

# Environmental Monitoring Report

---

Semi-annual report

For the period January–June 2020

Project Number: 42414-044

## GEO: SUSTAINABLE URBAN TRANSPORT INVESTMENT PROGRAM – Tranche 4

Prepared: August 2020

Prepared by Municipal Development Fund of Georgia for the Government of Georgia and the Asian Development Bank.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

**Project Number:** Sustainable Urban Transport Investment Program - Tranche 4  
LOAN NUMBER 3273-GEO

**Reporting period:** January - June 2020

## **GEORGIA: GEORGIAN SUSTAINABLE URBAN TRANSPORT INVESTMENT PROGRAM - Tranche 4**

**(Financed by the Asian Development Bank)**

**Prepared by:** Niniko Isakadze, Environmental Specialist for ADB projects  
Environmental and Resettlement Unit, Municipal Development Fund (MDF)  
Tbilisi, Georgia

**Endorsed by:** Elguja Kvantchilashvili, Head of Environmental and Resettlement Unit  
Municipal Development Fund (MDF)  
Tbilisi, Georgia

**July, 2020**

# Table of Contents

<b>1</b>	<b>INTRODUCTION</b> .....	<b>5</b>
1.1	Preamble.....	5
1.2	Headline Information.....	5
<b>2</b>	<b>PROJECT DESCRIPTION AND CURRENT ACTIVITIES</b> .....	<b>6</b>
2.1	Project Description .....	6
2.2	Project Contracts and Management .....	9
2.3	Project Activities during Current Reporting Period .....	12
2.4	Description of Any Changes to Project Design.....	13
<b>3</b>	<b>ENVIRONMENTAL SAFEGUARD ACTIVITIES</b> .....	<b>15</b>
3.1	General Description of Environmental Safeguard Activities.....	15
3.2	Site Audits .....	15
3.3	Issues Tracking (Based on Non-Conformance Notices).....	16
3.4	Trends .....	16
3.5	Unanticipated Environmental Impacts or Risks .....	16
<b>4</b>	<b>RESULTS OF ENVIRONMENTAL MONITORING</b> .....	<b>17</b>
4.1	Overview of Monitoring Conducted during Current Period.....	17
4.2	Trends .....	17
4.3	Summary of Monitoring Outcomes.....	17
4.4	Material Resources Utilization .....	17
4.4.1	Current Period.....	17
4.4.2	Cumulative Resource Utilization .....	17
4.5	Waste Management.....	17
4.5.2	Cumulative Waste Generation .....	19
4.6	Health and Safety .....	19
<b>5</b>	<b>FUNCTIONING OF THE SEMP</b> .....	<b>21</b>
5.1	SEMP Review.....	21
<b>6</b>	<b>GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT</b> .....	<b>22</b>
	Good Practice.....	22
6.1	22	
6.2	Opportunities for Improvement.....	22
<b>7</b>	<b>SUMMARY AND RECOMMENDATIONS</b> .....	<b>23</b>
7.1	Summary.....	23
7.2	Recommendations .....	23

## Abbreviations

ADB	Asian Development Bank
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMP	Environmental Management Plan
EPSM	Engineering Procurement and Construction Management
GoG	Government of Georgia
SUTIP	Sustainable Urban Transport Investment Program
IA	Implementing Agency
IEE	Initial Environmental Examination
MDF	Municipal Development Fund of Georgia
MFF	Multi-tranche Financing Facility
MEPA	Ministry of Environmental Protection and Agriculture
MoRDI	Ministry of Regional Development & Infrastructure
SSEMP	Site-Specific Environmental Management Plan

# 1 INTRODUCTION

## 1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for GEORGIAN SUSTAINABLE URBAN TRANSPORT INVESTMENT PROGRAM – TRANCHE 4 - **Coastal Protection Batumi project**. Contract No: P42414-SUTIP4-ICB-01-2016 and Amendment N2, N3.
2. This report is the seventh (7) EMR for the project, since the 2017.

## 1.2 Headline Information

3. Black Sea coast playing a significant role in economics of Georgia, cultural and tourist development as well. Coastal improvement is one of the priorities among other infrastructural projects, which will facilitate the future development of the City Batumi and Adjara region. Upgrading and improvement of local transport and transport-related infrastructure plays a significant role in the development of Georgia infrastructure. To this effect, a number of important activities have been implemented and financed from the budget of Georgia and from other sources. Recently several significant programs, financed through state budget, loans and grants, have been implemented with this regard.
4. The Sustainable Urban Transport Investment Program (SUTIP) is financed by ADB under a multi tranche financing facility (MFF), and is aimed at promoting a sustainable, integrated, socially-affordable and cost-efficient urban transport system in cities of Georgia, to energize the economy and improve the quality of life of citizens. Projects involve rehabilitation and repair of existing infrastructure, provision of new facilities and capacity building.
5. SUTIP - Tranche 4 was developed as the government's response to the transportation problems in urban areas, which include large traffic volumes causing increasing delays, as a result of previous under-investment in infrastructure maintenance and expansion. Tranche 4 was signed on 26 October 2015, and declared effective on 8 January 2016. Inception Mission was fielded on 26 January to 9 February 2016. Batumi coastal protection works contract was awarded in December 2016, and project implementation is ongoing.
6. SUTIP - Tranche 4 comprises (i) urban infrastructure improvement, including one subproject: Batumi Coastal Protection; (ii) institutional strengthening, including management information system for MDF; and (iii) project management facility, including incremental administration and consulting services for audit, safeguards monitoring, and feasibility studies and detailed engineering design for sustainable urban transport projects. The government, through the Ministry of Finance, has submitted on 15 April 2015 the periodic financing request for Tranche 4, requesting a loan of \$20 million from ADB's ordinary capital resources. These investments will improve the urban environment, strengthen economic and tourism development, and regional integration.
7. The Municipal Development Fund of Georgia (MDF) is the executing agency of the program, and is responsible for the general coordination and implementation of projects, for negotiating with ADB and with appropriate ministries and agencies of the Borrower. MDF is directly responsible for planning, designing, civil works on construction and rehabilitation of all subprojects in the frame of program.

## 2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

### 2.1 Project Description

8. Coastal improvement is one of the priorities among other infrastructural projects, which will facilitate the future development of the Batumi City and region. The proposed project is aimed at protecting the Batumi coast against erosion, which is affecting the coastline southwest of Batumi, over a length of about 5 km. Along this section a number of properties has been lost already in the past. Without adequate protection measures coastal erosion will continue and as a consequence the investment climate for tourism development could be negatively influenced.
9. The main objective of the proposed project is to protect the Batumi coast against erosion. The coastline southwest of Batumi is affected by erosion over a length of about 5 km. Along this section a number of properties has been lost already in the past. Without adequate protection measures coastal erosion will continue at the airport area and at Adlia (village south of Batumi) and might even affect the beaches and the coastline of Batumi. As a consequence, the investment climate for tourism development could be negatively influenced.
10. The evaluation of the alternatives to protect the coast against the erosion affecting the southern section of the littoral has shown that a soft intervention, featuring recirculation of the sediment between the northern section of the littoral (where it accumulates due to natural transport pattern) and the southern portion (from where it is removed due to erosion), is the most efficient way to protect and restore the beach.
11. Therefore, the main intervention aiming at stabilizing this portion of the Batumi coastline features artificial nourishment in the southern portion of the littoral, just north of the airport, spread over a beach length of approximately 2,000 m, using material taken from the northern part of the coastline (where beach accretion is occurring).
12. The interventions for the protection of the coast under the project are listed here below:
  - Beach nourishment of the eroded sediment along the coast for about 1,680m, in the southern beach (approx. 120,000 m<sup>3</sup>);
  - Adapting the revetment to the existing local conditions for 1,750m;
  - Safeguard of greenery and boulevard for about 1,750m;
  - Yearly possible nourishment maintenance (50,000m<sup>3</sup>);
  - A Chorokhi river monitoring program providing the information needed to analyze the morphology and hydrology of the Chorokhi river and to study the shape of river mouth that could increase the deposit of the sediment from the river towards north and that could minimize the loss in the canyon of the sediments transported by the river.
13. For transportation of sediments, contractor selected and acquired respective equipment (hydraulic and booster pumps, pipes) and brought to Batumi City. The tests held in October-November of 2019 identified that the acquired equipment is less effective for pumping of sand-gravel material of Batumi City coastline. The Contractor found the way out, transported the required quantity of sand-gravel material (30,500 m<sup>3</sup>) by trucks.
14. In the first half of 2020, the consultations were being held between the Contractor and Supervision Companies aimed at issue resolving. The Contractor was assigned to replace the existing equipment with effectively operational technique of relevant parameters, however proposed equipment was considered as unacceptable due to its high price.
15. According to the Opinion #004151920 of LEPL Levan Samkharauli National Forensics Bureau, execution of works by applying of pipeline equipment is not expedient, since upon finalization of project works, the machinery (main hydraulic pump, dredging/booster pumps,

pipeline) at maintenance stage shall be handed to the Beneficiary, in particular to Batumi Municipality.

16. With this regard, Batumi Municipality City Hall sent the Letter to MDF, notifying that there is no structural unit at the Municipality to carry out such activities and there are no required competent staffers there. Hence, they have to procure the works. If the Bidding for transportation of ballast by trucks is announced, the competition will be higher and selection of the Company will be simplified, rather than in case of announcing the Bidding for transportation by pipeline.
17. The following maps show the general location of the Project activities:

**Figure 1: General location**



**Figure 2. Site location**



18. In addition to sediment recirculation, the beach in the South, suffering erosion, will also be protected by a revetment and enlarged over a stretch about 2 km long. Both sediment from recirculation (gravel) and sediment from excavation (needed to build the revetment) will provide nourishment to this southern portion of the littoral. In particular, in this first intervention, the gravel material from recirculation (approximately 30,000 m<sup>3</sup>) will be used to form the toe of the new enlarged beach.



supervisor is mandated to track implementation of EMP/SSEMP by the contractor and reveal any deviations from the prescribed actions.

20. The Consultant's staff, as outlined within the Consultant's proposal, consists of an international Project Team, formed by TECHNITAL and a national team of experts, formed by Saunders Group Ltd.
21. With respect to this stage, the Supervision Team falls conveniently into two groups as follows (Table 1):

**Table 1: Supervision Team Composition**

<b>International</b>	<b>National</b>
Coastal Management Specialist/Team Leader	Coast Protection Engineer/Deputy TL
Coast Protection engineer	Hydraulic engineer
Geotechnical Engineer	Geotechnical Engineer
Environmental specialist	Sea Hydrologist
	Environmental specialist
	Quantity surveyor

22. As foreseen by the Contract No. SUTIP2/C/QCBS/7-2013 between MDF and Technital, dated October 16th 2014, for the Environmental supervision for the construction site (4.2 Construction Supervision, (a) International Team, Non Key Experts, Environmental Specialist) the following tasks and responsibilities are requested:
  - Coordination and liaison with Government/Employer;
  - Reports preparation;
  - carry out environmental monitoring and management of project implementation;
  - help ensure the implementation of environmental management practices at each stage of the construction;
  - develop an environmental auditing protocol for the construction period, regularly supervise the environmental monitoring;
  - submit periodic reports based on the monitoring data and laboratory analysis reports;
  - Implementation of environmental mitigation measures during construction period.
23. Construction Supervision Company is preparing quarterly progress reports, which cover the implementation of the SSEMP, discrepancies from the SSEMP and list all HSE relevant incidents and accidents that occur during the implementation; Submits periodic reports based on the monitoring data and laboratory analysis.
24. A Non-Compliance Notice has to be issued to the contractor if the SC requires action to be taken. The contractor is required to prepare a corrective action plan which needs to be implemented by a date agreed with the SC.
25. Construction Contractor (CC) is obligated to follow EMP/SSEMP and good construction practice. In order to meet this obligation, a contractor has established environmental management team and procedures. The Contractor has appointed an Environmental Manager (EM), which is a member of the construction management team based on site for the duration of the contract.
26. Duties and responsibilities of the Environmental Manager of the Construction Contractor are:

- To Identify all Environmental Aspects and Impacts for each activity;
  - To ensure compliance with all project standards, statutory requirements and permit conditions;
  - To lease with government authorities on environmental issues;
  - To coordinate Environmental information flow between Client and Suppliers/Sub-Contractors;
  - Implementation of, and adherence to, all pre-construction, pollution prevention, waste management, water supply, aggregates, fauna and visual management requirements outlined in this plan;
  - Ensuring relevant permits are in place for site specific activities;
  - Implementation and supervision of the monitoring program;
  - Record keeping and reporting on a daily basis to the Project Manager;
  - Maintenance of records;
  - Ensure Training Department presents well founded and appropriate environmental training;
  - To plan and ensure implementation of all monitoring activities and evaluates results;
  - To ensure any corrective or preventative action is implemented in wise time;
  - Keep Project personnel fully informed of all environmental concerns and issues;
  - Close supervision of Sub-Contractors.
27. Thus, key responsibilities of the Contractor are preparation of the Site-Specific Environmental Management Plan (SSEMP) for approval by the Employer (EA) prior to the Contractors taking possession of the construction site; Ensure that the SSEMP is implemented effectively throughout the construction period; Carry out the monitoring and mitigation measures set forth in the IEE/EMP/SSEMP; Establish an operational system for managing environmental impacts; Allocate the budget required to ensure that such measures are carried out. Construction contractor is responsible to prepare monthly progress reports on SSEMP implementation, which should contain information on the main types of activities carried out during the reporting period, status of any clearances/permits/licenses which are required for carrying out such activities, mitigation measures applied, and any environmental issues that have emerged in relations with suppliers, local authorities, affected communities, etc.
28. MDF is responsible for general implementation of all safeguards tasks and guarantee that potential adverse environmental impacts arising from the Projects are minimized by implementing mitigation measures presented in the Initial Environmental Examination (IEE) or SSEMP, as applicable.
29. Management of safeguards issues is carried out by the MDF through Environmental and Resettlement Unit, established in October 2014. From that time, number of Environmental and Resettlement team members has increased from 6 to 12 and currently consists of: Head of Unit, 4 environmental safeguards specialists, one social and gender specialist, 4 resettlement specialists. Since 2018, there is no ADB Environmental Consultant, but an Environmental Specialist is responsible for ADB projects. Until October 2014, Environmental and resettlement safeguards team was consisting of 3 environmental safeguards and 2 resettlement specialists, one of which was the ADB's national consultant on resettlement issues. Environmental and Social Safeguards team had a Team Leader who was an advisor to Executive Director of MDF on environmental and social safeguards issues.

30. The Environmental and Resettlement Unit is involved in addressing of environmental and social safeguard issues throughout the entire projects' cycles. The Environmental and Social Specialists of the MDF, are responsible for management of the environmental and social aspects associated with development of all donor funded projects for which MDF is the responsible Executing Agency (EA). The Environmental Specialist of the MDF supervises ADB projects, review the IEEs/EIAs, EMPs, and SSEMPs of projects and carries out supervision of the construction performance based on approved EMPs, EIAs, and environmental standards in accordance with ADB "Safeguard Policy Statement" (2009) requirements' and acting Georgian Legislation.
31. MDF ensures availability of all environmental information and facilitates environmental supervision of the project. The MDF's local environmental specialist's responsibilities in respect of implementation of the IEE/SSEMP, are to: ensure that all relevant IEE/SSEMP requirements (including environmental designs and mitigation measures) are duly incorporated into the project bidding documents; Assist Contractors to obtain necessary permits and/or clearance, as required, from any relevant government agencies (NEA, etc.); Ensure that all necessary regulatory clearances are obtained before commencing any civil work on the project; Ensure, that contractors have access to the EMP and IEE report and understand their responsibilities to mitigate environmental problems associated with their construction activities and facilitate training of their staff in implementation of the EMP; Approve the Site-Specific Environmental Management Plan (SEMP) prepared by the Contractor before he takes possession of construction site; Time-to time monitor the contractor's implementation of the SEMP in accordance with the environmental monitoring plan by conducting site monitoring visits; The MDF through its Local Environmental Consultant, reports to the ADB in every 6 months on the status of environmental compliance of construction works by preparing semi-annual Environmental Monitoring Reports. In case unpredicted environmental impacts occur during the project implementation, prepare and implement as necessary an environmental emergency program in consultation with relevant government agencies and ADB.

### **2.3 Project Activities during Current Reporting Period**

33. The major activities which have been carried out during the January-February are provided below:
- Topographic in-survey between ch.1800-1600;
  - Removing some armour 3-7 tons' rocks for weighting procedure (as per client requirements) was ongoing and finished between ch.1800-1600;  
Repairing works for boulevard concrete pavements, crown wall and stainless hand rails installed above crown wall stairs beach accesses between ch.2000-0250 was ongoing

Physical and financial progress by June 2020:

Activities according contract:

- The actual physical progress for the contract works is: 97.0 %;
- The actual financial progress included submitted IPA-27 is: 95 %;

- The financial certified progress (IPC 1 until 31) for the contract works is: 93 %.

### Photographs of construction activities

<p>Figure 4. Crown wall repairing works</p> 	<p>Figure 5. Stainless hand rails repairing works</p> 
<p>Figure 6. Already installed rocks weighting retest</p> 	<p>Figure 7. Boulevard pavement repairing works</p> 

35. During the reporting period, Final Report of the Chorocki monitoring activities has been prepared and submitted to the Technital-& Saunders Group for further review. However, as the report was incomplete and needed to be improved, it was rejected by the environmental specialist of the CC in order to be revised and re-developed.

### 2.4 Description of Any Changes to Project Design

39. In the past two years the situation has changed sharply and with intensity that has been completely different from the experience of the last 15 years.
40. Sufficient magnitude erosion has been occurred during 2015-2017 years on Batumi beach, which needed to perform the additional works (back filling of the boulevard) asked by local government Municipality (Batumi) with MDF confirmation, and changes of the stone sizes

from 50 mm to 7000 mm because small stones sizes would not provide the beach stabilization, considering of all these circumstances it was required the design changes. The modifications of the water depth and of the slope of the coastline just after the breakwater in north direction have been very important and were extended for approximately 2 km. The modification has been so important that the original sections could not be done any more and that the new solution should include also the reconstruction of the boulevard.

41. In order to avoid any further damages, the Engineer, in agreement with the Client (MDF) and its Consultant, took the decision that it is immediately necessary to bring new material in the eroded portion of the coastline approximately equal to the volume lost in the past two years. This volume that is composed by gravel and sand with the grain size distribution defined by the Engineer has been dumped in the period between beginning of July and end of August 2017.
42. In parallel, the Engineer has proposed a final solution. The Client on May 17th 2017 requested to the Engineer to develop the updated detailed design of this solution. The solution has been further discussed with MDF, Consultant and with the Construction Contractor and the details have been agreed on the meeting held in Batumi on September 22nd, 2017.
43. The MDF asked Technital to revise the original design, including IEE and SSEMP in order not only to restore the protective function of the revetment but also to incorporate the actual embankment as integral part of the design. For this reason, the design revision, have taken into account the revetment, nourishment and boulevard.
44. On 6th of December 2017 the amendment has been signed between Technital and MDF with the approval of the "Adaptation design for Batumi coastal protection". SC submitted the revised design to the MDF by end of December, 2017. The revised design and other documentations (method statements) were approved by MDF in February, 2018. IEE was updated accordingly to ADB SPS 2009 together with revised detail design, which was agreed with MDF in March, 2018. By ADB updated IEE was approved in May, 2018. Updated IEE was disclosed at MDF's web-page: <http://mdf.org.ge/?site-lang=en&site-path=documents/&id=396>. SSEMP was also updated and approved as by MDF as well as by ADB prior to construction activities start.

### **3 ENVIRONMENTAL SAFEGUARD ACTIVITIES**

#### **3.1 General Description of Environmental Safeguard Activities**

45. Based on the EMP/SSEMP requirements, monitoring measures of project includes construction site supervision, verification of permits, monitoring of compliance of the contractors' performance and specific monitoring of environmental impacts like noise, dust, soil contamination, landscape structure, construction waste, flora and fauna, water pollution, air emissions and etc. conducted by Contractor's and Engineer's environmental management specialists.
46. The Construction Contractor's QHSE Manager is: submitting environmental monitoring reports on a monthly basis; Coordinating community relations issues through acting as the Contractor's community relations focal point (proactive community consultation, complaints investigation and grievance resolution); Establishing and maintaining site records of:
- Site inspections during construction activities using check-lists based on SEMP;
  - Environmental accidents/incidents including resolution activities;
  - Environmental monitoring data;
  - Non-compliance notifications issued by the SC;
  - Corrective action plans issued to the SC in response to non-compliance notices;
  - Community relations activities including maintaining complaints register;
  - Monitoring reports;
  - Routine reporting of SEMP compliance and community liaison activities;
  - As per reporting to the Employer's Engineer of environmental incidents/spillages including actions taken to resolve issues.
47. Local environmental specialists conduct site-monitoring visits and supervise and monitor implementation of the SSEMP during construction activities.
49. MDF's Environmental Specialist ensures that the Contractors – CC and SC understand what is to be done and how to rectify and address any environmental issues rose during project implementation process. MDF's Environmental Specialist has regularly been performing monitoring of ongoing activities with close cooperation with env. specialists of SC and CC companies, by mailing, site monitoring visits and meetings. Coordination with the Contractor and SC has been performed by checking the Reports (SSEMP, monthly, HSE and etc.).

#### **3.2 Site Audits**

50. Post-Construction Environmental Audit will be conducted and report with its checklist will be prepared by the SC environmental specialist and attached to the final EMR as an annex. The Post-Construction Environmental Audit Report will be developed by the supervision company as soon as the project is completed in the following reporting period. The final EMR with the relevant annexes will be submitted to the ADB safeguard Team in the next reporting period.
51. Regular inspection and monitoring of construction sites under Batumi Coastal Improvement Project were conducted during the implementation of civil works.

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

54. No Non-compliances were observed during the reporting period.

### **3.4 Trends**

55. During the previous reporting period (July- December, 2019), five non-compliances were revealed and fixed accordingly, while in January- June 2020 reporting period, no non – compliances were observed. Taking into consideration the fact, that civil works were conducted only during January and February 2020 and on the other hand, 6 months in the past period, the progress is obvious and the comparison shows a positive trend of revealing and fixing of non-compliances.

### **3.5 Unanticipated Environmental Impacts or Risks**

56. No any unanticipated environmental impacts and risks have been occurred during the reporting period. Any significant violations of HSE procedures have not been recorded during January -June 2020 reporting period.

## **4 RESULTS OF ENVIRONMENTAL MONITORING**

### **4.1 Overview of Monitoring Conducted during Current Period**

MDF requires the Construction and its Supervision Companies to implement construction activities in accordance with the environmental management plan, according to which SSEMP was developed.

59. Based on the EMP/SSEMP requirements, monitoring measures of projects includes construction site supervision, verification of permits, monitoring of compliance of the contractors' performance and specific monitoring of environmental impacts like noise, dust, soil contamination, landscape structure, construction waste, flora and fauna, water pollution, air emissions and etc. conducted by Contractor's and Engineer's environmental management specialists.
60. As in the reporting period, no large-scale construction works were carried out, that did not require movement of heavy machinery, therefore measurement of air, noise, and biodiversity have not been conducted during the given reporting period.

### **4.2 Trends**

64. N/A

### **4.3 Summary of Monitoring Outcomes**

65. No any recommendation for the additional monitoring.

### **4.4 Material Resources Utilization**

#### **4.4.1 Current Period**

66. N/A

#### **4.4.2 Cumulative Resource Utilization**

67. N/A

### **4.5 Waste Management**

68. Constructions works generate different type wastes starting from garbage, recycle waste, house hold waste and construction and demolition debris, including, small quantities of hazardous waste generated mainly from the vehicle maintenance activities (liquid fuels, lubricants, hydraulic oils, chemicals and etc.).
69. Waste Management Plan was approved by "Saunders Group" Ltd, MDF (Municipal Development Fund) and director of construction contractor "Struijk Group Georgia LLC". There were installed three different waste bins in the temporary waste area. Proper signs

are installed: Hazardous waste, General waste, paper waste, plastic waste, smoking area, temporary hazardous waste area, grievance box, do not burn, WC, keep area clean and etc. Temporary hazardous waste area has been arranged with two layers of Polyethylene. Area is fenced with metal fence and locked.

70. The Construction Company collects hazardous waste at the temporary storage sites and pass it to the licensed operator Sanitary LTD having environmental permit on operation of the hazardous wastes. The contract with "Sanitary" Ltd was signed on 07 April, 2017. Small amount of hazardous waste (liquid fuels, lubricants and contaminated rags).
71. Household waste - Contractor "Struijk Group Georgia" Ltd is conducting household waste segregation: Plastic, Paper and General Waste. On disposal of household waste, a letter was provided by Batumi Municipality on: 29 May, 2017. Based on letter two big waste bins were provided by city municipality and once in a week, waste is taking out from the site by them to the municipal landfill.
72. Household waste as well as plastic and paper is collected in special waste bins and periodically disposed by Batumi Municipal Service on a contractual base. Hazardous waste area is well established with concrete ground, roofing, fencing and drainage system. Hazardous waste such as contaminated soil, solvents, and materials used in oil spill clean-ups and etc. is collected in closed drums and passed to a licensed operator company "Sanitari" Ltd., which has the permit on operation of the hazardous waste.
73. Construction waste is accumulated on construction site in special isolated areas divided by hazardous, domestic and construction waste. Construction Company has signed contract with the companies for waste removal. The waste is being removed from construction site by authorized personal only in accordance of safety regulations. As the construction works were over, construction waste as well as all types of waste accumulated at the camp site was removed (see figures 8, 9). Concrete debris and all kind of construction waste generated during demolition works near the site camp and step by step was taken to the licensed landfill located near the city Batumi. Cleaning the site from the mud was carried out, there are only equipment and containers, which will be used during liability period. During the reporting period, no waste has been generated (see figures 10, 11).

### Camps site



Figure 8



Figure 9



Figure 10



Figure 11

#### 4.5.2 Cumulative Waste Generation

74. N/A.

#### 4.6 Health and Safety

75. Any significant violations of HSE procedures have not been recorded during January - June 2020 reporting period. Along the beach, proper signs are installed and coastal guards and relevant governmental agencies have been notified regarding the safety measures to be applied (see figures 12, 13, 14, 15).

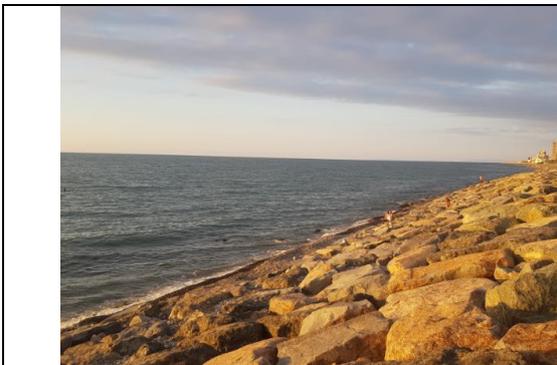


Figure 12

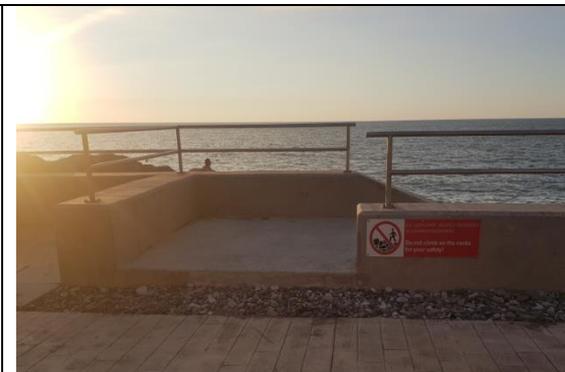


Figure 13



Figure 14



Figure 15

## **Community Health and Safety**

76. Any significant violations of community HSE procedures have not been recorded during January - June 2020 reporting period. During the reporting period, in order to manage community health and safety, proper signs are installed and coastal guards and relevant governmental agencies have been notified regarding the safety measures to be applied.
77. As the civil works were accomplished before COVID 19 outbreaks, no anti-COVID measures were required during this reporting period.

## **Trainings**

78. Taking into consideration specifics of the civil works conducted during the reporting period and the fact that no non-compliances were observed, trainings were not conducted during the given reporting period.

## **Grievance Redress Mechanism**

79. In order to provide a direct channel to the beneficiaries and have their grievances recorded and redressed in an appropriate time frame, Grievance Redress Mechanism was established for Batumi coastal protection project. Grievance journal (logbook) was created and available at construction site as well as at MDF's office. Locals were informed regarding GRM information and its functions. From MDF side, contact person was regularly communicated with beneficiaries and during the reporting period, no complaints were submitted to MDF or Contractor Company from locals or tourists.

## **5 FUNCTIONING OF THE SEMP**

### **5.1 SEMP Review**

85. Construction Contractor “Struijk”, as it was mentioned above, implements environmental monitoring of construction activities in accordance to SSEMP. Based on the EMP/SSEMP requirements, monitoring measures of project includes construction site supervision, verification of permits, monitoring of compliance of the contractors’ performance and specific monitoring of environmental impacts like noise, dust, soil contamination, landscape structure, construction waste, flora and fauna, water pollution, air emissions and etc.
86. Contractor has the ability to fully implement the requirements set out under the SSEMP. Monitoring of SSEMP implementation is conducted by Contractor’s and Engineer’s environmental management specialists.
87. Acting SSEMP is effective as along with project design change MDF ensured to update it as well and mitigation measures set out under the document are appropriate and working as intended. No other alternative better mitigation measures need to be set out, as existing ones are quite effective and comprehensive.

## **6 GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT**

### **6.1 Good Practice**

88. N/A

### **6.2 Opportunities for Improvement**

89. N/A

## **7 SUMMARY AND RECOMMENDATIONS**

### **7.1 Summary**

91. Effective implementation of Environmental Safeguards can be summarized in following aspects:

- IEE was updated along with project design change;
- Construction works were suspended during design change process;
- SSEMP was updated prior to construction works have been started;

### **7.2 Recommendations**

92. Demolishing activities of the camp site is partially implemented and metal and construction waste left at the camp site will be removed and will be reflected in final EMR.

93. Post-Construction Environmental Audit will be conducted by the SC environmental specialist during the next reporting period. The Post-Construction Environmental Audit Report with its checklist will be prepared and attached to the final EMR as an annex. The reports will be developed by the supervision company as soon as the project is completed in the following reporting period. The final EMR with the relevant annexes will be submitted to the ADB safeguard Team.