

Environmental Monitoring Report

Semestral Report
July 2016

ARM: Sustainable Urban Development Investment Program – Tranche 2

Prepared by the Yerevan Municipality for the Asian Development Bank.

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Environmental Monitoring Report

Bi-annual Report

January-June 2016

ARM: Sustainable Urban Development Investment Program, Tranche 2

Project Number: 42417-033

Loan Number: L3293-ARM

Prepared: July 2016

Prepared by the Yerevan Municipality

Yerevan Project Implementation Unit

ABBREVIATIONS

ADB	Asian Development Bank
AP	affected people
DESC	detailed engineering and construction supervision consultant
EARF	environmental assessment and review framework
EIA	environmental impact assessment
EMP	environmental management plan
EMR	environmental Monitoring Report
ES	environmental specialist
GRM	grievance redress mechanism
IEE	initial environmental examination
MNP	Ministry of Nature Protection
NPE	nature protection expertise
PIU	project implementation unit
PPMS	project performance monitoring system
REA	rapid environmental assessment
RA	Republic of Armenia
RE	resident engineer
SEMP	site-specific environmental management plan
SNCO	state non-commercial organization
SPS (2009)	Safeguards Policy Statement (2009)
SUDIP	Sustainable Urban Development Investment Program
YM	Yerevan Municipality

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I. Introduction

1. This bi-annual environmental monitoring report covers the time period of January-June 2016. The report was prepared by PIU ES.

A. Project Description

2. The Government of Armenia received a loan in October of 2015 from ADB to finance SUDIP, Tranche 2. The main objective of the Project is to complete the missing links of the Yerevan bypass: Argavand - Shirak road link Tender 3, Davitashen-Ashtarak road link Tender 4 and Babajanyan – Ashtarak Tender 5. The two captioned road projects will help to divert through-traffic around the city center.

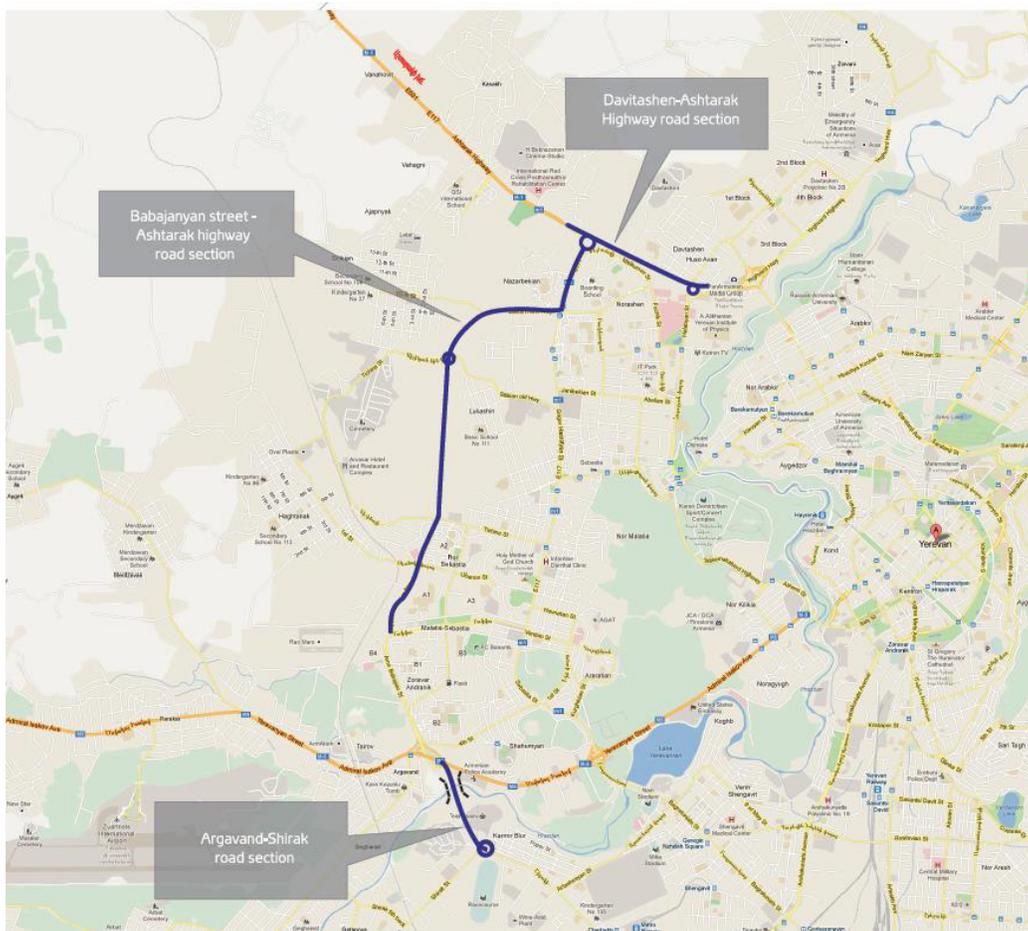


Figure 1: Map showing the Tranche 2 location

B. Project Progress

a. Argavand-Shirak street road link Tender 3

3. On 16 March 2016 SUDIP signed a contract with Serenissima Construction S.p.A., (Italy) Contractor for Argavand-Shirak road link Tender 3. The works comprises of the construction of a new 257 m length bridge over the River Hrazdan and approximately 1.3km in length new dual carriageway in the Karmir Blur archeological area. The duration of the construction will be 24 months. The commencement of construction mobilization was provided for the Argavand-Shirak street Tender 3 on 31 May 2016 but construction works will started in the beginning of the next reporting period.



Figure 2: Map showing Tender 3 for the Argavand-Shirak street road link location

b. Davitashen-Ashtarak highway Tender 4

4. The bidding documents including IEE for Davitashen-Ashtarak highway Tender 4 is in the tender process.



Figure 3: Map showing Tender 4 for the Davitashen-Ashtarak highway location

c. Babajanyan-Ashtarak highway Tender 5

5. The preparation of the IEE for Babajanyan-Ashtarak highway Tender 5 is in the finalization stage based on ADB comment. The Final IEE will be submitted to ADB for approval in the beginning of the next reporting period.



Figure 4: Map showing Tender 5 for the Babajanyan-Ashtarak highway location

C. Institutional Arrangements of the Project

6. The major tasks of the PIU ES are to carry out the overall environmental management ensuring full compliance of the Project implementation with Armenian legislation and ADB SPS (2009). The ES serves as a liaison between the safeguard team of DESC-Egis International Company, YM, the executing agency, MNP of the RA and Ministry of Culture of the RA, project affected people, ADB and develops and maintains direct relationships with government authorities, with the help of DESC ES organizes and conducts public consultations, etc. PIU ES Ruzanna Voskanyan manages all construction site activities related to the environmental issues and PIU land acquisition and resettlement specialist Sirak Gyulbudaghyan manages all resettlement and social aspects issues.

7. DESC environmental management team is responsible for the preparation of environmental assessment of Tranche 2 documents and is responsible for environmental supervision of construction works for Argavand-Shirak street road link Tender 3. Edita Vardgesyan is supervision ES of construction works of New Shirak street – Artashat highway Tender 3. Hasmik Aleksayan supervision social specialist is responsible for all aspects of the social issues.

8. The Tender 3 Contractor's ES Son Amirkhanyan is responsible for preparation and implementation of the SEMP in accordance with EIA/EMP, monitoring of the construction environmental and social activities. Contractor's ES reports to DESC ES after which the DESC ES reports to PIU ES.

II. Environmental Management

A. Environmental Safeguards Program

9. The implementation of the environmental safeguards program started in January 2013 and was in progress during the reporting period.

10. Weekly environmental monitoring checklist, templates of SEMP, monthly and weekly reports for Contractor were prepared for Tender 3 in close collaboration with PIU ES, DESC international and local ESs.

11. Before commencement of the construction, the draft version of project specific SEMP for Argavand-Shirak road link Tender 3 was developed by the Contractor based on the EIA and EMP. Contractor submitted SEMP on 27 June 2016 which is under revision, official submission is awaited shortly.

B. Archaeological Works Program Tender 3

12. The contractor was given possession to the construction site except the area of Karmir Blur (km 1+060 to km 1+280). The archaeological investigation in this area is already finished but Yerevan Municipality should get confirmation on completion of archeological investigation from the Ministry of Culture RA.

C. Grievance Redress Mechanism and Public Consultation

13. For feedback, concerns and complaints from the APs, a GRM, inspired by the problem solving function of ADB's guidelines and policies should be maintained for the duration of the Project. The GRM is intended to assist aggrieved persons in lodging their complaints and to describe the mechanism designed to redress their grievances in a timely and effective manner. The parties potentially involved are: the complainants, Contractor, DESC, PIU, EA, NGOs, and the courts. The details of the GRM operation could be found in EIA for Tender 3 and Davitashen-Ashtarak road links¹.

14. A proper GRM has been established to meet environmental related concerns of affected people in Argavand-Shirak street road link Tender 3. Contractor of Argavand-Shirak road link Tender 3 prepared the SEMP based on approved EIA and EMP in which GRM was included in accordance with EIA and EMP.

15. Public consultation organized by Contractor's EHSS under the Argavand-Shirak road link Tender 3 was held on 24 June 2016. General social and environmental issues, GRM had been discussed with APs. No environment related concerns were raised by the participants.

16. Public hearing for Babajanyan-Ashtarak road link was organized by PIU in the scope of the IEE Tranche 2 to meet requirements of Armenian legislation and ADB SPS (2009) for Tranche 2 on 25 February 2016. An environmental issue was raised by the participants: local resident hesitated that the amount of affected trees is correctly calculated as the figure seemed to be too small. PIU ES explained that the mentioned 274 trees are Ajapnyak community trees. All the private trees are treated within the LARP framework.

D. Meetings and Communication

17. During the reporting period environmental safeguards issues were regularly discussed during the joint meetings with YM, PIU and DESC. Particularly the following issues were repeatedly discussed: preparation and finalization of the IEEs for Tranche 2 approval process and related issues.

¹ EIA/EMP for Tender 3 H.2. Grievance Redress Mechanism, page 47 of 62 and in EIA for Davitashen-Ashtarak road link Tender 4 H.2. Grievance Redress Mechanism, page 45 of 61.

18. Regular meetings and discussions within PIU, DESC and the Contractor's ES took place during the reporting period. Meetings and discussions were held for Tender 3 to prepare the SEMP and templets.

E. Awareness Raising and Environmental Training

19. The awareness raising and environmental orientation program was developed in the scope of capacity building in the EIAs/IEEs and EMPs for Tender 3 and Davitashen-Ashtarak highway road links. According to the program the Contractor should be responsible to arrange general orientation session about project activities and environmental awareness. During this session, all the people working on the site should focus their efforts to protect environment and insure the safe handling of the social issues during construction period in accordance with ADB SPS (2009), Armenian environmental legislation, EIA and EMP. Further details about the awareness raising and environmental orientation program could be found in final EIA and EMP Tender 3 and Davitashen-Ashtarak road links Tender 4².

20. An awareness raising training session was held by Pierre Bourguignon, DESC International Environmental Manager on Health & Safety on 21 June 2016 and on Environment on 22 June 2016. Pierre Bourguignon explained the topics via PP Presentations: "Health & Safety Management" and "Environmental Management". Also Boris Gasparyan presented the implementation of the archeological mitigation measures in the sensitive areas of the right of way during the construction in Karmir blur section. Contractor's and sub-contractor's key staff including environmental, social specialists and engineers were also invited (list of participants is attached in Annex 1).

III. Environmental Monitoring

A. Environmental Monitoring Program

21. Environmental monitoring program with a view to ensure compliance with the ADB's environmental requirements and all applicable environmental laws, regulations and standards for environmental protection of RA has been developed in the scope of IEEs/EIAs and EMPs for Tranche 2. The EIAs and EMPs contain monitoring activities to be considered during project implementation: management during engineering design phase, preconstruction, construction through the operation

² EIA/EMP for Tender 3, I.3. Implementation arrangement, c) Awareness raising and environmental training, page 58 of 60; Annex 4, Table 1, para 7, page 7 of 36 and EIA/EMP for Davitashen-Ashtarak highway road link Tender 4 I.3. Implementation arrangement, c) Awareness raising and environmental Training, page 55 of 61; Annex 3, Table 1, para 6, page 5 of 31.

and maintenance periods. Details of monitoring activities and reporting are presented in approved final EIAs and EMPs for Tender 3 and Davitashen-Ashtarak highway Tender 4³.

22. On-site monitoring has not been carried out since no construction activities were implemented during the reporting period for Tender 3.

B. Non-compliance Notices

23. N/A for the reporting period

C. Corrective Action Plans

36. N/A for the reporting period

IV. Findings and Recommendations

24. Monitor Construction works of Tender 3 based on SEMP.

V. Future program

N	Action	Time frame	Responsible
1.	Finalize the IEE for Babajanyan-Ashtarak road link for Tranche 2	September 2016	PIU, DESC
2.	Finalization of SEMP	July 2016	PIU, DESC, Contractor
3.	Public consultations	On July-October 2016	PIU, DESC
4.	Regular monitoring visits of construction works according to the EMP/SEMP for Tender 3	Once a month/once a week	PIU/DESC
5.	Review of the environmental monitoring data on dust, noise, water quality, vibration and NO/NO2/SO2 for Tender 3	Every month /twice a month	PIU/DESC
6.	Review and approval of the construction updated SEMP for Tender 3 (if needed)	Next reporting period (July-December 2016)	PIU, DESC
7.	Contractors staff safeguard training for Tender 3	During reporting period 2016	DESC, Contractor
8.	Review and addressing the GRM for Tender 3	End of every month/ every week	PIU/DESC
9.	Other routine issues	Upon the need	PIU, DESC, Contractor
10.	Reporting on environmental safeguards	Weekly, Monthly, Quarterly Bi-annual	PIU, DESC, Contractor

³ EIA/EMP for Tender 3, I. Environmental Management Plan,I.2 Monitoring page 56 of 62; Annex 4 Table 2,page 28 of 36 and EIA/EMP for Tender 4, I. Environmental Management Plan,I.2 Monitoring page 54 of 61; Annex 3 Table 2, page 23 of 31.

VI. Annexes

A. Annex 1: List of EHS training participants held on 21, 22 June 2016

Sustainable Urban Development Investment Program, Tranche 1 & 2

ՔԱՂԱՔԱՑԻՆ ԿԱՅՈՒՆ ԶԱՐԳԱՑՄԱՆ ՆԵՐԴՐՈՒՄԱՅԻՆ ԾՐԱԳԻՐ ՏՐԱՆՇ 1 & 2

Environmental, Health and Safety training attendance list held on 21 June 2016

Քաղաքապետարան, առողջության և անվտանգության դաշնի քաղաքացի մասնակիցների ցանկ, 21 Հունիս 2016

N	Անուն Ազգանուն/ Name Surname	Պաշտոն/ position	Էլ. Հասցի e-mail	Ստորագրություն signature
1	Edite Vardgesyan	HSE EGIS	editavard@gmail.com	
2	Sos Amizahanyan	EHSS	amizsos2002@gmail.com	
3	Bozia Garaganyan	AS	boziagaravi@tcalas.menig.am	
4	Davit Harutyunyan	EHSS	harutyunyan@yahoo.com	
5	Hovhannes Mavsisyan	Quality Engineer	hovmavsisyan@bk.ru	
6	Sukiasyan Kerer	Site supervisor	k.sukiasyan@icloud.com	
7	Harutik Alibekyan	EGIS Supervisor	harutik.alibekyan@hotmail.com	
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11	Azram Vordanyan	EGIS JRE T2	azdazam@mail.ru	
12	Գրիգորյան Գրիգոր	ՍԵՎ. ՍԵՂՆԵՐ	Grigoryan G.G. P.L.	
13	Ruzanna Voskanyan	ՅՅ ՄԻՈՒ ԷՏ	ruzanna.voskanyan@yandex.ru	
14	Tigran Galstyan	EGIS. RE.assistant	tigrangalstyan79@gmail.com	

Sustainable Urban Development Investment Program Tranche 1 & 2

ՔԱՂԱՔԱՅԻՆ ԿԱՅՈՒՆ ԶԱՐԳԱՑՄԱՆ ՆԵՐԴՐՈՒՄԱՅԻՆ ԾՐԱԳԻՐ ՏՐԱՆՇ 1 & 2

Environmental, Health & Safety training attendance list held on 22 June 2016

Բնապահպանական, առողջության և անվտանգության դասընթացի մասնակիցների ցանկ, 22 Հունիս 2016

N	Անուն Ազգանուն/ Name Surname	Պաշտոն/position	Էլ. Հասցե /email	Ստորագրություն signature
1	Pierre BOURGIGNON	HSE Manager	pierre.bourgnone@equite	
2	Edita Vardanyan	HSE EGIS	editavard@gmail.com	
3	Sos Amirkhanyan	EHSS	amir2sos2002@gmail.com	
4	Գրիգորյան Էդուարդ	ԱՌԿ. ԵԶՋԱԿ	Edouard@e.p.f.	
5	Վահ Խարտյան	EHSS	hartutyanyan-davit@yandex	
5	Հասմի Ալեքսանյան	EGIS	hasmi-alekanyan@hotmail.com	
7	Արամ Վարդանյան	EGIS, DRE	ar2002ame@mail.ru	
8	Նոնա Լավրյան	Value and Social specialist	nonalavryan@mail.ru	
8	Հառոբ Քեռոսյան	EGIS, DRE	hacrobpetrosyan62@gmail.com	
10	Ruzanna Vardanyan	PIU ES	ruzanne.vardanyan@yandex	
10	Hovhannes Norisyan	quality engineer	hovhannovisyan@bi20	
12	JENS ROEMER	RE/TL T2	roemer.jens@ychoe.com	
13	Tigran Galstyan	Egis RE assistant	tigrangalstyan19@gmail.com	
14	Armine Yedigaryan	ADB, env. consultant	aredigaryan@yandex.ru	

**B. Annex 2: Template of weekly environmental monitoring checklist
MITIGATION COMPLIANCE & INSPECTION MONITORING Report**

Project: SUDIP – Tranche 2, Tender 3, “Construction of Road Links of the Yerevan Western Ring Road”.

Implementing Agency: _____

Scope of Inspection: Argavand-Shirak road link Tender 3

Contractor: Serenissima Construction S.p.A.

WORK SITE:General					
Environmental management: environmental team, health& safety, emergency, trainings, grievance redress mechanism					
Construction Activity		Mitigation Measure (as per EMP/SEMP)	Engineer's corrective action request available	Mitigation/ corrective action Implemented Yes / No / N/A	Comments
<u>Environmental team</u>					
All activities	1.	Person in charge on environmental management is appointed and is present on-site.			
All activities	2.	Person in charge on H&S management is appointed and is present on-site			
<u>Health& safety</u>					
All activities	3.	Warning signs and exclusion barriers erected around work site areas.			
All activities	4.	Access of strangers and outsiders is excluded.			
All activities	5.	Workers are provided with and are using the uniform, applicable safety/protection equipment for site conditions			
All activities	6.	Unsafe practices on-site are excluded			
Works on bridge	7.	Safety on the bridge is ensured			
All activities	8.	Worker’s health checks implemented			
All activities	9.	Sanitary-hygienic conditions for workers are provided: drinking and washing water supply, mealtime utilities, toilets, rest time, etc.			
All activities	10.	First aid kit is available on-site and is accessible to all workers.			

All activities	11.	Fire extinguisher available			
All activities	12.	Safety of the public is ensured			
<u>Emergency Response Plan</u>					
All activities	13.	Person in charge on emergency is appointed and is present on-site			
All activities	14.	Copy of ERP and emergency contact list are available, updated and posted in a visible place at all work sites.			
All activities	15.	Accident report maintained			
All activities	16.	Damage of utilities and/or other structures managed.			
<u>Trainings and orientation courses</u>					
All activities	17.	Workers briefed on CEMP/ SEMP at time of starting employment.			
All activities	18.	Workers briefed on ERP at time of starting employment.			
All activities	19.	Job-specific environmental and safety training for workers provided			
<u>Work site cleanliness</u>					
All activities	20.	The work site kept clean from debris, garbage, etc.			
All activities	21.	Bins for garbage collection are installed			
All activities using machinery	22.	Tires of trucks are cleaned before entering city roads and roads are not dirtied by mud and other construction related dirt			
All activities using liquid materials	23.	Spillages are managed properly			
<u>Public communication and grievance redress mechanism: environmental issues</u>					
All activities	24.	Meeting with community members on construction activities, environmental impacts and mitigation measures held			
All activities	25.	Register of complaints maintained, Complaints observed during the last visit addressed			

		accumulation sites agreed with Engineer.			
Earth works	42.	Remains of materials and previously detected construction waste is hauled from work site			
Removal of existing asphalt pavement	43.	Hazardous waste is managed in accordance with SEMP			
Earth works, demolition of structures,	44.	Non-hazardous waste (excavation material, rocks, concrete and metallic parts, etc.) is managed in accordance with SEMP.			
Dismantling of utilities	45.	Utilities are dismantled and managed in accordance with SEMP			
Use of chemicals, fuel, lubricants, etc. while all activities	46.	Leakages and liquid waste is managed in accordance with SEMP.			
<u>Contractor's facilities and equipment</u>					
Contractor's camp establishment	47.	Site Management Plan for the Camp is available.			
Parking of machinery	48.	Machinery is parked in approved area			
Mobile house	49.	Mobile house is installed in approved area			
Storage of materials	50.	Materials are stored in regular heaps and in approved areas			
Contractor's facilities	51.	Contractor's facilities are established according to SEMP			
<u>Archaeological program</u>					
All activities	52.	Archaeologist is on-site supervising the civil works			
All activities	53.	Workers trained on archaeological chance find procedures			
All activities	54.	Archaeological chance finds discovered			
All activities	55.	Archaeologically sensitive area is undisturbed			