

Semi-annual Environmental Monitoring Report

Project Number: 3449 - ARM
July-December 2025

Armenia: M6 Vanadzor-Alaverdi-Georgian Border Interstate Road
(Section Km 38+450 – Km 90+191)
(Financed by the ADB)

Prepared by the "Road Department" Fund

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
CEMP	Contractor's Environmental Management Plan
CAP	Corrective Action Plan
DNV	Dust, Noise and Vibration
EMP	Environmental Management Plan
IEE	Initial Environmental Examination
ES	Environmental Specialist
LARP	Land Acquisition and Resettlement Plan
NCN	Non-Compliance Notice
RD	"Road Department" Fund
SSEMP	Site Specific Environmental Management Plan
TMP	Tree Management Plan

1. INTRODUCTION

1.1. Preamble

1. This report represents the Semi-Annual Environmental Monitoring Review (SAEMR) for Rehabilitation and Improvement of the M6 Vanadzor-Alaverdi-Georgian Border Interstate Road (Section Km 38+450 – Km 90+191) (Loan No.: 3449-ARM). The Report covers the time period from **July – December 2025**.

1.2. Headline information

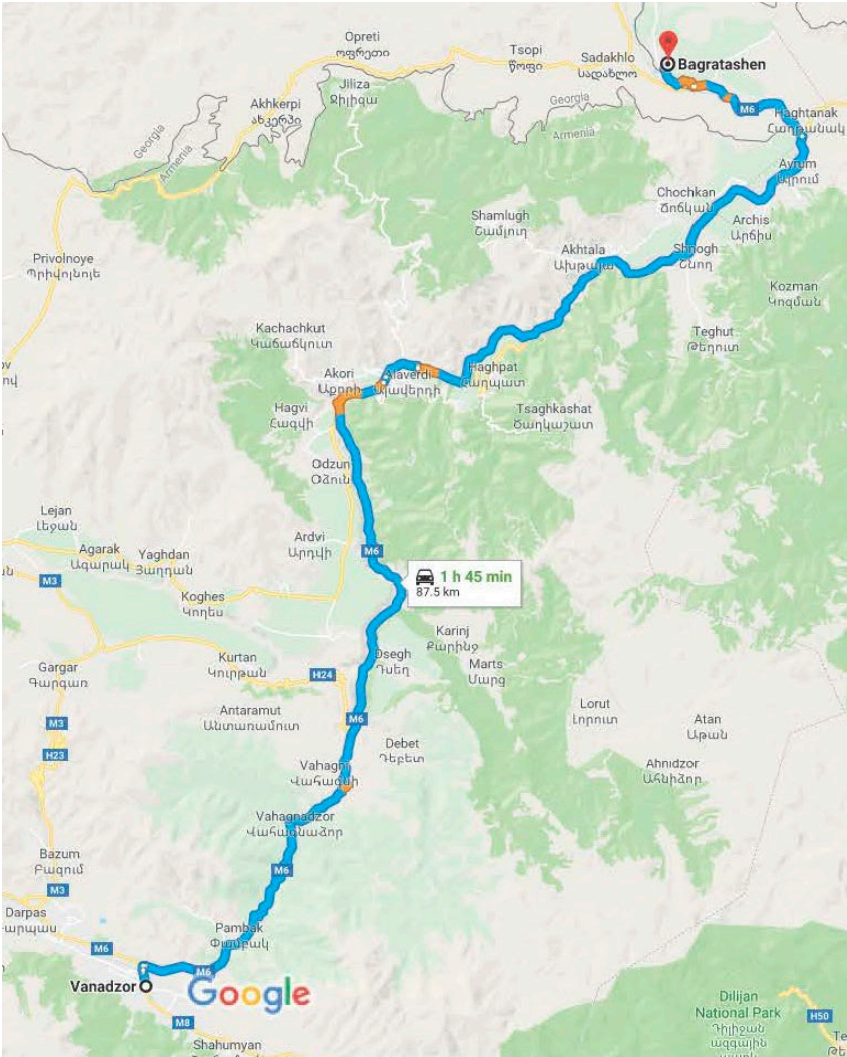
2. As of **December 30, 2025** all road sections are handed over.
3. **Lot 1:** km38+450 - km48+140. The completion rate in Lot 1 is 100%. Defect Notification period was expired (December 4, 2023). Taking-Over Certificate was issued by the Engineer
4. **Lot 2:** km48+140 - km62+300. The completion rate in Lot 2 is 100%. Defect Notification period was expired (March 31, 2024). Taking-Over Certificate was issued by the Engineer
5. **Lot 3:** km62+300 - km90+191. The completion rate in Lot 3 is 100%. Defect Notification period was expired (March 18, 2024). Taking-Over Certificate was issued by the Engineer

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1. Project Description

- 6. The Republic of Armenia (hereinafter called "Borrower") has received financing from the Asian Development Bank (ADB) in a form of loan towards the costs for the Armenia – Georgia Border Regional Road (M6 Vanadzor–Bagratashen) Improvement Project. Actually, ADB has approved a \$50 million loan to improve the transport efficiency and safety of the M6 Highway from Vanadzor in Armenia to the border with Georgia at Bagratashen, one of the strategic roads for internal and external trade. The Government is now giving priority to the rehabilitation of transport infrastructure and the proposed project is meant to promote economic development and support transit traffic, having in mind that the ports on the Black Sea, accessed through Georgia, provide one of the major access routes for this traffic.

Map 2-1: M6 Vanadzor–Alaverdi–Georgian Border Interstate Road Rehabilitation and Improvement Project Area



2.2. Project Contracts, Contact Details and Management

7. **The Employer/Client:** "Road Department" Fund
*Address: Government House 3, Republic Square,
0010 Yerevan, Armenia
Email: info@armroad.am
Tel: (+37412) 20-10-09, 20-10-10
Webpage: www.armroad.am*

8. **Contract for Construction Works:**

The Contractor: Horizon-95 LLC & Oberosler Cav Pietros SRL Joint-Venture
*Address: Amiryan 26, 0002 Yerevan, Armenia
Email: horizon@horizon.am
Tel: (+37410) 53-88-56, 53-88-52
Webpage: www.horizon.am*

Lot 1 Civil works for rehabilitation/reconstruction of the existing M6
-Vanadzor-Alaverdi -Georgian border interstate road (km 38
+450 -Km 48 +140)

Date of Signature: 30 November 2017

Commencement Date: May 29, 2018

Time for Completion: 900 days + 737 days

Date of Completion: November 21, 2022

Defects Notification Period/DNP: 365 days

DNP Completion Date: December 4, 2023

The Contractor: Joint Venture: " Black Sea Group & AAB Project "
*Address: 39/1a Arabkir str., 0037 Yerevan, Armenia
Email : info@aab.am
Tel : (+37410) 25-92-59
Webpage: www.aabconstruction.am*

Lot 2 Civil works for rehabilitation/reconstruction of the existing M6
-Vanadzor-Alaverdi -Georgian border interstate road (km 48
+140 -Km -Km 62 +300)

Date of Signature: 30 November 2017

Commencement Date: May 29, 2018

Time for Completion: 900 days + 706 days (+130 days only for installation of rockfall
protection nets at km57+750-km57+970)

Date of Completion: March 31, 2023

Defects Notification Period/DNP: 365 days

DNP Completion Date: March 31, 2024

The Contractor: SUARDI JSC Armenian Branch
*Address: 2nd Industrial str., №24 Transport Enterprise,
Abovyan, Armenia
Email: mauro.dorazio@suardispa.am
Tel: (+37499) 55-14-69
Webpage: www.suardispa.it*

Lot 3 Civil works for rehabilitation/reconstruction of the existing
M6 -Vanadzor-Alaverdi -Georgian border interstate road (km
62 + 300 -Km 90 +191)

Date of Signature: 30 November 2017
Commencement Date: May 29, 2018
Time for Completion: 900 days + 836 days
Date of Completion: February 28, 2023
Defects Notification Period: 365 days
DNP Completion Date: March 18, 2024

9. **Contract for Consultancy Services:**

Engineer: Joint Venture Safege SAS and Hill International N.V.
Address: 1704 Hakhpat Kisakayaran, Alaverdi, Armenia
Email: info@safegehill-m6.am
Tel: (+37455) 55 08 30

Contract Signed: April 03, 2018
Commencement: May 03, 2018
Date/Effective Date:
Duration of the Services: 49.5 months
Date of Completion: April 30, 2024
Defect Notification Period 12 months

2.2.1. Safeguards Staff of RD

10. The Project Safeguards Management activities are undertaken by Environmental Impact Specialist and Social Specialists:
11. Mrs. Inesa Zargaryan - Environmental Impact Specialist is responsible for environmental inspection, day to day supervision of EMPs (CEMP, SSEMPs) implementation and reporting to EM and Project Manager.
12. Mrs. Shushan Kocharyan – Social Specialist is responsible for social inspection, day to day supervision of LARPs/CAPs implementation and reporting to SM.

2.2.2. The Safeguards Staff of the Engineer

13. The Environmental Safeguards Specialists of the Supervision Consultant/Engineer were not mobilized during this reporting period

2.2.3. The Contractor's Safeguards Staff

14. The Contractor's Environmental Units were not mobilized during this reporting period.

2.3. Project Activities during current reporting period

15. No activities.

2.4. Description of Any Changes to Project Design

16. There were no changes in the project design during the reporting period

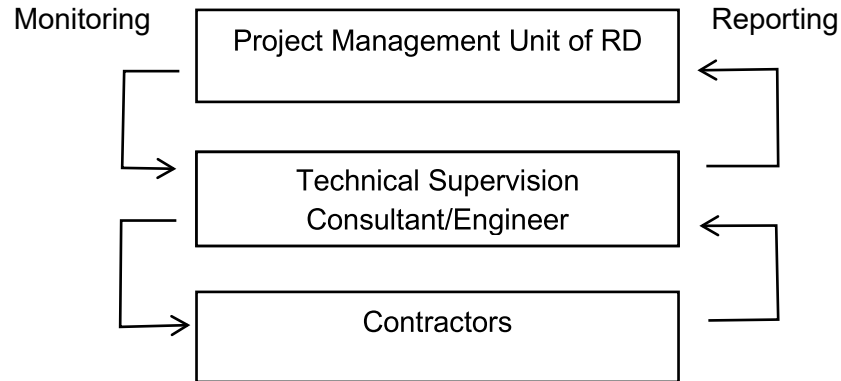
2.5. Description of Any Changes to Agreed Construction methods

17. No changes.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1. General Description of Environmental Safeguards Activities

18. ADB is implementing monitoring of safeguard compliance; supervision of the project, initiating and reviewing LARP/LARF/EIA/IEE, and providing clearance to contract awards and signing/initiation of civil works to the Project.
19. The Road Department is implementing day-to-day management of project execution. The RD includes an Environmental Safeguards staff whose responsibilities include the management of all environmental aspects of the project.
20. The Engineer is providing Technical Assistance to the RD in the management and reporting of the project. Environmental Specialist of the Engineer is responsible for supervising the construction works in relation to environmental and archaeological impact and, in particular, for supervising and reporting on the Contractor's performance in the implementation of the EMP.
21. Contractors are implementing construction works. Every contractor has Environmental specialist responsible for preparation and implementation CEMP and SEMP, monitoring of the construction activities and reporting.



3.2. Site Audits

22. During the reporting period regular audit site visits by contractors' environmental specialists were not conducted.
23. During the reporting period regular audit site visits by the Engineer's environmental specialist were not conducted.
24. During the reporting period the RD environmental specialist was not conducted audit site visits.

3.3. Issue Tracking

25. No issues

3.4. Trends

26. All issues were closed.

3.5. Unanticipated Environmental Impacts or Risks

27. No unanticipated environmental impacts and risks were identified during the current period.

3.6. Vibration Monitoring

28. Pre-Construction Inventory of Buildings and Vibration Monitoring Reports were developed by all three Contractors and approved by the Engineer.

29. The Vibration Monitoring Consultant (VMC or Georisk Scientific Research CJSC) was hired by the Engineer to conduct vibration assessment during the works. During the reporting period, no vibration assessment was conducted by the VMC, since the assessment at all identified sensitive locations has been completed during the previous periods.

30. ATMS Solutions LLC was responsible for DNV routine assessment in three lots. During the reporting period the Contractors didn't conduct DNV instrumental measurements.

3.7. GRM Tracking

31. No grievances were registered during the reporting period.

3.8. Tree Planting

32. **Lot 1:** The TMP final status is fully compliant.

33. **Lot 2:** The TMP final status is fully compliant.

34. **Lot 3:** The TMP final status is fully compliant.

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1. Overview of monitoring conducted during the reporting period

- 35. During the reporting period instrumented measurements and monitoring of environmental parameters of air quality, noise and vibration were not undertaken.
- 36. During the reporting period no Water Quality Assessment was conducted.

4.2. Trends

No trends.

4.3. Summary of monitoring outcomes

- 37. No NCN were submitted to the Contractors during the reporting period.

4.4. Waste Management

- 38. **Lot 1-3:** No excavated materials were generated during the reporting period.

4.5. Health and Safety

4.5.1. Community Health and Safety

- 39. No issues were observed during the reporting period.

4.5.2. Workers Safety and Health

- 40. No accidents were recorded during the reporting period.

4.6. Trainings

- 41. No trainings were conducted during the reporting period.

4.7. Archeological Issue

- 42. No archeological finds were found during the reporting period.

5. FUNCTIONS OF THE SEMP

5.1. SEMP review

43. **Lot 1, 2 and 3:** No SEMPs were submitted during the reporting period.

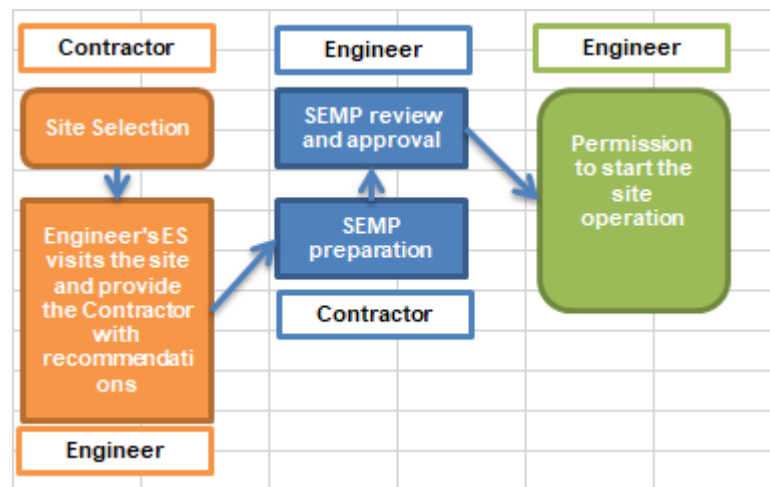
6. GOOD PRACTICE AND OPPORTUNITIES FOR IMPROVEMENT

6.1. Good Practice

6.1.1. Dumping Site Approval Procedure

44. RD adopted a procedure concerning a dumping site selection and SEMP approval as follows:
- Contractor selects the site for topsoil stockpiling or dumping of excavated material;
 - Engineer's ES visits the site and provide Contractor with site evaluation report with identified sensitive receptors and recommendations on the site use. Archaeological specialist is also involved to give their conclusion concerning any potential historical and cultural object (if any);
 - Contractor secures the site and prepares SEMP based on the findings of evaluation report and submits for Engineer's approval;
 - The Engineer's ES reviews the SEMP and issues an approval;
 - Then Contractor is permitted to start the site operation.
45. The procedure allows to assess the site and identify the sensitive receptors in early stage of the procedure and by this way accelerates the further works related to SEMP preparation and approval.

Figure 6-1: Dumping Site Selection and SEMP Approval Procedure



46. This practice was not implemented during the reporting period, since no new dumping sites were opened.

6.1.2. Grievance Registration Procedure

47. The Engineer adopted a procedure concerning the registration of Grievances. The main features of the procedure are:
- The table or registration of the grievances is located in the Google Drive and all parties (Client, Engineer and Contractors) have access to the folder;
 - The Grievance Registration Form is also available in the drive;
 - Each case shall be registered in the registration table as well as a form shall be filled up.
 - A folder shall be created in the name of the applicant and the affected community and the fill up form together with all related information shall be uploaded to the folder.
48. The procedure allows all parties to upload all files related to a case to the same folder and effectively share the information between the parties.

6.2. Opportunities for improvement

49. No opportunities.

7. SUMMARY AND RECOMMENDATIONS

7.1. Summary

50. In order to ensure the environmental performance, it was supervised that the implementation of construction activities in general meets CEMP requirements which is prepared in accordance with IEE (July 2016), ADB Environmental Policy and RA legislation.
51. During the reporting period no DNV assessment was conducted.
52. During the reporting period no vibration assessment was conducted by the Vibration Monitoring Consultant.
53. No public consultation meeting was held during the reporting period.
54. No grievances were registered during the reporting period.
55. All dumping sites for three lots were handed over.
56. No training was conducted during the reporting period.
57. No historical finds were found during the reporting period.
58. No blasting works were implemented during the reporting period.
59. No NCNs were submitted by Engineer during the reporting period.
60. As a result of the flooding of the Debed River on May 26, certain sections of the M6 road were damaged. No tree planting sites were damaged by the flood.
61. A post-disaster needs assessment (PDNA), conducted in cooperation with the United Nations in the declared disaster zones affected by the floods, has been completed and disclosed on the UNDP website: <https://www.undp.org/armenia/publications/armenia-floods-may-2024-post-disaster-needs-assessment> The assessment included a multi-sectoral study and evaluation of the damages caused across various sectors of the economy (including infrastructure), as well as impacts on the social and environmental spheres.
62. ADB has signed a contract with Geoinfo LLC to conduct hydrological surveys of the Debed River. The hydrological study report was approved.
63. A contract for the detailed design for rehabilitation of the M6 road was signed with the joint venture between BERNARD Group LLC (Austria) and Aktes BERNARD LLC (Austria) on June 20, 2023. The works commenced on August 4, 2023. The necessary studies and surveys for the preparation of the project has been completed. The reports were submitted and approved. The detailed design package of the M6 rehabilitation project was submitted to RDF and ADB for comments.
64. The Consultant also developed the Project's Initial Environmental Examination (IEE), which was submitted to RDF and ADB for comments.
65. Public discussions were held in Alaverdi community, Tumanjan and Ajrum settlements of Lori and Tavush regions on December 9, 2025. The minutes of the meeting will be included in IEE.

7.2. Non-compliances

N/A

7.3. Post-Construction Audit

66. In November 2023 the post construction audit was conducted in 3 Lots by the Engineer to check the compliance of Project EH&S status.
67. **Lot 1** The EH&S final status is Fully compliant.
68. **Lot 2** The EH&S final status is Fully compliant.

69. **Lot 3** The EH&S final status is Fully compliant.

7.4. Recommendations

70. No recommendations.

7.5 Rehabilitation of Pushkin and Dilijan tunnels

68. The M6 Project also includes the preparation of rehabilitation projects for the Pushkin and Dilijan tunnels.

69. A contract for the detailed design for rehabilitation of the Dilijan and Pushkin tunnels was signed with the joint venture between BERNARD Group LLC (Austria) and Aktes BERNARD LLC (Austria) on June 20, 2023. The works commenced on August 4, 2023.

The necessary studies and surveys for the preparation of the tunnel rehabilitation projects have been completed. The corresponding reports were submitted and approved.

The final electronic version of the Pushkin tunnel rehabilitation project was submitted to ADB for comments.

The Consultant also developed the Project's Initial Environmental Examination (IEE), which was submitted to ADB for comments. IEE was approved in November 2025.

70. A consultation and review mission for the proposed Project was conducted from 17 to 28 November 2025. The objective of the mission was discuss the status and progress of the detailed designs of the M6, Dilijan and Pushkin tunnels.

As part of the mission, specialists from the ADB and the RDF visited the Dilijan Tunnel and M6 road sites. Discussions were held at the offices of the RA Ministry of Territorial Administration and Infrastructure, RDF, and ADB. At the conclusion of these meetings, an Aide-Mémoire was signed.

71. For the Dilijan tunnel, a decision was made to develop a new tunnel construction project instead of pursuing rehabilitation. This decision requires additional studies. Following the approval of the contract amendments by the Project Management Board, and in agreement with the ADB, the design consultant commenced further research and design work during the reporting period. The necessary environmental surveys and studies for the preparation of the tunnel project have been completed. The reports were submitted and approved. In December, the consultant submitted the detailed design package for the construction of the new Dilijan tunnel, including the Environmental and Impact Assessment (EIA).

7.6 Action Plan

- Review and approval of design documents and IEE for the M6 road.
- Review and approval of the Dilijan Tunnel design documents and EIA.
- Participate in the second public consultation organized by the Consultant.

