (ADB) for the Sustainable Water Supply and Sanitation Sector Development Program, formerly the Water Supply and Sanitation Service Improvement Project (the Project). The proposed program supports the government's pursuit of a sustainable water supply and sanitation (WSS) sector and efficient state-owned enterprise (SOE). The policy actions under the stand-alone multi tranche PBL will transform sector governance and institutions to improve sector performance and financial sustainability, while ensuring funding for basic services during a period of fiscal constraints brought on by the coronavirus disease (COVID19) pandemic. The project will (i) enhance water supply services in Telavi city, a regional capital and employment generation hub, to provide 24-hour water supply service, (ii) strengthen operation and maintenance (O&M) capacity of the United Water Supply Company of Georgia (UWSCG), (iii) prepare strategic investment plans for national-scale rural WSS development; and (iv) increase public awareness of infection prevention measures in the context of COVID-19 through a gender-sensitive health, hygiene, and sanitation program.

**6. Sub-project activities include:**

I. reconstruction/rehabilitation of water producing 11 Boreholes, with the depth of 200-220 m. and capacity 8-10 l/sec, for each;
II. construction of one new reservoir with the volume of 2000m3 near the new central reservoir # 1 (2000m3)
III. reconstruction of existing Boreholes (1) and construction of new 2000 m3 reservoir (1) in "Gigo Gora";
IV. construction of 1000 m3 "Shalauri Reservoir" (1) and (1) new borehole in the south-eastern part of the city;
V. construction of one new reservoir of 500 m3 adjacent to the Caucasian Street;
VI. reconstruction of existing Borehole (1) and 1000m3 existing reservoir (1) between the Gigo Gora on the University Street;
VII. construction of 500m3 reservoir (1) and (1) borehole adjacent to the Caucasian Street;
VIII. reconstruction of existing Boreholes (2) and construction of (2) new Boreholes in central reservoir N1, near the 2000m3 reservoir;
IX. reconstruction of existing (1) Borehole instead of existing reservoir No. 2, near the new 1000m3 reservoir;
X. construction of (2) Boreholes In the western part of Telavi near the new 500m3 reservoir in "Zuzumbo"; (xi) complete rehabilitation of Distribution Network for I, II and III zones, with total length of 63 km; (xii) construction of a new transmission line for water supply from well fields to reservoirs; (xiii) metering of the customers, including multistorey residential buildings and construction of the Chlorination Building.

**7.** Since the subproject is unlikely to have significant adverse impacts, it is classified as environment Category B, and accordingly an Initial Environmental Examination has been conducted. TEL-01 subproject IEE was elaborated and approved in October 2017.

**8.** The contract No UWSCG-OCB-TEL-01-2020 was signed on August 19, 2021 with "CGC" China Geoengineering Corporation. The Contract shall be completed within 450 days that will follow the Defect Notification period for 365 days.

### 2.2 Project Contracts and Management

**9.** The main institutions that are involved in implementation of the EMP are UWSCG executing agency (EA), Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environmental Protection and Agriculture of Georgia (MoEPA).

**10.** The Investment Program Management Office (IPMO) under UWSCG, which was renamed in November 2021 from the Project Management Department to the Donor Funded Project Management Department, is responsible for the day-to-day management of the project, including the implementation

of the EMP. IPMO has an Environmental Specialist who is responsible for managing the environmental aspects of the SDP. The head of the department was also replaced, and Ms. Irina Chikhladze was appointed as Acting Head of the Department instead of Ms. Ana Onashvili.

**11.** The IPMO (Environmental Specialist) responsibilities in respect of implementation of the EMP are as follows:

(i) Approve the Site-Specific Environmental Management Plan (SSEMP) before Contractor takes possession of construction site;
(ii) Monitor implementation of EMP and ensure the environmental safeguards compliance;
(iii) Review the updated IEE and/or SEMP and send it for clearance to ADB;
(iv) Ensure that contractors have access to the EMP and IEE report;
(v) Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; Provide ENG and GEO final versions of SAEMRs to be uploaded on UWSCG website;
(vi) Review and approve the Corrective Action Plan and provide to ADB for review and comments if any;
(vii) Participate in public consultations during project implementation;
(viii) In case of need assist IPMO Social/Resettlement Consultant in resolving process of environmental safeguards related complaints;
(ix) Assist in organizing trainings for the Contractors in coordination with ADB/RETA consultant;
(x) Participate in external trainings in environmental management and environmental auditing

**12.** The SC include a full time Environmental Specialist to assist the IPMO supervise and monitor implementation of the EMP during construction.

**13.** The Contractor also appoints a full time Environmental specialist to be a senior member of the construction management team based on site for the duration of the contract. The ES has a university degree (preferably at Masters Level) in Environmental Science or related discipline and have at least 10 years work experience in environmental management of infrastructure project.

**14.** Department of Environmental Protection and Permits of UWSCG work together with IPMO on addressing the Environmental Safeguard issues of SDP sub-projects. More detailed description of implementation arrangements; responsibilities and staffing are provided in the Table 1 below.

**Table 1: Institutional Arrangement, Responsibilities and Staffing**

| # | Millstones/Actions | Contractor (Environmental Specialist) | Construction Supervision Consultant (Environmental Specialist) | IPMO (Environmental Specialist) | Environmental Protection and Permits Department (Environmental Specialist) |
|---|---|---|---|---|---|
| 1 | **Environmental planning and management Contractors Environmental Management Plan (site-specific EMP)** | Prepare Specific EMP (SEMP) with supplemented Topic Specific EMPs at pre-construction stage based on IEE/EMP Implement SEMP approved by IPMO. | Review and endorse the SEMP; Monitor implementation of SEMP on daily basis; Monitor monthly environmental monitoring reports or results prepared by the Contractor and report to IPMO. | Review and approve the SEMPs; Monitor implementation of EMP and ensure the environmental safeguards compliance. | Work together with IPMO on addressing the environmental non-compliance issues, if any. |
| 2 | **Changes in design** | Provide details of design changes to CSC required to update IEE/EIA, or SEMP; Implement updated SEMP. | Approve the design change to be submitted to IPMO; Make environmental assessment of the change and update the IEE and/or SEMP. | Review the updated IEE and/or SEMP and send it for clearance to ADB | Liaise with CSC in preparing updated IEE and/or SEMP; Upload the approved IEE/SEMP provided by IPMO to UWSCG website for Public Disclosure. |
| 3 | **Unanticipated impacts** | Inform CSC about unanticipated impact and follow the instructions received from IPMO. | Make environmental assessment of the unanticipated impact and update the IEE and/or SEMP | Review the updated IEE and/or SEMP and send it for clearance to ADB | Liaise with CSC in preparing updated IEE and/or SEMP |

| # | Millstones/Actions | Contractor (Environmental Specialist) | Construction Supervision Consultant (Environmental Specialist) | IPMO (Environmental Specialist) | Environmental Protection and Permits Department (Environmental Specialist) |
|---|---|---|---|---|---|
| **4** | **Reporting** | Prepare monthly environmental monitoring reports and send it to CSC and IPMO | 1. Prepare inputs to environmental part of quarterly construction progress reports;<br>2. Prepare inputs to semi-annual environmental monitoring report (SAEMR) to be submitted to IPMO for further review, comments and improvement.<br>3. Conduct Post-Construction Final Environmental Audit and prepare final environmental audit report. | 1. Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure;<br>2. Provide ENG and GEO final versions of SAEMRs to be uploaded on UWSCG website. | Upload the approved reports (ENG and GEO) provided by IPMO to UWSCG website for Public Disclosure |
| **5** | **Permits and clearances** | NA | NA | NA | Obtaining environmental permits and clearances |
| **6** | **Non-compliances** | Prepare a corrective action plan (CAP) | Assist contractor in preparing the CAP. | Review and approve the CAP and provide to ADB for review and comments if any. | |
| **7** | **Public consultations** | Participate in public consultations during project implementation | Organize public consultations: inform people about activities and prepare the record of consultations. | Participate in public consultations during project implementation | UWSCG & IPMO host PCs, CSC will present the topics related to environmental issues |

| # | Millstones/Actions | Contractor (Environmental Specialist) | Construction Supervision Consultant (Environmental Specialist) | IPMO (Environmental Specialist) | Environmental Protection and Permits Department (Environmental Specialist) |
|---|---|---|---|---|---|
| **8** | **Grievance Redress Mechanism** | Project site Focal person to record environmental grievances in the logbook and follow up with UWSCG established practice for grievance redress | 1. Ensure that grievances, if any, are being properly documented and addressed timely and effectively.<br>2. Assist IPMO to develop consolidated GRM database and consolidation of GRM cases both for ENV and Social safeguards | In case of need assist IPMO Social/Resettlement Consultant in resolving process of environmental safeguards related complaints;<br>Assist IPMO Social/Resettlement Consultant in GRM database consolidation and data analysis. | UWSCG maintains GRM applicable to all projects. UWSCG will ensure IPMO information on grievances is consolidated into the UWSCG grievances (both - environmental and social) without duplication. |
| **9** | **Trainings** | Attend on-site trainings organized by IPMO and ADB/RETA Consultant | Assist the IPMO in organization of trainings for the Contractors on environmental safeguards requirements. | Organize trainings for the Contractors in coordination with ADB/RETA consultant. Participate in external trainings in environmental management and environmental auditing | Participate in external trainings in environmental management and environmental auditing |

**15.** Main organizations involved in the project and related to environmental safeguard are presented in the Table 2 below:

**Table 2: List of Main Organizations under SDP**

| Type of project participant | Name of Agency/Company | Environmental Staff | Name and contact details |
|---|---|---|---|
| Lender | Asian Development Bank | Country Environmental Focal | Ninette R. Pajarillaga<br>E-mail: npajarillaga@adb.org |
| | | Associate Safeguards Officer<br>Georgia Resident Mission<br>Asian Development Bank | Nino Nadashvili<br>Tel: +995 595 070442<br>nnadashvili@adb.org |
| | | ADB RETA International Environmental Consultant | Keti Dgebuadze<br>Tel: +995 577232937<br>ketdgeb@yahoo.com |
| Borrower | UWSCG | UWSCG, Department of Environmental Protection and Permits, Head | Ms. Maka Goderdzishvili<br>Tel: +995 599 229925<br>E-mail:<br>m.goderdzishvili@water.gov.ge |
| | | UWSCG/IPMO Department of Projects Management, Head | Ms. Irine Chikhladze<br>Tel: +995 598 179898<br>E-mail:<br>I.chikhladze@water.gov.ge |
| Construction Company | China Geo-Engineering Corporation | Environmental Specialist | Mr. Alexandre Abzianidze<br>Tel: 599 45 29 02<br>E-mail: sandroabzianidze@gmail.com |
| Supervision Consultant | Supervision Consultant: Temelsu | Environmental Specialist | Mrs. Ketevan Chubabria<br>Tel: +995 599 986697<br>E-mail:<br>chubabria@gmail.com |

## 2.3 Project Activities during Current Reporting Period

### 2.3.1 The progress for Rehabilitation and Upgrading of Water Supply System in Telavi

**16.** Physical progress of works under Telavi Water Supply sub-project is presented in the Table 3 below.

**Table 3: Physical Progress of Works for Water Supply System in Telavi**

| Item No | Description | Unit | Quantity Project | Quantity Completed as of 31.12.21 | % |
|---|---|---|---|---|---|
| 1.0 | **SECTION-I: WATER NETWORK+REHABILITATION OF EXISTING WELLS.** **(Total Progress for Construction of water supply system for %5.8 during the reporting period).** | m | 79304,62 | 4614,0 | %5,8 |
| 1.1 | Zone I - "A" | m | 2849.72 | 671.0 | %24 |
| 1.2 | Zone II - "A" | m | 1929.44 | 425.0 | %22 |
| 1.3 | Zone III - "A" | m | 3516.77 | 0 | 0 |
| 1.4 | Zone IV - "A" | m | 26958.73 | 0 | 0 |
| 1.5 | Zone I - "B" | m | 4937.27 | 0 | 0 |
| 1.6 | Zone II - "B" | m | 8685.98 | 1079.0 | %12 |
| 1.7 | Zone III - "B" | m | 7322,69 | 1421.0 | %19 |
| 1.8 | Zone IV - "B" | m | 2030.21 | 0 | 0 |
| 1.9 | Zone - "V" | m | 21073 | 1018.0 | %5 |
| 1.10 | Rehabilitation for Existing Wells (**W#01-02-03-04-05**) | no | 5 | 0 | 0 |
| **2.0** | **SECTION-II: CONSTRACTION OF 5 NEW RESERVOIRS Territory** | no | 5 | 0 | 0 |
| 2.1 | Central Reservoir 2x2000m³ Res.#01 | no | 1 | 0 | 0 |
| 2.2 | Shalauri-1000m³-– Res.#05 | no | 1 | 0 | 0 |
| 2.3 | Kafkasyoni 200m³ – Res.#07 | no | 1 | 0 | 0 |
| 2.4 | Zuzumbo 500m³ – Res.#06 | no | 1 | 0 | 0 |
| 2.5 | 6th Zone Res.#03 (Demolish and re-construction) | no | 1 | 0 | 0 |
| **3.0** | **SECTION-II: 3 New Borehole Drillings** | no | 3 | 0 | 0 |
| 3.1 | W#01 & 02 -Zuzumbo | no | 1 | 0 | 0 |
| 3.2 | W#03-Kafkasioni | no | 2 | | |

**17.** In ZONE "V": The work was started on 15th September 2021 and so far, the works have been done intermittently. Approximately 1003m in different sizes HDPE-PN10 pipe was laid until end of December2021. Because of so many existing illegal pipe connections in that zone, a lot of pipe damages have been occurred during trench excavations.

**18.** In ZONE "II-B": The work was started on 25th October 2021 and 1025m in different sizes HDPE-PN10 pipe was laid until end of December 21. Additionally, this pipeline route on the roadside is not in the design drawing. Upon the request of local authorities, the Contractor has added this pipeline to scope with the Employer's information. Under this circumstance, the variation order was prepared and submitted for the approval of the employer.

- In ZONE "I-B": The work was started on 22nd November 2021 and 686m in different sizes HDPE-PN10 pipe was laid until end of December 2021.

- In ZONE “III-B”: The work was started on 03rd December 2021 and 1533m in different sizes HDPE-PN10 pipe was laid until end of December 2021.
- In ZONE “II-A”: The work was started on 11th December 2021 and 425m in different sizes HDPE-PN10 pipe was laid until end of December 2021
- In ZONE “I-A”: The work was started on 18th December 2021 and 671m in different sizes HDPE-PN10 pipe was laid until end of December 2021.

**19.** The physical progress of main contract Section-I is given in the Progress Table 4 below.

**Table 4: Physical Progress of Contract Section - 1**

| Task Name | % Complete This Period | % Total Complete | % Total Planned For this period | % Difference Executed vs Planned |
|---|---|---|---|---|
| **REHABILITATION OF 5 EXISTING BOREHOLES, BOREHOLE BUILDINGS FOR 8 EXISTING BOREHOLES** | **0%** | **0%** | **54%** | **-54%** |
| Supply of Materials | 0% | 0% | 100% | -100% |
| Well Development | 0% | 0% | 100% | -100% |
| Well Testing | 0% | 0% | 50% | -50% |
| Completion of Well | 0% | 0% | 0% | 0% |
| Reporting | 0% | 0% | 0% | 0% |
| Control Panel | 0% | 0% | 0% | 0% |
| Mechanical Installations | 0% | 0% | 0% | 0% |
| Borehole buildings for 8 Existing boreholes | 0% | 0% | 77% | -77% |
| Masonry | 0% | 0% | 30% | -30% |
| Roof construction | 0% | 0% | 20% | -20% |
| Built-in parts | 0% | 0% | 77% | -77% |
| Finishes | 0% | 0% | 0% | 0% |

**20.** The physical progress of main contract Section-II is given in the Progress Table 5 below.

**Table 5: Physical Progress of Contract Section – 2**

| Task Name | % Complete This Period | % Total Complete | % Total Planned For this period | % Difference Executed vs Planned |
|---|---|---|---|---|
| **3 New Boreholes** | **0%** | **0%** | **22%** | -22% |
| Mobilization | 0% | 0% | 100% | -100% |
| Drilling | 0% | 0% | 15% | -15% |
| Supply of Materials | 0% | 0% | 0% | 0% |
| Installation of Materials | 0% | 0% | 100% | -100% |
| Well Development | 0% | 0% | 0% | 0% |
| Well Testing | 0% | 0% | 0% | 0% |
| Completion of Well | 0% | 0% | 0% | 0% |
| Reporting | 0% | 0% | 0% | 0% |
| Control Panel | 0% | 0% | 0% | 0% |
| Borehole buildings Note: 6 pump houses | 0% | 0% | 0% | 0% |
| Masonry | 0% | 0% | 0% | 0% |
| Roof construction | 0% | 0% | 0% | 0% |
| Built-in parts | 0% | 0% | 0% | 0% |

| Task Name | % Complete This Period | % Total Complete | % Total Planned For this period | % Difference Executed vs Planned |
|---|---|---|---|---|
| Finishes | 0% | 0% | 0% | 0% |
| Mechanical Installations | 0% | 0% | 0% | 0% |
| **#7 '1ST Zone' 500 cub. m. Reservoir** | **0%** | **0%** | **0%** | **0%** |
| Access Road & Parking Area | 0% | 0% | 0% | 0% |
| Site Security Fence | 0% | 0% | 0% | 0% |
| Earthworks | 0% | 0% | 0% | 0% |
| 500m3 Reservoir - Structural Part | 0% | 0% | 0% | 0% |
| Testing & Disinfection | 0% | 0% | 0% | 0% |
| Wall Insulation | 0% | 0% | 0% | 0% |
| Roof insulation | 0% | 0% | 0% | 0% |
| Earthing / Grounding | 0% | 0% | 0% | 0% |
| Access Covers & Ladders | 0% | 0% | 0% | 0% |
| Inlet Pipe | 0% | 0% | 0% | 0% |
| Outlet Pipe | 0% | 0% | 0% | 0% |
| Drainage Pipe | 0% | 0% | 0% | 0% |
| Outlet Pipe to Guard House, Inside Reservoir | 0% | 0% | 0% | 0% |
| Ventilation Pipe to Valve Chamber | 0% | 0% | 0% | 0% |
| Inlet, Outlet and Drainage Pipes outside the reservoir contour | 0% | 0% | 0% | 0% |
| D40mm Water Supply Pipe to Guard House | 0% | 0% | 0% | 0% |
| External Sewerage System | 0% | 0% | 0% | 0% |
| Flowmeter Chamber according to drawings | 0% | 0% | 0% | 0% |
| Guard House | 0% | 0% | 0% | 0% |
| Chlorination Building | 0% | 0% | 0% | 0% |
| Works for arranging pipeline from borehole to reservoir | 0% | 0% | 0% | 0% |
| Electric Part | 0% | 0% | 0% | 0% |
| **N2 "Central" 2x2000 cub. m. Reservoirs** | **0%** | **9%** | **18%** | **-9%** |
| Earthworks | 0% | 20% | 21% | -1% |
| Site Security Fence | 0% | 0% | 100% | -100% |
| 2,000m3 Reservoir - Structural Part | 0% | 0% | 25% | -25% |
| Access Covers & Ladders | 0% | 0% | 0% | 0% |
| Testing & Disinfection | 0% | 0% | 0% | 0% |
| Roof Insulation | 0% | 0% | 0% | 0% |
| Earthing / Grounding | 0% | 0% | 0% | 0% |
| Inlet Valve Chamber | 0% | 0% | 0% | 0% |
| Access Covers & Ladders | 0% | 0% | 0% | 0% |
| Earthing / Grounding | 0% | 0% | 0% | 0% |
| Flowmeter Chamber | 0% | 0% | 0% | 0% |
| Access Covers & Ladders | 0% | 0% | 0% | 0% |
| Earthing / Grounding | 0% | 0% | 0% | 0% |
| Pipes & Fittings | 0% | 0% | 0% | 0% |
| Inlet Pipe (d450mm PE Pipe) | 0% | 0% | 0% | 0% |
| Outlet Pipes (d225mm PE Pipe) | 0% | 0% | 0% | 0% |
| Drainage Pipes (d450mm PE Pipe) | 0% | 0% | 0% | 0% |
| Connection of pipes in flow meter chamber (d450mm PE pipe) | 0% | 0% | 0% | 0% |
| Flowmeter Chambers at N1 Existing Reservoir | 0% | 0% | 0% | 0% |

| Task Name | % Complete This Period | % Total Complete | % Total Planned For this period | % Difference Executed vs Planned |
|---|---|---|---|---|
| Electric Part | 0% | 0% | 0% | 0% |
| **N6 "ZUZUMBO" 500 cub. m. Reservoir** | **0%** | **0%** | **0%** | **0%** |
| Access Road & Parking Area | 0% | 0% | 0% | 0% |
| Site Security Fence | 0% | 0% | 0% | 0% |
| Earthworks | 0% | 0% | 0% | 0% |
| 500m3 Reservoir - Structural Part | 0% | 0% | 0% | 0% |
| Testing & Disinfection | 0% | 0% | 0% | 0% |
| Wall Insulation | 0% | 0% | 0% | 0% |
| Roof insulation | 0% | 0% | 0% | 0% |
| Earthing / Grounding | 0% | 0% | 0% | 0% |
| Access Covers & Ladders | 0% | 0% | 0% | 0% |
| PE 100 Outlet Pipe | 0% | 0% | 0% | 0% |
| PE Drainage Pipe & Outlet Pipe | 0% | 0% | 0% | 0% |
| Inlet Pipe | 0% | 0% | 0% | 0% |
| PE Inlet Pipe Inside Reservoir, PE 100 SDR11 | 0% | 0% | 0% | 0% |
| Ventilation Pipe to Valve Chamber | 0% | 0% | 0% | 0% |
| Drainage Pipe outside the reservoir contour | 0% | 0% | 0% | 0% |
| D40mm Water Supply Pipe to Guard House | 0% | 0% | 0% | 0% |
| Cable Ducts | 0% | 0% | 0% | 0% |
| Transmission Main | 0% | 0% | 0% | 0% |
| Outlet Pipe | 0% | 0% | 0% | 0% |
| External Sewerage System | 0% | 0% | 0% | 0% |
| Flowmeter Chamber | 0% | 0% | 0% | 0% |
| Guard House | 0% | 0% | 0% | 0% |
| Doors and Windows | 0% | 0% | 0% | 0% |
| Facade Works | 0% | 0% | 0% | 0% |
| Arranging Staircase | 0% | 0% | 0% | 0% |
| Sanitary Equipment | 0% | 0% | 0% | 0% |
| Internal Water Supply & Sewage System | 0% | 0% | 0% | 0% |
| External Sewage System | 0% | 0% | 0% | 0% |
| Electrical Works | 0% | 0% | 0% | 0% |
| Chlorination Building | 0% | 0% | 0% | 0% |
| Works for arranging pipeline from borehole N5 to reservoir | 0% | 0% | 0% | 0% |
| Site Security Fence for Borehole N5 | 0% | 0% | 0% | 0% |
| Works for arranging pipeline from borehole N6 to reservoir | 0% | 0% | 0% | 0% |
| Site Security Fence for Borehole N6 | 0% | 0% | 0% | 0% |
| Electric Part | 0% | 0% | 0% | 0% |
| **N3 '6TH ZONE' 1000 cub.m. Reservoir** | **0%** | **0%** | **0%** | **0%** |
| Earthworks | 0% | 0% | 0% | 0% |
| Access Road & Parking Area | 0% | 0% | 0% | 0% |
| Site Security Fence | 0% | 0% | 0% | 0% |
| 1,000m3 Reservoir - Structural Part | 0% | 0% | 0% | 0% |
| Testing & Disinfection | 0% | 0% | 0% | 0% |
| Walls Insulation | 0% | 0% | 0% | 0% |
| Roof Insulation | 0% | 0% | 0% | 0% |
| Access Covers & Ladders | 0% | 0% | 0% | 0% |

| Task Name | % Complete This Period | % Total Complete | % Total Planned For this period | % Difference Executed vs Planned |
|---|---|---|---|---|
| Earthing / Grounding | 0% | 0% | 0% | 0% |
| PE 100 Outlet Pipe, SDR11 | 0% | 0% | 0% | 0% |
| PE Drainage Pipe & Overflow Pipe | 0% | 0% | 0% | 0% |
| Inlet Pipe d225 PE SDR 17 | 0% | 0% | 0% | 0% |
| PE Inlet Pipe Inside Reservoir, PE 100 SDR17 | 0% | 0% | 0% | 0% |
| Ventilation Pipe to Valve Chamber | 0% | 0% | 0% | 0% |
| Cable Ducts | 0% | 0% | 0% | 0% |
| Transmission Main (D225mm PE Pipe, SDR 17) | 0% | 0% | 0% | 0% |
| Outlet Pipe (d355mm PE Pipe, SDR 11) | 0% | 0% | 0% | 0% |
| Drainage Pipe (Connecting to the existing Drainage Pipe | 0% | 0% | 0% | 0% |
| External Sewerage System | 0% | 0% | 0% | 0% |
| Flowmeter Chamber | 0% | 0% | 0% | 0% |
| Chlorination Building | 0% | 0% | 0% | 0% |
| Electric Part | 0% | 0% | 0% | 0% |
| **N4 Existing GIGOSGORA 2000 cub. m. Reservoir** | **0%** | **0%** | **0%** | **0%** |
| Chlorination Building | 0% | 0% | 0% | 0% |
| **N5 "SHALAURI" 1000 cub.m. Reservoir** | **0%** | **0%** | **0%** | **0%** |
| Access Road & Parking Area | 0% | 0% | 0% | 0% |
| Site Security Fence | 0% | 0% | 0% | 0% |
| Earthworks | 0% | 0% | 0% | 0% |
| 1,000m3 Reservoir - Structural Part | 0% | 0% | 0% | 0% |
| Testing & Disinfection | 0% | 0% | 0% | 0% |
| Walls Insulation | 0% | 0% | 0% | 0% |
| Roof Insulation | 0% | 0% | 0% | 0% |
| Access Covers & Ladders | 0% | 0% | 0% | 0% |
| Earthing / Grounding | 0% | 0% | 0% | 0% |
| Inlet Pipe | 0% | 0% | 0% | 0% |
| Outlet Pipe | 0% | 0% | 0% | 0% |
| Drainage Pipe | 0% | 0% | 0% | 0% |
| Ventilation Pipe to Valve Chamber | 0% | 0% | 0% | 0% |
| Inlet, Outlet and Drainage Pipes outside the reservoir contour | 0% | 0% | 0% | 0% |
| D40mm Water Supply Pipe to Guard House | 0% | 0% | 0% | 0% |
| External Sewerage System | 0% | 0% | 0% | 0% |
| Flowmeter Chamber | 0% | 0% | 0% | 0% |
| Guard House | 0% | 0% | 0% | 0% |
| Floors | 0% | 0% | 0% | 0% |
| Ceiling | 0% | 0% | 0% | 0% |
| Doors and Windows | 0% | 0% | 0% | 0% |
| Façade Works | 0% | 0% | 0% | 0% |
| Arranging Staircase | 0% | 0% | 0% | 0% |
| Sanitary Equipment | 0% | 0% | 0% | 0% |
| Internal Water Supply & Sewage System | 0% | 0% | 0% | 0% |
| External Sewage System | 0% | 0% | 0% | 0% |
| Electrical Works | 0% | 0% | 0% | 0% |
| Chlorination Building | 0% | 0% | 0% | 0% |

**21.** The physical progress of main contract Section-III is given in the Progress Table 6 below.

**Table 6: Physical Progress of Contract Section – 3**

| Task Name | % Complete This Period | % Total Complete | % Total Planned For this period | % Difference Executed vs Planned |
|---|---|---|---|---|
| **Water Supply Network** | **2%** | **3%** | **12%** | **-9%** |
| Earthworks | 2% | 5% | 21% | -16% |
| Water Supply Pipes, PE 100 | 2% | 5% | 18% | -13% |
| Provide and place OD160mm PE100 PN16 Pipeline | 0% | 0% | 0% | 0% |
| Provide and place OD315mm, PE100 PN10 Pipeline | 0% | 0% | 0% | 0% |
| Provide and place OD225mm PE 100 PN10 Pipeline | 0% | 0% | 0% | 0% |
| Provide and place OD160mm, PE100 PN10 Pipeline | 0% | 7% | 0% | 7% |
| Provide and place OD110mm, PE100 PN10 Pipeline | 4% | 10% | 22% | -12% |
| Provide and place OD90mm, PE100, PN10 Pipeline | 0% | 14% | 22% | -8% |
| Provide and place OD63mm, PE100, PN 10 Pipeline | 0% | 1% | 22% | -21% |
| Provide and place OD32mm PE100 PN10 Pipeline | 0% | 0% | 22% | -22% |
| Provide and place OD25mm PE100 PN10 Pipeline | 2% | 4% | 22% | -18% |
| Flushing and disinfection of Pipeline | 0% | 0% | 0% | 0% |
| Pressure testing of installed pipelines, including supply and disposal of water | 0% | 0% | 23% | -23% |
| Warning tapes | 2% | 5% | 22% | -17% |
| Crossings with Horizontal Direction Drilling (HDD) | 0% | 0% | 0% | 0% |
| PE Fittings, PN 10, PE-100 | 2% | 5% | 0% | 5% |
| Gate valves | 0% | 0% | 0% | 0% |
| Notes: all PE fittings shall be PN 10, PE-100 | 0% | 0% | 0% | 0% |
| Connection of Existing Water Meter Nodes with PE pipes OD25 to OD50 | 0% | 0% | 0% | 0% |
| Provision and installation of DN80 Fire Hydrants | 0% | 0% | 0% | 0% |
| Arrangement of PRV chamber on OD110 pipe, 6 pieces | 0% | 0% | 0% | 0% |
| Arrangement of PRV chamber on OD140 pipe, 2 pieces | 0% | 0% | 0% | 0% |
| Arrangement of PRV chamber on OD160 pipe, 2 pieces | 0% | 0% | 0% | 0% |
| Arrangement of PRV chamber on OD225 pipe, 1 piece | 0% | 0% | 0% | 0% |
| Arrangement of PRV chamber on OD315 pipe, 1 piece | 0% | 0% | 0% | 0% |
| Arrangement of DMA chamber on D315 pipe, 1 piece | 0% | 0% | 0% | 0% |
| Arrangement of DMA chamber on D225 pipe, 1 piece | 0% | 0% | 0% | 0% |
| Arrangement of DMA chamber on D160 pipe, 1 piece | 0% | 0% | 0% | 0% |
| Arrangement of DMA chamber on D110 pipe, 1 piece | 0% | 0% | 0% | 0% |
| Bridge Crossing with D110mm Pipe (5 crossings with about 16 m long each) | 0% | 0% | 0% | 0% |
| Bridge crossing with D110mm pipe (2 crossings with | 0% | 0% | 0% | 0% |

| Task Name | % Complete This Period | % Total Complete | % Total Planned For this period | % Difference Executed vs Planned |
|---|---|---|---|---|
| about 12 m long each) | | | | |
| Bridge crossing with D160mm pipe (1 crossing with about 16 m long) | 0% | 0% | 0% | 0% |
| Bridge crossing with D225 mm pipe (1 crossing with about 12 m long) | 0% | 0% | 0% | 0% |
| Bridge crossing with D315 mm pipe (1 crossing with about 17 m long) | 0% | 0% | 0% | 0% |
| River crossing with D110mm pipe (3 crossings with about 18 m long each) | 0% | 0% | 0% | 0% |
| River crossing with D225 mm pipe (1 crossing with about 18 m long) | 0% | 0% | 0% | 0% |
| Arrangement of Water Meter node on d=25mm pipe | 0% | 0% | 0% | 0% |
| Provide and place Water Meter Node On D=32mm Pipe | 0% | 0% | 0% | 0% |
| Provide and install Water Meter Node On D=63mm | 0% | 0% | 0% | 0% |
| **SCADA System** | **0%** | **0%** | **0%** | **0%** |

### 2.3.2 Description of Any Changes to Project Design

**22.** During the reporting period there were no changes in project design.

### 2.3.3 Description of Any Changes to Agreed Construction methods

**23.** During the reporting period there were no changes in construction methods.

## 3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

### 3.1 General Description of Environmental Safeguard Activities

**24.** Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC, Mrs. Ketevan Chubabria.

**25.** Since The World Health Organization (WHO) on March 11, 2020, has declared the novel coronavirus (COVID-19) outbreak a global pandemic the Government of Georgia and its Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia, issued the General Guidelines Related to Infection (COVID-19) which applies to all sectors of economic activity.

**26.** General guidelines on COVID-19 have been additionally developed specifically for the construction sector (see Annex C) by the Government of Georgia.

**27.** This COVID-19 Construction Sector Guidelines have been created to provide construction project owners/operators and their employees and contractors with precautions to protect against the spread of COVID-19 on indoor and outdoor construction sites.

**28.** During the reporting period, the environmental monitoring activities under TEL-01 included:

- The monitoring of compliance of construction activities under TEL-01 project sites to the IEE/EMP requirements;

**29.** The construction activities under TEL-01 sub-projects affecting the environment during the reporting period are as follows:

- Excavation works;
- Removal of Surplus Soil;
- Backfilling of Trenches;
- Topsoil stripping and storage;
- Manual works

**30.** In accordance with the IEE, and the accompanying Environmental Monitoring Plan (EMP), the Contractor is required to undertake parametric measurements and observations on air quality, noise, and socio-cultural resources. The monitoring guidelines were set as shown in the Table 7 below.

**Table 7: Parametric Measurement Guidelines**

| Parameters | Frequency & Location | Remarks |
|---|---|---|
| **TEL-01** | | |
| Air Quality | Quarterly. Reservoirs, Networks, transmission Main | Watering site during excavation works to avoid dust spreading;<br>Conduct measurements of PM2.5, PM10; CO Mg/m3; NO2 Mg/m3; SO2 Mg/m3. |
| Noise | Quarterly. Reservoirs, Networks, Transmission Main | Ensure that all equipment & vehicles used for construction activity are in good condition<br>Limiting working hours to 8 am – 6 pm. |
| Incorrect surplus/waste soil management | Monthly during the site Inspection and audit | Utilize surplus/waste soil for beneficial purposes such as in construction or to raise the ground-level of low-lying sites. Dispose extra waste soil at special disposal place identified by Municipality. |
| Cultural heritage Disturbance to | Every time along the alignment Archaeological | Contractor shall put in place a protocol for conducting any excavation work, to |

| Parameters | Frequency & Location | Remarks |
|---|---|---|
| cultural resources | & Cultural Properties | ensure that any chance finds are recognized, and measures are taken to ensure they are protected and conserved.<br><br>Calling in the state archaeological authority if a find is suspected and taking any action, they require to ensure its removal or protection. |
| | | |

**31.** There are no protected areas, wetlands, mangroves, or estuaries. Trees, vegetation (mostly shrubs and grasses), and animals in the subproject sites are those commonly found in built-up areas. The geological structure of the area is stable and no potential land subsidence is foreseen.

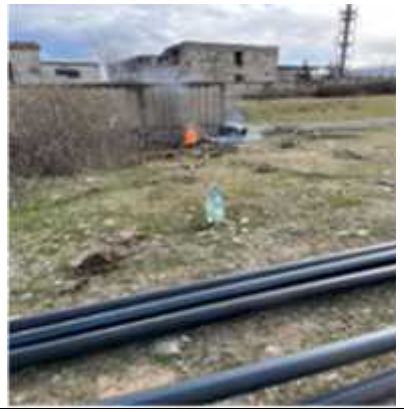
### 3.2 Site inspections/monitoring

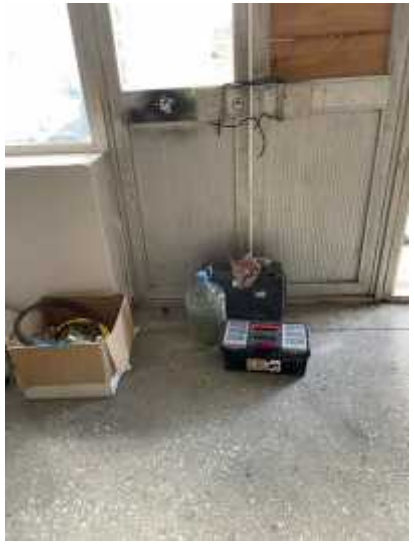
**32.** The reporting period covered an initial stage of the Project and there were limited activities at the sites. The activities mainly covered establishment of the Construction Camp and excavation of trenches. Due to the limited activities at the sites the limited number of inspections took place. The summary of inspections/monitoring carried out under sub-projects is provided in the Table 8 below.

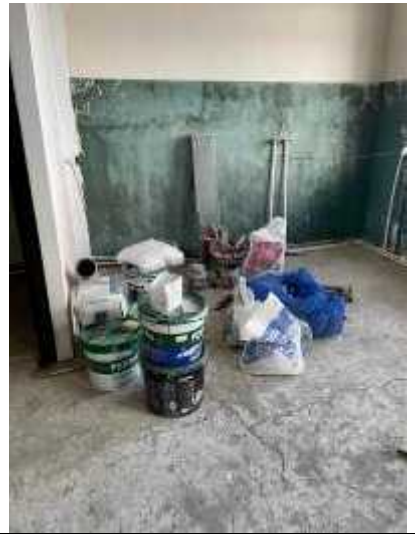
**Table 8. Summary of site inspections/monitoring for TEL-01 sub-projects.**

| Date of Visit | Name of Company & Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|---|---|---|---|---|---|---|
| Continuously during reporting period (July-December 2021) | China Geo-Engineering Corporation<br><br>Telavi Water Supply Sub-project, TEL-01 | Environmental Specialist of Supervision Company Temelsu International Mrs. Ketevan Chubabria | Compliance with Environmental safeguard requirements | Environmental issues on construction sites | Prepare Quarterly and Semiannual Environmental Monitoring Reports and send to UWSCG;<br>Issue Non-compliance Notices | Completed in December 2021 |
| 22 November 2021 | | Environmental Specialist of SC Mrs. Ketevan Chubabria | Regular monitoring of sites | During the site visit, the construction activities were suspended due to the COVID situation, and the Contractor did not present at sites.<br>No activities were observed at construction sites.<br><br>**Photo 1**<br>  | No actions were implemented | No actions were required |

| Date of Visit | Name of Company & Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|---|---|---|---|---|---|---|
| | | | | **Photo 2**<br>  | | |
| 22 December 2021 | | Environmental Specialist of SC Mrs. Ketevan Chubabria | Regular monitoring of sites | As the Camp site has already been organized, it's the time to arrange hazardous waste materials and waste storage area, the area shall be organized in accordance with local legislation and ADB Initial Environmental Examination.<br><br>There is no environmental personal on board.<br><br>Waste collection points shall also be identified, and sufficient number and quality bins shall be labeled and placed.<br><br>The Contractor shall elaborate the Company's waste management plan that need to be submitted to the Ministry of Environment Protection and Agriculture for approval. | Verbal instruction was given to contractor to immediately improve the situation and stop unsafe activity.<br><br>Environmental Training was conducted on site to raise awareness of the workers.<br><br>Non-compliance Notice was prepared and sent to the Contractor (please see Annex B) | The additional training session is planned to be organized in February 2022, the agenda, signed list of participants and relevant photos will be presented in the next SAEMR, July-December 2022. |

| Date of Visit | Name of Company & Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|---|---|---|---|---|---|---|
| | | | | Contractor shall have a layout of the project area which will indicate location of temporary storage area of topsoil, workshops, hazardous materials waste storage area, etc.<br><br>The site reinstatement and Re-cultivation plan shall be elaborated.<br><br>All personal shall undergo environmental management training before commencement of construction activities and the training matrix and log shall be maintained<br><br>The weather was windy and cold, and the workers built a fire to keep warm, which created a risk of fire spreading due to the wind and dry bushes next to the fire.<br><br>**Photo 3**<br>  | | |

| Date of Visit | Name of Company & Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|---|---|---|---|---|---|---|
| | | | | As the Camp site has already been organized, it's the time to arrange hazardous waste materials and waste storage area, the area shall be organized in accordance with local legislation and ADB Initial Environmental Examination.<br><br>**Photo 4**<br>  | | Ongoing as the deadline still open |

| Date of Visit | Name of Company & Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|---|---|---|---|---|---|---|
| | | | | **Photo 5**<br>  | | |

### 3.3 Issues Tracking (Based on Non-Conformance Notices)

**33.** A summary of the identified environmental issues for July-December 2021 under TEL-01 sub-project is presented in Table 8 below.

**34.** There is one open issues under TEL-01 sub-project. Topsoil should be removed and stored properly in requested amount and managed in accordance with the required regulations.

**Table 9: Summary of Issues Tracking Activity for Current Period TEL-01**

| Total Number of Issues for Project | 9 |
|---|---|
| **Issues Opened This Reporting Period** | 4 |
| **Issues Closed This Reporting Period** | 5 |
| **Percentage Closed** | 56% |

*Note: pending task in not an overdue action as deadline is still valid.*

### 3.4 Trends

**35.** Summary of identified trends under TEL-01 during the reporting period – July-December 2021 is presented in the Table 10 below.

**Table 10: Summary of identified trends in environmental issues**

| Semi-Annual EMR No | Total No of Issues | % Issues Closed | % Issues closed late |
|---|---|---|---|
| July-December 2021 | 2 | 56% | 44% |

*Note: pending task in not an overdue action as deadline is still valid.*

### 3.5 Unanticipated Environmental Impacts or Risks

**36.** During the reporting period, COVID-19 is viewed as an unanticipated impact and risk to the community and workers, however, IPMO, SC and CC have taken all appropriate measures to minimize this risk. These measures, inter alia, included in the SEMP by the contractor.

# 4. RESULTS OF ENVIRONMENTAL MONITORING

## 4.1 Overview of Monitoring Conducted during Current Period

**37.** During the reporting period no Noise and Dust monitoring has been due to the initial stage of the project. Therefore, Non-compliance notice have been issued by SC to the contractor to ensure that environmental quality measurements are carried out during the next reporting period (January 2022) and provide the measurement data to UWSCG.

**38.** Noise standards defined by IFC/WHO 1999, are presented in the Table 11 below.

**Table 11: Noise Level Guidelines**

| Noise | dBA National Regulations | | dBA WHO | |
|---|---|---|---|---|
| Receptor | Daytime 07:00 - 22:00 | Nighttime 22:00 - 07:00 | Daytime 07:00- 22:00 | Nighttime 22:00- 07:00 |
| Residential; Institutional; Educational | 55 | 45 | 55 | 45 |
| Industrial; Commercial | 70 | 70 | 70 | 70 |

**39.** Air pollution standards by IFC/WHO 1999, are presented in the Table 12 below.

**Table 12: Air pollution Guidelines**

| Contaminants | IFC/WHO Guideline Value (Limit) mg/m$^3$)) |
|---|---|
| 1 | 2 |
| Inorganic dust | (*IFC does not have a standard for "inorganic dust". Instead IFC applies standards for PM2.5 and PM10).<br>PM10 – 0,02/1 Year<br>0,05/24 Hour<br>PM2,5-0,01/1 Year<br>0,025/24 Hour |
| Carbonic monoxide | n/a |
| Nitrogen dioxide ($NO_2$) | 0,2/ 1 Hour<br>0,04/1 Year |
| Aldehyde | n/a |

## 4.2 Trends

**40.** All mitigation measures identified within the IEE/EMP, SEMPs under Telavi sub-projects are effective, and no additional measures are required.

## 4.3 Summary of Monitoring outcomes

**41.** No environmental quality measurements were conducted during the reporting period, contractor is strongly requested by UWSCG and SC to carry out EQM during the next reporting period and reflect measurement data in the next SAEMR of January-June 2022.

## 4.4 Material resources Utilization

### 4.4.1 Current Period

**42.** The following information for material resources utilization (water supply, electricity) was provided by the contractor within the framework of the TEL-01 sub-project during the reporting period July-December 2021.

**Table 13: Material Resources Utilized under TEL-01 sub-project**

| Item | Quantity (July-December 2021) |
|---|---|
| Water | 250 $m^3$ |
| Electricity | 2400kw |

### 4.4.2 Cumulative Resources Utilization

N/A

## 4.5 Waste Management

### 4.5.1 Current Period

**43.** At the construction sites under the TEL-01 sub-project will mainly produce household, construction (inert, surplus soil) and hazardous waste.

**44.** Mainly household waste is collected in municipal containers. Local municipality is responsible for the disposal of household waste.

**45.** Contractor is requested to conclude contract with the licensed hazardous waste Management Company and inert material disposal landfill.

**Table 14: Household Waste produced under TEL-01 sub-project**

| Item | Monthly |
|---|---|
| Household waste | 700kg |

### 4.5.2 Cumulative Waste Generation

**46.** Not yet applicable.

## 4.6 Health and Safety

### 4.6.1 Community Health and Safety

**47.** No community incidents have been reported by SC during reporting period under the sub-projects.

### 4.6.2 Worker Safety and Health

**48.** Environmental H&S specialist of contractor recently was appointed.

**49.** Health & safety and environment issues which were covered during the reporting period are as follows:

- Ground works;
- Manual works;
- Removal waste;
- PPE;
- Housekeeping;
- Installation of Safety Hard and Warning Barricade

**50.** During July-December 2021 reporting period no incidents and accidents have been fixed.

## 4.7 Training

**51.** COVID-19 workplace safety trainings, Occupational Health and Safety Trainings and Environmental Management training will be held in February 2022.

# 5. FUNCTIONING OF THE SEMP

## 5.1 SEMP Review and Approval

**52.** The SEMP for Telavi water supply network was prepared and in November and reviewed by the SC. The SEMP was approved with conditions that requires the Construction Contactor to consider all recommendations made by the Engineer and UWSCG.

# 6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

## 6.1 Good Practice

**53.** Implementing parties of The Subproject will consider experiences of the other projects implemented under the SDP and apply the best practice.

## 6.2 Opportunities for Improvement

**54.** As the project progresses there will be more areas of improvement. The most important milestone at this stage is to develop all required documentations and procedures.

## 7. SUMMARY AND RECOMMENDATIONS

### 7.1 Summary

**55.** Individual monitoring activities were conducted by Environmental Monitoring Specialist of SC, Ms. Keti Chubabria during the reporting period under TEL-01 sub-project.

**56.** Due to the fact that The World Health Organization (WHO) on March 11, 2020, has declared the novel coronavirus (COVID-19) outbreak a global pandemic the Government of Georgia and its Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia, issued the General Guidelines Related to Infection (COVID-19) which applies to all sectors of economic activity.

**57.** The General Guideline for COVID-19 was also developed by the Government of Georgia specifically for the construction sector.

**58.** This Guidance for Construction Activities during the COVID-19 was created to provide owners/operators of construction projects and their employees and contractors with precautions to help protect against the spread of COVID-19 as indoor and outdoor construction sites.

**59.** No Environmental Quality Measurement was conducted under TEL-01 sub-project. SC issued non-compliance notice and request from contractor to conduct EQM in March 2022.

### 7.2 Recommendations

**60.** During the reporting period, July-December 2021, the SDP /T6 was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.

**61.** More detailed recommendations for the implementation of T6 during the next reporting period July-December 2021 are provided in the Table 15 below:

**Table 15: Recommendations to Address Environmental Issues under SDP sub-projects**

| Recommendations under TEL-01 sub-project | |
|---|---|
| **Recommendations TEL-01** | **Implementation Status and Date** |
| Conduct Environmental Quality Measurements of Noise and Air Pollution under TEL-01 sub-project | March 2022 |
| The topsoil of about 1 ft depth (0.3 m) 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 | January 2022 |
| Contract a Licensed Hazardous Waste Management Company | January 2022 |
| Contract Inert Waste Disposal Landfill | January 2022 |

**62.** Conduct quarterly monitoring of Noise and Air quality under TEL-01 project at the nearest sensitive receptors. The schedule of environmental quality measurements to be carried out during the next reporting period, January-June 2022 is presented in the Table 16 below.

**Table 16: Conduct Monitoring of Environmental Quality under TEL-01 project**

| Parameters | Quarterly measurement |
|---|---|
| Dust | March 2022 |
| $PM_{2.5}$ and $PM_{10}$ | March 2022 |
| Vibration | January 2022 |
| Carbon monoxide | January 2022 |
| Nitrogen dioxide | January 2022 |
| Noise | January 2022 |

# ANNEXES

## ANNEX A: PHOTOS OF CONSTRUCTION SITES

**Photo N1: Reservoir “Caucasioni”**

**Photo N2**

**Photo N3**

**Central Reservoir**

**Photo N1**

## ANNEX B: NON-COMPLIANCE REPORT



**SITE ENVIRONMENTAL INSPECTION REPORT**

| | |
|---|---|
| **Site:** | **Telavi** |
| **Project:** | **Rehabilitation and Upgrade of Water Supply System in Telavi** |
| **Contractor:** | **China Geo – Engineering Corporation** |
| **Date:** | **December 22, 20211** |
| **Inspector:** | **Environmental Specialist** |

The site visit was implemented on 22nd of December 2021, the aim of the visit was inspection of environmental activities of the Construction Contractor. During the visit the following locations were surveyed:

- "Zuzumbo" reservoir
- "6th Zone" Reservoir
- "Shalauri" reservoir
- "Central" (existing and new) reservoir
- "1st Zone" reservoir
- "Gigosgora" reservoir
- Water distribution network (Tbilisi and Mshvidoba streets)

During the site visit it was observed that progress of the Contractor is too low. Only two teams worked on excavation works. One of the teams worked next to the Camp Site. We observed violation of environmental and Health and safety rules at active sites. The weather was windy and cold, and the workers built a fire to keep warm, which created a risk of fire spreading due to the wind and dry bushes next to the fire. Worker were not equipped with Personal Protective Equipment that would protect them from cold weather and wind. Besides, diesel in plastic bottle was placed next to the bonfire. Diesel is flammable substances and classified as hazardous materials, Contractor shall organize storage of hazardous materials and waste at specially arranged hazardous material and waste storage area. No refueling is allowed at the construction site.

The second team worked at construction of Shalauri reservoir. The construction site was not bounded, no information banner is provided, excavation work was almost completed, but no piles of stripped topsoil was anywhere. It was not possible to find answers on our questions since we did not manage to meet senior management of the Contractor or person responsible for environmental issues as they did not present at sites.

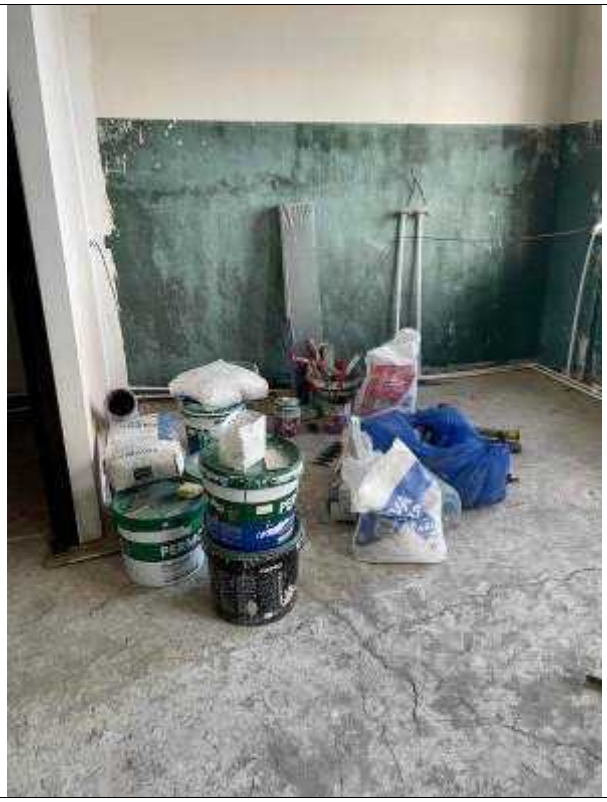
During the site visit we inspected the Camp site of the contractor. The area seems to be abandoned factory or technical yard, which is leased by Contractor for the Camp. No arrangement has been organized; only two-three rooms are renovated for offices. There is no material storage area, all type of materials is placed together in unorganized way; no hazardous materials and waste storage areas are arranged, there is no construction machinery parking area. Etc.

The recommendation provided last month for contractor remains active and they are listed below:

- As the Camp site has already been organized, it's the time to arrange hazardous waste materials and waste storage area, the area shall be organized in accordance with local legislation and ADB Initial Environmental Examination.

- There is no environmental personal on board.
- Waste collection points shall also be identified and sufficient number and quality bins shall be labeled and placed.
- The Contractor shall elaborate the Company's waste management plan that need to be submitted to the Ministry of Environment Protection and Agriculture for approval.
- Contractor shall have a layout of the project area which will indicate location of temporary storage area of topsoil, workshops, hazardous materials waste storage area, etc.
- The site reinstatement and Re-cultivation plan shall be elaborated.
- All personal shall undergo environmental management training before commencement of construction activities and the training matrix and log shall be maintained.

**Photo illustration of the site inspection:**



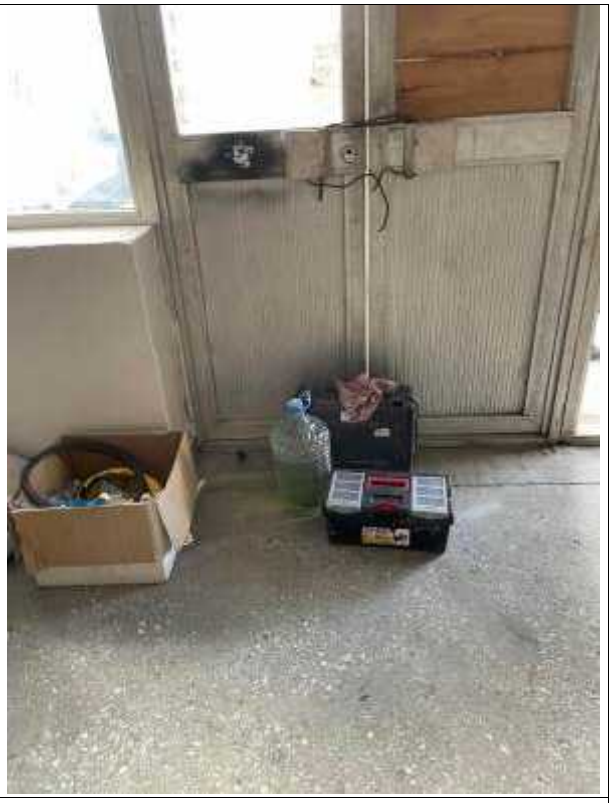
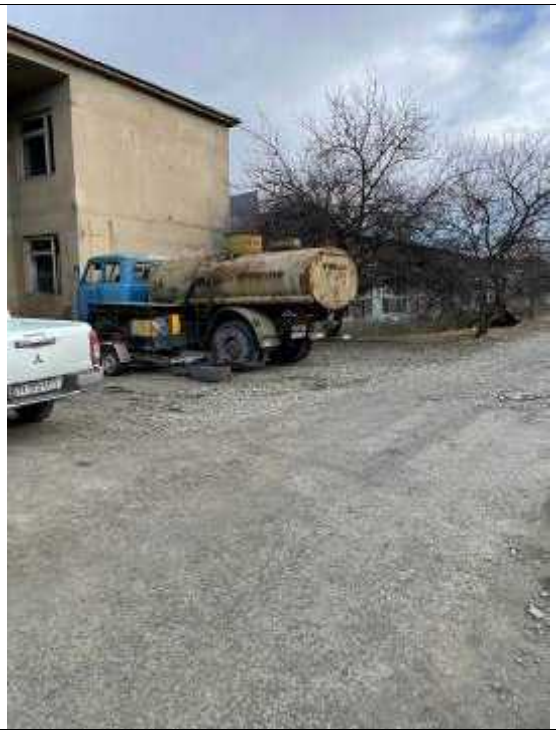
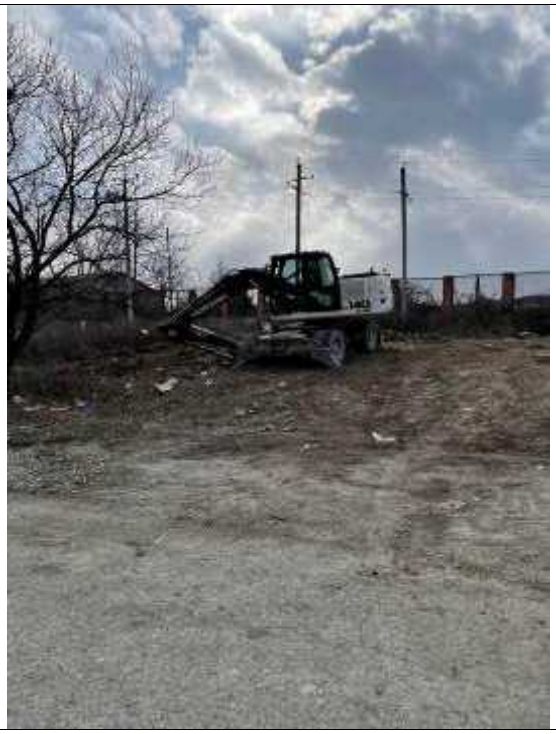


**Photo 1 and 2: The way how the materials are stored at Camp site, this is a main entrance of the building**





**Photos 3 and 4: Illustration of spontaneous parking of construction machinery**

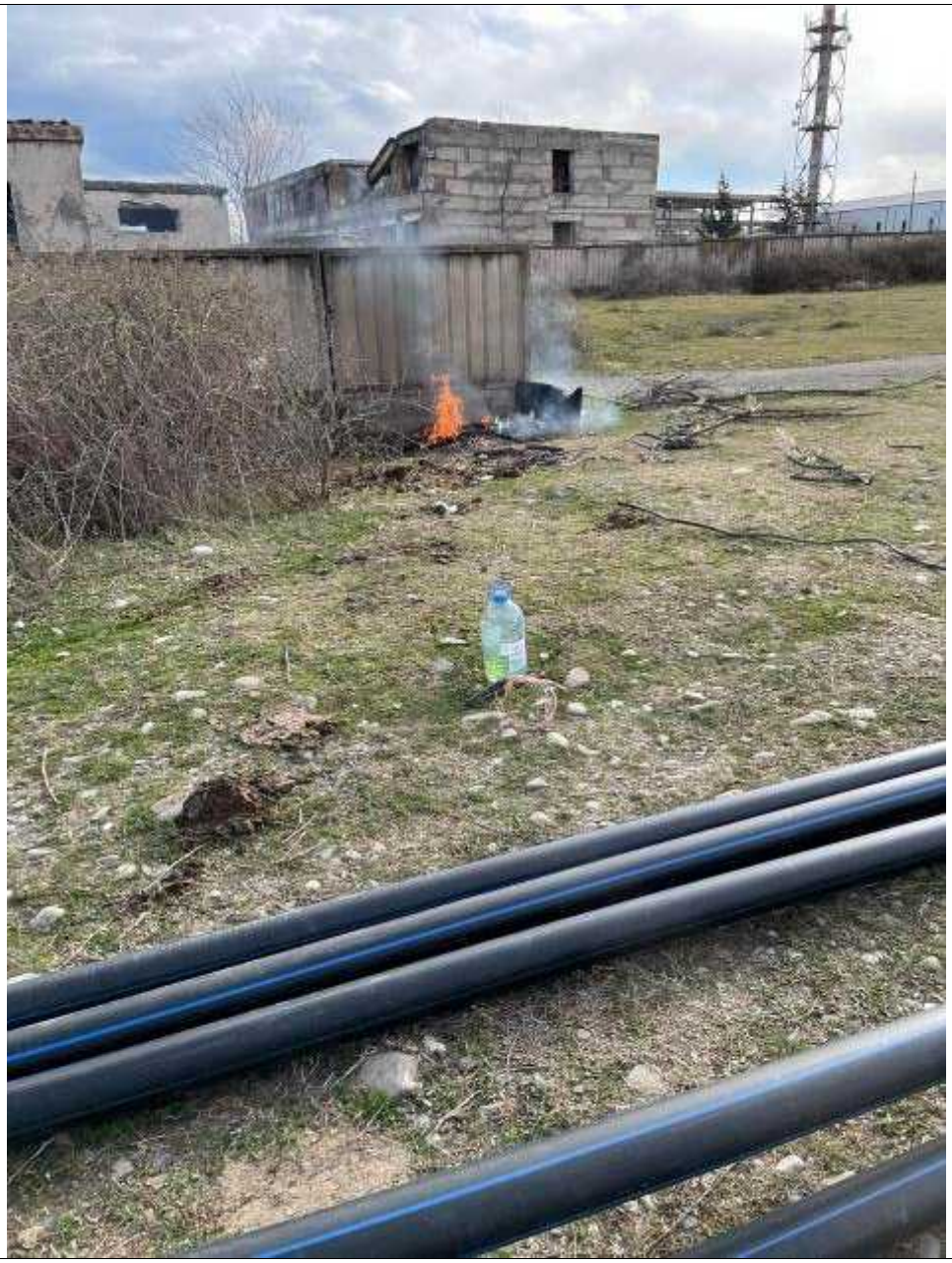
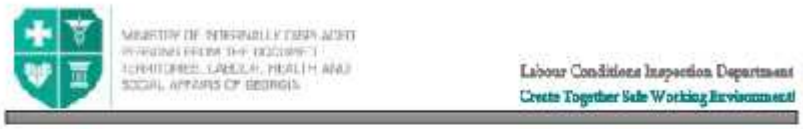


**Photo 5: Fire lit for warming next to the dry bushes and diesel containing bottle**

## ANNEX C: GENERAL GUIDELINES RELATED TO INFECTION (COVID-19) CAUSED BY NOVEL CORONAVIRUS (SARS-COV-2) FOR CONSTRUCTION SECTOR




Annex №2

**General Guidance Related to Infection (COVID-19) Caused by Novel Coronavirus (SARS-CoV-2) for Construction Sector**

Note: In accordance with Order N281/N of the Minister of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia on "the rule for Examination for Short-term Employment Disability and Issuance of Doctors Note", the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia will issue an equivalent document to the doctors excuse note (Medical Certificate) to persons quarantined in order to prevent the spread of coronavirus. The document will serve as the basis to receive monthly payment and therefore, the working days spend in quarantine or in self isolation will be legitimate and fully paid to the employees. In order to get the certificate, an interested person has to apply to the Ministry of Internally Displaced Persons from the Occupied Territories Labour, Health and Social Affairs of Georgia at

For further information, please contact: 1505 116 001

StopCoV.ge

*The job of builders involves constantly changing work places and work activity existing in open-air conditions. For this reason, in terms of virus spread, construction falls within the medium risk sector because its specificity covers natural ventilation. Nevertheless, it is important to consider the following preventive measures at construction work.*

**The staff must not appear in the workplace if they :**

- Left the affected country over the past 14 days;
- Were in close contact with infected person/persons for the past 14 days (they must be self-isolated/quarantined as per the rule);
- Have symptoms of respiratory infection (coughing, temperature, sneezing, difficulty in breathing, general weakness etc.);
- Are among the ones who have high risk of getting infected with COVID-19 or serious complications: over 70 years of age, people suffering from chronicle diseases (cardio-vascular diseases, diabetes, bronchial asthma and other respiratory diseases.

## Employer's responsibilities

- Whether or not the incidence of infection is detected, employer should develop an emergency action plan to support reduction of working days missed due to illness, and in case of detection – prevention of spread;
- Provide employees with information about safe working procedures and about prevention of virus spread (guide with the recommendations defined by LEPL L. Sakvarelidze National Center for Disease Control and Public Health of the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia);
- Inside the working space post announcements about COVID-19 and about the preventive measures that have been identified by LEPL L. Sakvarelidze National Center for Disease Control and Public Health;
- In relation to the employees who can perform job remotely (administrative personnel) ensure as much as possible use of such working mode;
- At the entrances of break room/dining room, place disinfecting rugs with relevant mandatory sign marking;
- Provide hand-washing facility with soap and other disinfectants. If hand-washing facility is not feasible, at least 70% alcohol based hand cleansing liquid should be used;
- Visibly place the hand sanitizers and post the rules of their proper use;
- Make sure that employees have access to hand sanitizers and are aware of their use with proper rules;
- Provide all employees and contractors, personnel responsible for cleaning with information about relevant preventive measures to avoid spread of coronavirus in the working environment;
- Train the employees in proper use and further storage/removal of personal protective equipment and disinfectants;

- Depending on their work specificity, provide the employees with necessary personal protective equipment (protective clothing, protective shoes, helmet, gloves, respirator) and establish control on their use;
- Periodically, several times a day ensure natural ventilation of closed spaces/facilities;
- At certain periodicities disinfect frequently used working equipment and working places;
- Maintain ergonomics at construction site. Ensure timely cleaning of working space and timely disposal of construction waste.
- For employees and visitors ensure closed containers for used disposable tissues and other used hygienic waste in the working space.

## Employees' responsibilities

Ensuring proper hand hygiene regularly and thoroughly is the best way to be protected from most of the viruses. Therefore, it is necessary to take the following measures in the workplace:

- Follow hygiene rules in your workplace;
- Carry out the working process in accordance with emergency situations action plan defined by employer/occupational safety manager;
- When greeting do not shake hands and avoid contact with others (touching etc.);
- Avoid gatherings, it is recommended not more than 10 people in one working platform by keeping a safe distance (at least 2 m);
- While performing your work, fully use personal protective equipment provided by the employers;
- Treat with disinfectants the working places and tools used in the course of the work;
- Before and after taking meals, before and after using the restrooms thoroughly wash your hands with soap and water. After washing dry your hands well;
- If you can not wash and dry your hands, use alcohol-based hand sanitizers;
- Keep safe distance (at least 2 m);
- While coughing or sneezing, cover the face with a clean tissue or elbow and place used dispensable tissue in the waste bin;
- Avoid touching your eyes, nose and mouth with your hands.

2. These recommendations have been developed to be communicated to all employers, workers and stakeholders. Everyone is urged to regularly promote and adhere to this document;
3. Site inductions should be updated as required to include information on coronavirus (COVID-19) potential risks and workplace specific controls that have been implemented such as daily screening, health checks and symptoms of coronavirus (COVID-19), staggered start, finish and meal times, good hygiene practices and cleaning regimes and PPE requirements;
4. Toolbox talks should be regularly conducted, and workers are to be encouraged to put forward practical ideas for changing work practices to avoid the spread of coronavirus (COVID-19). Toolbox talks should also provide clarity to workers on leave arrangements for those that cannot work, and to encourage self-reporting and minimize the spread of risk;
5. Toolbox talks should also include updates from the responsible Health Officer as they occur and additional information on the severity of the pandemic and the importance of physical distancing at toolbox meetings.

## 15. Other measures

1. Construction sites are diverse and vary in complexity, employers must apply a risk-based approach and implement reasonably practical controls based on the environment and specific hazards at each construction site. In addition to the aforementioned measures and controls mentioned in this section, employers should consider other measures for implementation such as:
    - Using alternatives to face to face meetings where practicable;
    - Reducing the length and size of meetings, especially for critical employees, by requiring some or all to dial in;
    - consider off-site fabrication;
    - ensuring working from home arrangements are enabled where feasible;
    - Structuring management teams to ensure contingency in the event of team members needing to be isolated or quarantined at home.

## 16. Vulnerable workers

1. Has been identified the following groups of people as vulnerable workers in relation to coronavirus (COVID-19):

- people over the age of 70;
- people with chronic diseases (cardiovascular disease, diabetes, bronchial asthma and other respiratory diseases)

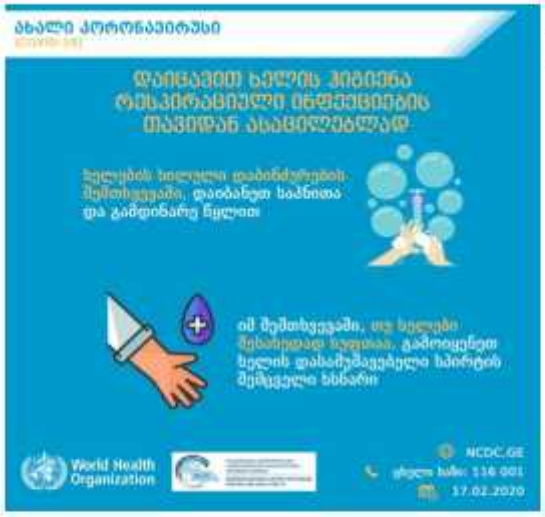
2. Where practical, reasonable action should be taken to minimize vulnerable workers from conducting higher risk roles.

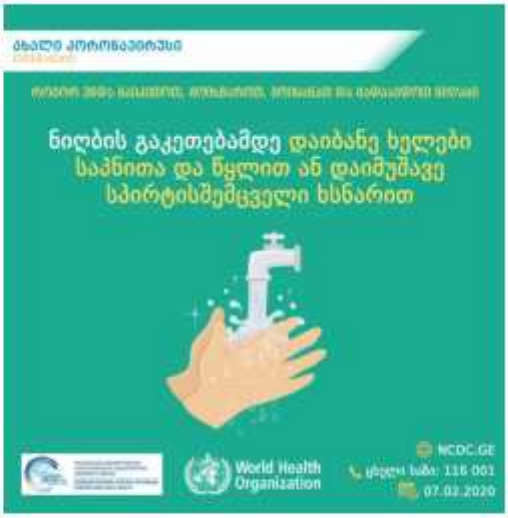
### 17. Summary of recommendations and responsibility

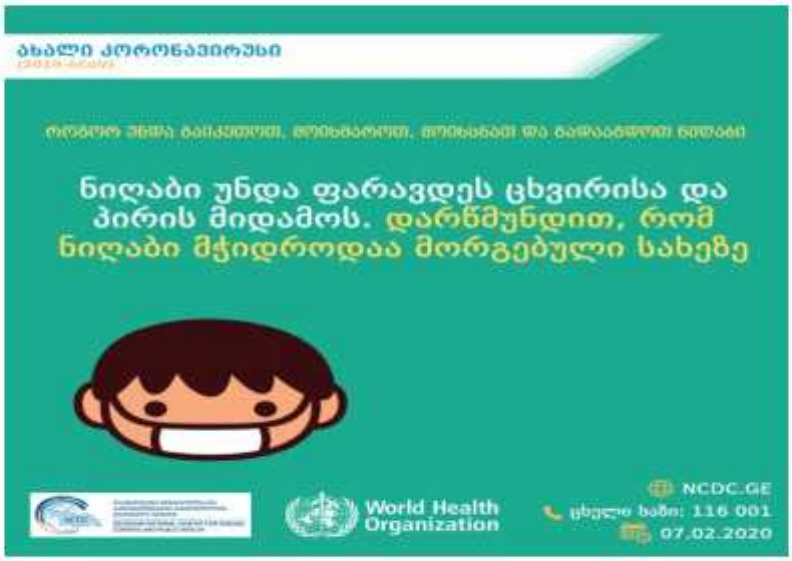
| # | Activity | Responsible for implementation |
|---|---|---|
| 1. | To provide employees with the information about the work safety procedures and prevention of virus spread (guided by the recommendations of the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia and LEPL L. Sakvarelidze National Center for Disease Control and Public Health) | Employer |
| 2. | To place ads in the workspace about the COVID-19 and its preventive measures defined by the LEPL I. Sakvarelidze National Center for Disease Control and Public Health | Employer |
| 3. | To ensure maximum use of remote work in relation to those employees who can perform work remotely (administrative personnel) | Employer |
| 4. | To put mattings at the entrance of the lounge room / dining room, with the relevant sign of indication | Employer |
| 5. | To ensure hand washing at the workspace with appropriate soap and other hygiene products. In case of inability to wash hands, to provide with at least 70% alcohol- based hand cleaning liquids | Employer |
| 6. | To place hand sanitizers and the instruction for their proper use in a prominent place | Employer |
| 7. | To ensure that employees have access to hand sanitizers and know how to use them in accordance with the relevant instructions | Employer |
| 8. | To provide information to all staff and contractors, as well as cleaning staff, on appropriate preventive measures to avoid the spread of coronavirus in the work environment | Employer |
| 9. | To train the employees on the proper use of personal protective equipment and its subsequent storage / disposal | Employer |
| 10. | To provide employees with the necessary personal protective equipment (overalls, special shoes, helmet, gloves, medical mask) based on the specifics of their job and establish control over their use | Employer |
| 11. | Periodically, several times a day ensure natural ventilation of indoor spaces/closets | Employer |
| 12. | Periodically ensure disinfection of workplaces and frequently used equipment | Employer |
| 13. | To keep ergonomics in order at the construction site. To ensure the prompt cleaning of workspace and removal of construction waste | Employer |
| 14. | To ensure placement of closed containers for the disposable napkins and other hygiene waste used by both employees and visitors | Employer |
| 15. | Follow the rules of hygiene at your workplace | Employee |

| | | |
|---|---|---|
| 16. | Carry out the work process in accordance with the Emergency Action Plan defined by the employer / work safety manager | Employee |
| 17. | Avoid shaking hands and direct contact with others (touch, etc.) while saluting | Employee |
| 18. | Avoid gathering, the work of more than 10 people on one work platform at a safe distance (less than 2 m) is not recommended | Employee |
| 19. | When performing the work, make full use of the personal protective equipment provided by the employer | Employee |
| 20. | Clean the workplaces and the tools and equipment used during the work process with disinfectants | Employee |
| 21. | Thoroughly wash your hands with soap and water before and after eating, as well as before and the bathroom. Dry your hands thoroughly after washing | Employee |
| 22. | Use alcohol-based hand sanitizers in case if you are unable to wash and dry your hands | Employee |
| 23. | Keep a safe distance (not less than 1.5 m); | Employee |
| 24. | Cover your mouth with clean napkin or elbow when coughing and sneezing and then throw the used disposable napkin in the trash | Employee |
| 25. | Avoid touching your eyes, nose, or mouth with your hands. | Employee |

**18. Informational banners for COVID -19**

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(2019-nCoV)
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მოხმარებისას არ შეეხოთ ნიღაბს;
შეხების შემთხვევაში, დაიბანეთ ხელები
საპნითა და წყლით ან დაიმუშავთ
სპირტისშემცველი ხსნარით.
World Health Organization
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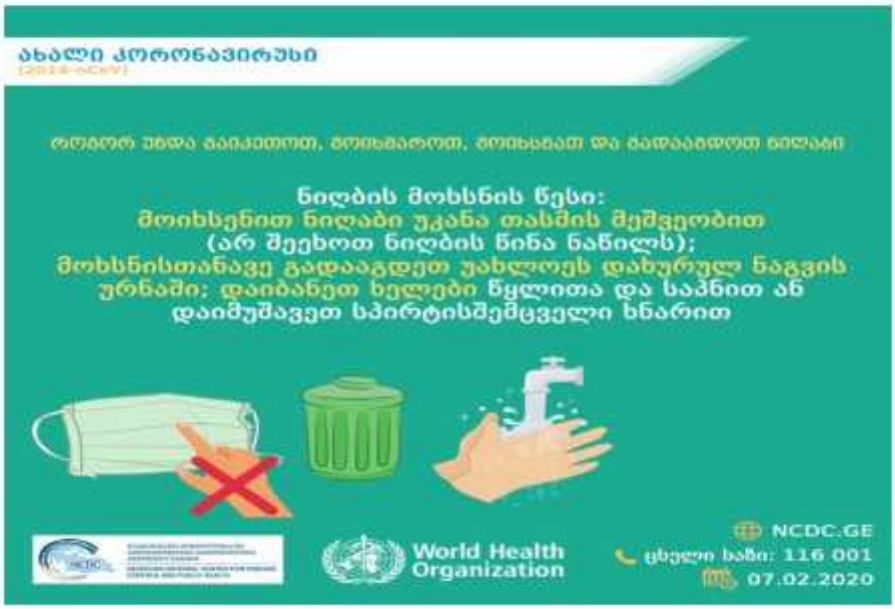
ცხელი ხაზი: 116 001
07.02.2020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ნიღბის მოხსნის წესი:
მოიხსენით ნიღაბი უკანა თასმის მეშვეობით
(არ შეეხოთ ნიღბის წინა ნაწილს);
მოხსნისთანავე გადააგდეთ უახლოეს დახურულ ნაგვის
ურნაში; დაიბანეთ ხელები წყლითა და საპნით ან
დაიმუშავეთ სპირტისშემცველი ხნარით
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