

SAMI-ANNUAL ENVIRONMENTAL MONITORING REPORT

#7 Semiannual Report

(Reporting Period: July-December 2024)

Project Number: 51132-002

Loan Number: 3982

GEORGIA: SUSTAINABLE WATER SUPPLY AND SANITATION SECTOR DEVELOPMENT PROGRAM

(Financed by the Asian Development Bank)

Prepared by the “United Water Supply Company of Georgia” of the Ministry of Regional Development and Infrastructure of Georgia for the Asian Development Bank”.

January 2025

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ABBREVIATIONS

ADB	Asian Development Bank
DC	Design Consultant
DPEPSA	Department of Permits, Environmental Protection and Social Affairs
DFPMD	Management of Projects Financed by Donor Organizations
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
SC	Supervision Consultant
SDP	Sustainable Water Supply and Sanitation Sector Development Program
UWSCG	United Water Supply Company of Georgia
WHO	World Health Organization

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1. INTRODUCTION

1.1 Preamble

1. This report represents the seventh Semi-annual Environmental Monitoring Review (SAEMR) for the Sector Development Program (SDP), and describes the period of July-December 2024.
2. This report is the 7th Environmental Monitoring Review (EMR) of SDP/Telavi Water Supply Project (TEL-01).

1.2 Headline Information

3. SDP encompasses only the construction of the Water Supply System for the Telavi, TEL-01 sub-project.
4. There were no physical/construction activities under SDP/TEL-01 sub-project during the reporting period. The Post Construction Environmental Audit Report, prepared in December 2023, was updated in August 2024 to reflect corrective actions taken by the contractor and UWSCG on identified non-compliances. The site monitoring in August 2024 confirmed the resolution of all remaining non-compliances, leading to the preparation of the final updated PCEAR.
5. Detailed information on improvements are provided under the Paragraph 9 and Table N1 below. The updated PCEAR is attached to this report (please see Annex N1).

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

6. 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 sector development program (SDP) assisted the government to achieve universal access to continuous and safe water supply and sanitation (WSS) service, and contribute to improved environmental and public health conditions of the Georgian citizens. The SDP comprises (i) a program, financed by a policy-based loan (PBL), to improve sector governance and institutions in support of the government's reforms; (ii) a project, financed by a project loan, to increase WSS access and system efficiency in the service area of United Water Supply Company of Georgia (UWSCG).

7. Investment Program includes:

- Telavi Water Supply System Improvement Project (TEL-01)

8. TEL-01 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.







Post-Construction Environmental Audit





9. A post-construction environmental audit under the TEL-01 subproject was carried out by UWSCG/SDP Environmental Specialist Ms. Kate Chomakhidze on December 29, 2023 and further updated in August 2024. The contractor has addressed all non-compliances, and there are no outstanding issues under the TEL-01 sub-project.




10. Table 1 below provides a summary of the non-compliances identified during the Post-construction Environmental Audit conducted on December 29, 2023 as well as the required corrective actions, the responsible organizations and status of improvements of the non-compliances.

Table 1: Summary information of post-construction environmental audit, 29 December 2024

	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
Shalauri Reservoir						
	Prevent access of public to the reservoir site - The fence of the reservoir should be equipped with Signs, information and warnings	Reservoirs sites should be equipped with proper warning and information signs		End of August 2024	UWSCG	Completed, August 2024
	Surplus waste soil were piled up outside the fence of the Shalauri reservoir	Surplus waste soil should be removed from the outside of the Reservoir territory		End of March 2024	Contractor	Completed, removed April 2024, Photo N1 
Central Reservoir						
	Prevent access of public to the reservoir site - The fence of the reservoir should be equipped with Signs, information and warnings	Reservoirs sites should be equipped with proper warning and information signs		August 2024	UWSCG	Completed, August 2024

	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
	Prevent access of public to the reservoir site	Reservoirs sites should be fenced from all sides and equipped with lockable gate with proper warning and information signs		August 2024	UWSCG	Completed, August 2024 
	Some of the construction materials are left unattended and remain in the area	All construction materials should be removed and disposed according to Georgian Law		End of January 2024	Contractor	Completed, 31 January 2023, Photo N1 
Zuzumbo reservoir						
	Prevent access of public to the reservoir site - The fence of the reservoir should be equipped with Signs, information and warnings	Reservoirs sites should be equipped with proper warning and information signs		End of August 2024	UWSCG	Completed, end of August 2024
	Two pleases of the ventilation shafts on the top of the reservoir do not have a cover	New covers to be prepared and placed		End of March 2024	Contractor	Completed, April 2024

	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
	Electric cables make threats to the operators working on site	Electric cables of the chlorination building should be backfilled		End of July 2024	Contractor	Completed, August 2024 
Caucasioni Reservoir						
	Excluding public from the reservoir - The fence of the reservoir should be equipped with information and warning signs to alarm visitors that they should not enter the territory	Reservoirs sites should be equipped with proper warning and information signs		20 August 2024	WWTP	Completed, end of August 2024
Vardisubani Pumping station						
	Prevent access of public to the reservoir site - The fence of the reservoir should be equipped with Signs, information and warnings	Reservoirs sites should be equipped with proper warning and information signs		August 2024	WWTP	Completed, end of August 2024

	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
	Improper reinstatement of the construction site	The Construction site should be well covered with gravel.		20 August 2024	Contractor	Completed, end of August 2024
CAMP Site						
	Some of the construction materials - old pipelines are left unattended and remain in the area	All old pipelines to be removed and disposed adequately		End of January 2024	Contractor	Completed, 31 January 2024, Photo N1 

2.2 Project Contracts and Management

11. Contract: UWSCG-OCB-TEL-01-2020 for the implementation of the Telavi Water Supply System Improvement Project (TEL-01) was signed on October 2021 with CC – “China Geo-Engineering Corporation”, construction works have been completed in June 2023.

12. The main institutions that were involved in implementation of the Environmental Management Plan are UWSCG executing agency (EA), Supervision Consultant (SC) the Contractor, Local Government and to a lesser extent the Ministry of Environmental Protection and Agriculture of Georgia (MoEPA).

13. The Investment Program Management Office (IPMO) under UWSCG, which is the Department of Management of the Projects Financed by the Donors, is responsible for the day-to-day management of the project, including the implementation of the EMP. IPMO has an Environmental Specialist – Ms.Ketevan Chomakhidze, who is responsible for managing the environmental aspects of the SDP. The deputy head of the department is Mr. Nodar Rostomashvili.

14. 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
- 15.** The SC was represented by a full time Environmental Specialist – Ketevan Chubabria to assist the IPMO oversee day-to-day implementation of EMPs by contractors, including compliance with all government rules and regulations; Support IPMO in the review and endorsement of contractor's SSEMP; Conduct inspections on contractor's implementation of SSEMP and compliance with government rules and regulations; Ensure contractors comply with health and safety requirements per approved SSEMP's Health and Safety Management Plan; Conduct investigations on grievances/complaints, incidents and accidents; Assist IPMO in addressing any grievances in a timely manner as per the GRM; Monitor corrective actions as required in CAPs, and ensure non-compliances are resolved immediately and are not occurring repeatedly; Prepare recommendations for contractors repeated non-compliances on safeguards and EHS requirements; Submit monthly and quarterly environmental monitoring reports to IPMO.
- 16.** The Contractor also appointed a full time Environmental specialist – Aleksandre Abzianidze 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 in Public Administration and has 15 years of work experience in environmental, health and safety management of infrastructure projects.
- 17.** The Department of Permits, Environmental Protection and Social Affairs of the UWSCG is working alongside IPMO to address the environmental and social issues of USIIP. The head of the department is Ms. Maka Goderdzishvili. The above mentioned Department have two divisions, the Division of Permits and the Division of Environmental Protection and Social Affairs. Ms. Salome Mosidze is the Head of the Division of Environmental Protection and Social Affairs. More detailed description of implementation arrangements; responsibilities and staffing are provided in the Table 2 below.

Table 2: Institutional Arrangement, Responsibilities and Staffing

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Permits, Environmental Protection and Social Affairs 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)	Permits, Environmental Protection and Social Affairs 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 2. Prepare inputs to semi-annual environmental monitoring report (SAEMR) to be submitted to IPMO for further review, comments and improvement. 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; 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)	Permits, Environmental Protection and Social Affairs 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. 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; 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

18. Main organizations involved in the project and related to environmental safeguard are presented in the Table 3 below:

Table 3: 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 E-mail: npajarillaga@adb.org
		Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili Tel: +995 577 44 09 90 nnadashvili@adb.org
		ADB RETA Environmental Consultant	George Kobaladze Tel: +995 599 689834 E-mail: gkabaladze.consultant@adb.org.me
Borrower	UWSCG	UWSCG, Department of Permits, Environmental Protection and Social Affairs, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO Department of Management of Projects Financed by Donor Organizations, Deputy Head	Mr. Nodar Rostomashvili Tel: +995 597 181111 E-mail: n.rostomashvili@water.gov.ge
Construction Company	China Geo-Engineering Corporation	Environmental Specialist	Mr. Alexandre Abzianidze Tel: 599 45 29 02 E-mail: sandroabzianidze@gmail.com
		Occupational Health and Safety Specialist	Ms. Natia Karkuzaeva Tel: 591 70 74 04 karkuzaevi@gmail.com
Supervision Consultant	Supervision Consultant: “TEMELSU INTERNATIONAL ENGINEERING SERVICE”	Environmental Specialist	Mrs. Ketevan Chubabria Tel: +995 599 986697 E-mail: 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

19. There were no physical/construction activities under TEL-01 during the reporting period. All goals set within the TEL-01 project have been successfully achieved and completed.

2.3.2 Description of Any Changes to Project Design

20. There were no changes made to the Project Design in the reporting period.

2.3.3 Description of Any Changes to Agreed Construction methods

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

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

22. No Environmental Safeguard Activities were carried out, as all construction activities were completed in the previous reporting period.

3.2 Site inspections/monitoring

23. A post-construction environmental audit was conducted in December 2023 by a UWSCG/USIIP environmental specialist and further updated in August 2024.

3.3 Issues Tracking (Based on Non-Conformance Notices)

N/A

3.4 Trends

N/A

3.5 Unanticipated Environmental Impacts or Risks

N/A

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

N/A

4.2 Trend

N/A

4.3 Summary of Monitoring outcomes

N/A

4.3 Material resources Utilization

N/A

4.4.2 Cumulative Resources Utilization

N/A

4.4 Waste Management

4.5.1 Current Period

N/A

4.5 Health and Safety

N/A

4.5.2 Cumulative Waste Generation

N/A

4.6.2 Worker Health and Safety

N/A

4.6 Training

N/A

5. FUNCTIONING OF THE SEMP

5.1 SEMP Review and Approval

24. The SEMP for Telavi water supply network was prepared and approved in November 2021. No updates took place during the reporting period.

6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

N/A

6.2 Opportunities for Improvement

N/A

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

N/A

7.2 Recommendations

N/A

ANNEX: POST CONSTRUCTION AUDIT REPORT OF TEL-01 SUB-PROJECT, PREPARED IN DECEMBER 2023 AND UPDATED IN AUGUST 2024

ADB Project No: 51132-002
The contract No: UWSCG-OCB-TEL-01-2020
Financed by: The Asian Development Bank

GEORGIA: SUSTAINABLE WATER SUPPLY AND SANITATION SECTOR DEVELOPMENT PROGRAM

Project: Improvement of Telavi Water Supply System (TEL-01)



Post - Construction Environmental Audit Report

First Draft Prepared in December 2023 and further
Updated in August 2024

ABBREVIATIONS

ADB	Asian Development Bank
CAP	Compensation Action Plan
EA	Executing Agency
EHS	Environmental Health & Safety
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMP/ SSEMP	Environmental Management Plan/ Site-Specific Environmental Management Plan
EMS	Environmental monitoring System
ES	Environmental Specialist
GoG	Government of Georgia
IA	Implementing Agency
IEE	Initial Environmental Examination
MoEPA	Ministry of Environment Protection and Agriculture of Georgia
MoRDI	Ministry of Regional Development & Infrastructure
SDP	Sector Development Program
UWSCG	United Water Supply Company of Georgia
WS	Water Supply
WSS	Water Supply and Sanitation Service

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I. INTRODUCTION

1. This report represents the Post Construction Environmental Audit Report (PCEAR) for Improvement of Telavi Water Supply System (TEL-01) project prepared under the Sustainable Water Supply and Sanitation Sector Development Program (SDP). The initial report, prepared in December 2023, was updated in August 2024 to reflect corrective actions taken by the contractor and LWSCG on identified non-compliances. A subsequent monitoring effort in August 2024 verified the resolution of these remaining non-compliances and consequently, the final updated PCEAR was prepared. There are no outstanding environmental issues under the TEL-01 sub-project.
2. This Post Construction Audit Report is being prepared to comply with the 2009 ADB's SPS and Georgian legislation, including safeguards requirement and aims to identify past and present concerns from the production and business activities of Project Company that related to impacts on environment. The specific objectives of the audit can be summarized as follows:
 - Determine and verify whether all environmental requirements, criteria and constraints, prescribed in IEE/EMP and SSEMPs have been adhered to during the construction phase.
 - Determine and verify whether the mitigation actions and rehabilitation requirements contained in the IEE/EMP and SSEMPs have been appropriate and successful to prevent or control environmental pollution and/or damage.
 - Ensure that an appropriate environmental monitoring and control program exists to follow up on mitigation and rehabilitation works completed during the construction phase.
 - To identify any shortcomings in the SSEMP and EMS system implemented during the construction phase and to recommend alterations to the EMS applicable to the operational phase.

II. PROJECT DESCRIPTION

3. 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 sector development program (SDP) assists the government achieve universal access to continuous and safe water supply and sanitation (WSS) service, and contribute to improved environmental and public health conditions of the Georgian citizens. The SDP comprises (i) a program, financed by a policy-based loan (PBL), to improve sector governance and institutions in support of the government's reforms; (ii) a project, financed by a project loan, to increase WSS access and system efficiency in the service area of United Water Supply Company of Georgia (UWSCG) and (iii) improvement of Telavi Water Supply System (TEL-01) project.

2.1 Category of Project

4. Based on the existing ADB Environmental Safeguards Policy (2009), this Project falls under ADB's project Category B. According to ADB SPS 2009 proposed project can be classified as Category B due to the following reasons:
 - adverse environmental impacts are less adverse than those of category A projects;
 - these impacts are site-specific, few if any of them are irreversible, and
 - in most cases mitigation measures can be designed more readily than for category A projects.
5. An initial environmental examination is required for category B projects. A category is assigned to a project by its most sensitive component, therefore, all of the outputs and activities to be undertaken under the Project fall under Category B as well.
6. In accordance with the requirements of the existing National legislation, no EIA report was prepared and no permission was required for the proposed project.

2.2 Description of the TEL-01 Sub-project

7. The implementation of the present project is necessary with the aim to improve water supply system in Telavi for the population of the city.
8. The Ministry of Regional Development and Infrastructure is the Executing Agency and the "United Water Supply Company of Georgia", LLC is the Implementing Agency of the Investment Program. UWSCG is a 100% state-owned company.
9. The City of Telavi is located in Kakheti region, 160 km eastwards from the capital Tbilisi, at

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500-600 meters above the sea level. The town is one of the centers of Georgia's wine industry. Telavi is attracted to tourists as well with its various landmarks and cultural heritages.

10. **Water Sources and Transmission System.** Telavi water supply system was initially developed in the 30's of 20th century. The city water supply system was expanding during some decades, although fundamental reconstruction was undertaken in 1966. No major measures and/or old pipe replacement was conducted since 2000. In 2000-2002, some works were implemented: three new water supply sources with yield of 2 l/s were developed; water losses in the transmission mains were eliminated; in 2006-2008, a partial rehabilitation of the network of central part of the city was undertaken. In 2014-2017, a partial rehabilitation of network was undertaken (about 30 km).
11. Currently there are 5 boreholes in the Telavi city territory. Their yield ranges between 4-7 l/s. In Telavi, water flows from headwork's of "Turdos Khevi" (water supply is provided with underground water and drainage, which is fed by river "Turdos Khevi") and "Jvari Patsosani" and discharged into the Water Treatment Plant, clean water from the latter is flowing into the "central" reservoir №1 (2000 m³). The water from reservoir №1 is distributed in the reservoirs: №2 (1000 m³) and №3 (2000 m³), located in the southern part of the city. Water from the reservoir №2 is distributed in the reservoirs №4 (350 m³) and №5 (400 m³) located in the central part of the city.
12. The distribution network receives water from the aforementioned reservoirs, about 21 km of which was reconstructed as part of the early implanted projects.
13. Currently only 18% of the population of Telavi are connected to the network and has 24 hours water supply, 20% - 12 hours and 62% - 2-3 hours a day.
14. The new Telavi Water Supply System Project include the construction of:
 - (i) Wells (3 new);
 - (ii) New Transmission mains (length: ca. 1.450 km);
 - (iii) Reservoirs (rehabilitation of 1 existing, construction of 5 new);
 - (iv) Rehabilitation of Chlorination Station near the Reservoir №3 - Gigo Gora;
 - (v) Distribution network (Length: 59,55 km);
 - (vi) Automation (SCADA).
15. The city water supply is effectuated from both existing headwork's, from which the water is conveyed to existing treatment plant, and boreholes. The water is accumulated in reservoirs placed at 5 different sites, from whence the water will be conducted to distribution network. Considering the city terrain, the distribution network, according to pressure, is divided into seven zones.
16. The new Water Supply System of Telavi covers only the need of the city population.

2.3 Main Stakeholders of the Project

17. The main institutions that were involved in implementation of the EMP are: executing agency (EA) – United Water Supply Company of Georgia (UWSCG), Supervision Consultant (SC) – Supervision Consultant: TEMELSU INTERNATIONAL ENGINEERING SERVICE* and to a lesser extent the Ministry of Environmental Protection and Agriculture (MoEPA), Investment Program Management Office (IPMO) established within UWSCG is responsible for the day-to-day management of the project including implementation of the EMP. The head of Department is Ms. Irina Chikhladze. The IPMO has an Environmental Specialist – Ketevan Chomakhidze who is responsible for management of the environmental aspects of SDP/TEL-01.
18. The SC included a full time Environmental Specialist Ms.Kate Chubabria to assist the IPMO supervise and monitor implementation of the EMP during construction. Department of Permits, Environmental Protection and Social Affairs of UWSCG work together with IPMO on addressing the Environmental Safeguard Issues of USIP. Ms. Maka Goderdzishvili is the head of the Department.
19. Environmental issues arising from the construction activities were immediately brought to the attention of the construction supervision team to coordinate efforts in order to immediately mitigate impacts, protect the environment, and safeguard the health and welfare of the local communities. All these are to be conducted within the framework of the overall construction management and supervision.
20. Main organizations involved in the project and related to environmental safeguards are presented in the Table 1 below:

Table 1. List of contracts under the Project, SDP/TEL-01

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Lender	Asian Development Bank	Country Environmental Focal	Ninette R. Pajarilaga E-mail: npajarilaga@adb.org
		Associate Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili Tel: +995 595 070442 nnadashvili@adb.org
		ADB RETA Environmental	George Kobaladze

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Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
		Consultant	Tel: +995 599 655534 E-mail: globaladze_consultant@adb.org.me
Borrower	UWSCG	UWSCG, Department of Permits, Environmental Protection and Social Affairs, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO Department of Management of projects Financed by Donor Organizations, Acting Head	Mr. Davit Akhvediani Tel: +995 599 346090 E-mail: d.akhvediani@water.gov.ge
Construction Company	China Geo-Engineering Corporation	Environmental Specialist Occupational Health and Safety Specialist	Ms. Alexandre Abuzianidze Tel: 999 45 29 02 E-mail: sandroabuzianidze@gmail.com
Supervision Consultant	Supervision Consultant: TEMELSU INTERNATIONAL ENGINEERING SERVICE*	Environmental Specialist	Mrs. Ketevan Chubabria Tel: +995 599 956697 E-mail: chubabria@gmail.com

III. LOCATION OF PROJECT

21. The City of Telavi is located in Kakheti region, 160 km eastwards from the capital Tbilisi, at 500-600 meters above the sea level. Tsliv-Gombri Range borders to the south and south-west of the city and Alazani Valley to the north and east. Population of town Telavi is approx. 21000 inhabitants. It is the administrative center of the region, connected with the capital by two highways and railroad. The town is one of the centers of Georgia's wine industry. Proper water supply is very important for Telavi to increase production of wine and other agricultural spheres. Telavi is attracted to tourists as well with its various landmarks and cultural heritages.

Figure 1: Location of Telavi



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IV. SUMMARY OF PREVIOUS ENVIRONMENTAL MONITORING AND AUDITS

22. A total 20 individual and joint on-site site visits were conducted by Environmental Monitoring Specialists of SC and UWSOG/SDP on a regular basis, during the project implementation period (October 2021 – June 2023). 24 Non-compliances have been identified and 24 Non-Compliances Notices (Please see Annex A) were issued to consultant. Also unscheduled monitoring visits were carried out, on-site verbal instructions have been given to the contractor and its environmental team and non-conformance notes has been issued to the contractor as needed. Mitigation measures to reduce major environmental impacts have been instructed to contractors during the monitoring visits. Corrective action plans were developed by contractor to improve the situation.
23. The monitoring activities included:
- The monitoring of mobilization activities under TEL-01 project sites to the overall project EMP/SSEMP requirements;
 - The monitoring of compliance of construction activities under TEL-01 project sites to the IEE/EMP requirements.
24. Environmental Monitoring Specialist hired under the TEL-01 projects Ms. Ketevan Chubabria conducted regular monitoring (on the weekly basis) of the construction sites, developed the monthly and quarterly monitoring reports and submitted to SC/TEMELSU INTERNATIONAL ENGINEERING SERVICE.
25. Environmental Monitoring Specialist, of CC/China Geo-Engineering Corporation, Mr. Aleksandre Abzianidze, conducted the day-to-day monitoring of the construction sites, developed monthly monitoring reports for TEL-01 sub-project based on the regular site inspections.
26. ES of UWSOG/SDP performed monitoring of contractor's performance with the approved EMPs and SSEMPs, environmental standards and other environmental commitments of the contractor. ES developed Semi-annual Environmental Monitoring Reports and submitted to AOB based on the quarterly reports prepared by SC and monitoring results.
27. The construction activities affecting the environment during the reporting period are as follows:
- Excavation works
 - Removal of Surplus Soil
 - Removal of Top Soil
 - Backfilling of Trenches
 - Reinstatement Activities

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28. The TEL-01 Project commenced 04th October 2021 and an actual construction activities started on December 2021. Construction works were completed in June 2023.
29. During the construction phase of Telavi Water Supply Sub-project, the environmental monitoring was conducted by several organizations, namely - ADB, Supervision Consultant (CSC), Construction Contractor (CC) and UWSCG/SDP. As it was mentioned above a total of 20 Site visit have been carried out during the construction period of TEL-01 project and a total 24 non-compliances were identified during these site visits in 2021-2023. The Non-compliance Notices issued during the construction process under TEL-01 sub-project are attached to this document, the identified non-compliances during the site visits were as follows (please see Annex A):
- At Central Reservoir site Concrete washout is poured on ground, this is a forest environment and such attitude is extremely forbidden;
 - There is poor housekeeping at the Camp site;
 - Construction material and waste have no designated area, bulk material are places in unorganized way at the Central Reservoir site;
 - Household waste bin is overturned at the entrance of Camp site;
 - Unorganized workers workshop at Central Reservoir ;
 - Messy and unorganized camp site;
 - Unsafe construction site at Shalauri reservoir site;
 - Reservoir construction sites not fenced;
 - Not proper handling of hazardous material;
 - The Camp yard is unorganized and messy, wastes are spread all around the site. Housekeeping is extremely poor
 - Hazardous waste/material storage area has not been arranged at the site. Hazardous material and waste are placed on the ground without any protective measures, creating risk to the environment and people
 - Construction material and waste have no designated area, bulk material are places in unorganized way at the entrance of the building, in a hall of the building, at the stairs
 - Caucasian Reservoir site has no proper fencing in order to restrict unauthorized entry to the site
 - No concrete mixer washout has been arranged at the site
 - Contractor was requested to conduct instrumental measurement of noise and air pollutants
30. It should be noted that corrective action plans were developed by the contractor during the construction phase, and most of the non-compliances were improved.

V. AUDIT RESULTS

21. Construction of Telavi Water Supply System (TEL-01) is financed from the Asian Development Bank (ADB) under the Sustainable Water Supply and Sanitation Sector Development Program, formerly the Water Supply and Sanitation Service Improvement Project.
22. The Post Construction Environmental Audit was conducted by the environmental specialist of SDP/TEL-01 sub-project Ms. Kate Chomakhidze on 29 December 2023.
23. During the audit the following construction sites have been visited: (i) Shalauri reservoir, with the volume of 1000m³; (ii) Central Reservoirs (2000X2m²); (iii) Zuzumbo Reservoir (500m³); (iv) Caucasian Reservoir (500m³); (v) "Gigaspoti" Reservoir – Chlorination Station; (vi) Vardisubani Pumping Station; (vii) reinstatement of the network area.
24. All the above-mentioned sites were fenced and it was impossible for strangers as well as domestic animals to enter the sites (see **Figure 2-15 below**).

Shalauri Reservoir (Fig.2.3)



25. The territories were restored in a timely manner; the removed topsoil was used for the rehabilitation works and cover of the reservoir.

Central Reservoir (Fig.4,5)



26. The territories were restored in a timely manner; the removed topsoil was used for the rehabilitation works and cover of the reservoir.

Zuzumbo Reservoir (Fig.6,7)



27. The territories were restored in a timely manner. The whole territory is cleaned and reinstated by the top soil removed from the site during the construction

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Cavcasiani Reservoir (Fig.8,9)



26. The territories were restored in a timely manner; the removed topsoil was used for the rehabilitation works and cover of the reservoir.

Vardisubani Pumping Station (Fig. 10,11)



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Water Supply Network Reinstatement Area (Fig.12,13)



Construction Camp (Fig.14,15)

25. Most of the hazardous and household waste was removed and disposed of from the CAMP site.



VI. CONCLUSIONS AND RECOMMENDATIONS




21. The construction of the Water Supply System in Telavi is complete and the object will be put to exploitation soon. All Reservoirs, well filled and pumping stations under the TEL-01 sub-project are properly fenced, it have a gates and guardrooms. The whole territory is cleaned and reinstated by the top soil removed from the construction sites.
22. A total of 20 site visits have been carried out during the construction phase of TEL-01 sub-project (October 2021 – June 2023) and 24 non-compliances were identified during these site visits. Annex A to this report gives the information about the non-compliances observed during the environmental audit and due corrective actions of their improvement.
21. As already noted, most of the impacts are associated with the removal and disposal of construction materials, preventing public access to the reservoirs, as well as equipping the reservoir sites with Signs and Information.
23. This Post-construction Environmental Audit was conducted on December 29, 2023 to address a number of mitigation measures and potential problems, so proper and timely implementation of correction actions will significantly reduce the expected negative future impact.
22. Table 2 below provides a summary of the non-compliances identified during the Post-construction Environmental Audit conducted on December 29, 2023 as well as the required corrective actions, the responsible organizations and status of improvements of the non-compliances.

Table 2: Summary information of post-construction environmental audit, 29 December 2024



#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
Shalauri Reservoir						
1	Prevent access of public to the reservoir site - The fence of the reservoir should be equipped with Signs, Information	Reservoirs sites should be equipped with proper warning and information signs		End of August 2024	UWSCG	Completed, August 2024





#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
	and warnings					
	Surplus waste soil were piled up outside the fence of the Shalauri reservoir	Surplus waste soil should be removed from the outside of the Reservoir territory		End of March 2024	Contractor	Completed, removed April 2024, Photo N1 
Central Reservoir						
2	Prevent access of public to the reservoir site - The fence of the reservoir should be equipped with Signs, information and warnings	Reservoirs sites should be equipped with proper warning and information signs		August 2024	UWSCG	Completed, August 2024
	Prevent access of public to the reservoir site	Reservoirs sites should be fenced from all sides and equipped with lockable gate with proper warning and information signs		August 2024	UWSCG	Completed, August 2024 

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#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
	Some of the construction materials are left unattended and remain in the area	All construction materials should be removed and disposed according to Georgian Law		End of January 2024	Contractor	Completed, 31 January 2023, Photo N1 
Zuzumbo reservoir						
3	Prevent access of public to the reservoir site - The fence of the reservoir should be equipped with Signs, information and warnings	Reservoirs sites should be equipped with proper warning and information signs		End of August 2024	UWSCG	Completed, end of August 2024
	Two pieces of the ventilation shafts on the top of the reservoir do not have a cover	New covers to be prepared and placed		End of March 2024	Contractor	Completed, April 2024

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#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
	Electric cables make threats to the operators working on site	Electric cables of the chlorination building should be backfilled		End of July 2024	Contractor	Completed, August 2024 
Caucasian Reservoir						
4	Excluding public from the reservoir - The fence of the reservoir should be equipped with information and warning signs to alarm visitors that they should not enter the territory	Reservoirs sites should be equipped with proper warning and information signs		20 August 2024	WWTP	Completed, end of August 2024
Vardisubani Pumping station						

#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status
5	Prevent access of public to the reservoir site - The fence of the reservoir should be equipped with Signs, information and warnings	Reservoirs sites should be equipped with proper warning and information signs		August 2024	WWTP	Completed, end of August 2024
	Improper reinstatement of the construction site	The construction site should be well covered with gravel.		20 August 2024	Contractor	Completed, end of August 2024
CAMP Site						
6	Some of the construction materials - old pipelines are left unattended and remain in the area	All old pipelines to be removed and disposed adequately		End of January 2024	Contractor	Completed, 31 January 2024, Photo N1 

ANNEXSES

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ANNEX A: Non-compliances identified during the project Implementation period (October 2021-June 2023)

January-June 2023				
Number of site visits	Number of non-compliances	Issues	Status	Comments
5 site visits	7 non-compliances	There is poor housekeeping at the Camp site	Completed	
		Vardisubani Construction site is very dangerous, as excavation are too deep and have no barricades or warning signs.	Completed	
		Construction material and waste have no designated area, bulk material are places in unorganized way at the Shalauri Reservoir site.	Completed	
		Hazardous material is placed at construction site.	Completed	
		Unorganized camp site. Material placed in unorganized way.	Completed	
		Proper fencing of construction areas	Completed	
		Insolation of the information boards and signs	Not completed	Was completed in August 2024
July-December 2022				
10 site visits	11 non-compliances	At Central Reservoir site Concrete washout is poured on ground, this is a forest environment and such attitude is extremely forbidden	Completed	
		There is poor housekeeping at the Camp site	Completed	
		Construction material and waste have no designated area, bulk material are places in unorganized way at the Central Reservoir site	Completed	
		Household waste bin is overturned at the entrance of Camp site	Completed	

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		Unorganized workers workshop at Central Reservoir	Completed	
		Messy and unorganized camp site	Completed	
		Unsafe construction site at Shalauni reservoir site	Completed	
		Reservoir construction sites not fenced	Completed	
		Not proper handling of hazardous material	Completed	
		Proper fencing of construction areas	Completed	
		Insolation of the information boards and signs	Not completed	Was completed in August 2024
January-June 2022				
5 site visits	6 non-compliances	The Camp yard is unorganized and messy, wastes are spread all around the site. Housekeeping is extremely poor	Completed	
		Hazardous waste/material storage area has not been arranged at the site. Hazardous material and waste are placed on the ground without any protective measures, creating risk to the environment and people	Completed	
		Construction material and waste have no designated area, bulk material are places in unorganized way at the entrance of the building, in a hall of the building, at the stairs	Partially completed	Was completed in August 2024
		Caucasiani Reservoir site has no proper fencing in order to restrict unauthorized entry to the site	Partially completed	Was completed in August 2024
		No concrete mixer washout has been arranged at the site	Completed	

January-June 2022				
5 site visits	7 non-compliances	There is poor housekeeping at the Camp site	Completed	
		Vardisubani Construction site is very dangerous, as excavation are too deep and have no barricades or warning signs.	Completed	
		Construction material and waste have no designated area, bulk material are places in unorganized way at the Shalauni Reservoir site.	Completed	
		Hazardous material is placed at construction site.	Completed	
		Unorganized camp site. Material placed in unorganized way.	Completed	
		Proper fencing of construction areas	Completed	
		Insolation of the information boards and signs	Not Completed	Was completed in August 2024
July-December 2022				
7 site visits	11 non-compliances	At Central Reservoir site Concrete washout is poured on ground, this is a forest environment and such altitude is extremely forbidden	Completed	
		There is poor housekeeping at the Camp site	Completed	
		Construction material and waste have no designated area, bulk material are places in unorganized way at the Central Reservoir site	Completed	
		Household waste bin is overturned at the entrance of Camp site	Completed	
		Unorganized workers workshop at Central Reservoir	Completed	
		Messy and unorganized camp site	Completed	

		Unsafe construction site at Shalauri reservoir site	Completed	
		Reservoir construction sites not fenced	Completed	
		Not proper handling of hazardous material	Completed	
		Proper fencing of construction areas	Completed	
		Insolation of the information boards and signs	Not Completed	
January-June 2022				
5	6 non-compliances	The Camp yard is unorganized and messy, wastes are spread all around the site. Housekeeping is extremely poor	Completed	
		Proper fencing of construction areas	Completed	
		Insolation of the information boards and signs	Not completed	
		Caucasian Reservoir site has no proper fencing in order to restrict unauthorized entry to the site	Completed	
		No concrete mixer washout has been arranged at the site	Completed	

ANNEX B: Telavi Water Supply Project – TEL-01, Post-Construction Environmental Audit Checklist

Required mitigation measures of environmental impact	Measures implemented				Comment
	yes	partially	no	N/A	
Site territories (reservoirs, pumping stations) fenced fully	<input checked="" type="checkbox"/>				All project zones were fenced.
Reservoirs sites should be equipped with lockable gate with proper warning and information signs	<input checked="" type="checkbox"/>				All Reservoirs sites are equipped with lockable gate except central reservoir
Reservoirs sites should be equipped with proper warning and information signs	<input checked="" type="checkbox"/>				Reservoirs sites are equipped with proper warning and information signs
Top soil was used for reinstatement purposes	<input checked="" type="checkbox"/>				The rehabilitation works were carried out in all project zones, where the removed topsoil in the project zone was used.
Trees replanted as needed				<input checked="" type="checkbox"/>	No trees were planted in the project zone.
Construction waste and surplus/waste soil removed completely and disposed properly	<input checked="" type="checkbox"/>				All the construction equipment and construction materials were removed from the project zones.
Hazardous waste removed and disposed properly.	<input checked="" type="checkbox"/>				No facts of uncontrolled disposal of hazardous waste were fixed in the project area.
Fuels and lubricants spills eliminated	<input checked="" type="checkbox"/>				No traces of leakage were identified in the project area.
Contractor equipment and machinery removed	<input checked="" type="checkbox"/>				All the construction equipment was removed from the project zones.
All temporary facilities removed and cleaned up	<input checked="" type="checkbox"/>				The temporary auxiliary buildings are full y removed from the site.
Streets with installed network reinstated to pre-	<input checked="" type="checkbox"/>				The access roads to the project zone are reinstated. Their physical state is

construction or better conditions					satisfactory.
Post-Construction reinstated to pre-construction or better conditions	territory to pre-better	X			The project zone is reinstated in line with the requirements.