

Validation Report
January 2021

Azerbaijan: Road Network Development Program (Tranche 3)

Reference Number: PVR-737
Project Number: 39176-043
MFF Number: 0014
Loan Number: 2831



Raising development impact through evaluation

ABBREVIATIONS

AAY	–	Azeravtoyol State Agency
ADB	–	Asian Development Bank
ARS	–	Azer Road Service Open Joint-Stock Company
DMF	–	design and monitoring framework
EIRR	–	economic internal rate of return
IED	–	Independent Evaluation Department
IRI	–	international roughness index
km	–	kilometer
MFF	–	multitranche financing facility
MOT	–	Ministry of Transport
PCR	–	project completion report
PFR	–	periodic financing request
PIU	–	project implementation unit
RRP	–	report and recommendation of the President

NOTE

In this report, “\$” refers to United States dollars.

Director General	Marvin Taylor-Dormond, Independent Evaluation Department (IED)
Deputy Director General	Veronique Salze-Lozac'h, IED
Director	Nathan Subramaniam, Sector and Project Division (IESP)
Team Leader	Toshiyuki Yokota, Principal Evaluation Specialist, IESP

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PROGRAM BASIC DATA

Project number	39176-043	PCR circulation date	14 August 2020	
Loan number	2831	PCR validation date	Jan 2021	
Program name	Road Network Development Program (Tranche 3)			
Sector and subsector	Transport	Road transport (non-urban)		
Strategic agenda	Regional integration Inclusive economic growth			
Safeguard categories	Environment		A	
	Involuntary resettlement		A	
	Indigenous peoples		C	
Country	Republic of Azerbaijan		Approved (\$ million)	Actual (\$ million)
ADB financing (\$ million)	ADF:	Total project cost	250.00	219.84
	OCR: 200.00	Loan	200.00	186.57
		Borrower	50.00	33.27
		Beneficiaries	0.00	0.00
		Others	0.00	0.00
Cofinancier	–	Total cofinancing	0.00	0.00
Approval date	14 Dec 2011	Effectiveness date	26 Aug 2012	23 Oct 2012
Signing date	27 Jul 2012	Loan closing date Financial closing date	31 Dec 2014	28 Sep 2017 12 Jan 2018
Project Officers	B. Bathula Z. Wu F. Huseynbeyov	Location ADB HQ ADB HQ Azerbaijan Resident Mission	From Oct 2012 Feb 2015 Dec 2016	To Jan 2015 Nov 2016 Sep 2018
IED review Director Team Leader	N. Subramaniam, IESP T. Yokota, Principal Evaluation Specialist, IESP*			

ADB = Asian Development Bank, ADF = Asian Development Fund, HQ = headquarters, IED = Independent Evaluation Department, IESP = Sector and Project Division, OCR = ordinary capital resources, PCR = project completion report.

*Team members: H. Hettige (Quality reviewer), F. De Guzman (Senior Evaluation Officer), P. Choynowski and G. Morgan (Consultants).

I. PROJECT DESCRIPTION

A. Rationale

1. Azerbaijan's transport sector played an important role in the national economy, accounting for around 6% of the country's gross domestic product in 2005. Roads were the dominant mode of passenger transport and the second major mode for freight transport after rail. After the collapse of the Soviet Union, most roads in Azerbaijan were in poor condition because of inadequate funding for road maintenance and poor management of weight control. As a result, a large part of the road network needed reconstruction or rehabilitation. Poor road conditions resulted in high transport costs, long travel time, and danger to public safety.

2. To assist the Government of Azerbaijan in meeting these challenges, the Asian Development Bank (ADB) approved a \$500 million multitranche financing facility (MFF) for the Road Network Development Program in September 2007.¹ Project 1 of the MFF was to develop

¹ ADB. 2007. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility to the Republic of Azerbaijan for the Road Network Development Program*. Manila.

the Masalli–Astara section² of the north–south highway, while project 2 was to rehabilitate the Ganja bypass road. However, project 1 was not ready for implementation because of delays in procuring civil works contracts for sections B and C, and land acquisition issues. Therefore, a change in scope was approved to remove sections B and C from project 1.³ In August 2011, ADB received the third periodic financing request (PFR) from the government amounting to \$200 million to finance improvement of project 3's sections B and C of the Masalli–Astara road.⁴

3. Project 3 road was a high government priority and was included in the Road Network Development Program for 2006–2015 under the Transport Sector Development Strategy.⁵ It formed part of the country's primary north–south highway linking the southern border to the capital, Baku. The highway was in poor condition and impeded the growth of the non-oil sector and poverty reduction, as well as regional trade. The project road's rehabilitation was to promote domestic and regional trade, thus, contributing to the achievement of the State Program on Poverty Reduction and Economic Development's objectives.⁶

B. Expected Impacts, Outcomes, and Outputs

4. The program's expected impact in the design and monitoring framework (DMF) in the PFR was greater economic development in Azerbaijan and expanded trade with neighboring countries. Its targeted outcome was an efficient, safe, and sustainable southern road corridor from Baku. The expected output was construction of sections B and C of the 4-lane expressway between Masalli and Astara on the southern corridor and rehabilitated access roads.

C. Provision of Inputs

5. According to the project completion report (PCR), project 3 was approved in December 2011 and became effective in October 2012, 2 months later than planned.⁷ The original loan closing date was extended twice, resulting in an actual financial closing date in September 2017, or about 2 years and 9 months later. The project was delayed because of four key reasons. The land acquisition pace was slow. The public utility infrastructure, such as power transmission poles, on land for the project had to be moved. There were unforeseen construction issues, such as high-water tables, which required geotechnical and hydrological surveys more time to implement. Severe weather conditions during the rainy season from October 2013 to April 2014 also delayed asphalt laying.

6. At appraisal, the total project cost was estimated at \$250 million, of which the ADB loan was to finance 80% of the project cost and the government was to fund the balance. New consulting services were not needed under project 3 because the consultant under project 1 was expected to provide consulting services. In June 2016, funds for the consultant under project 1 were fully utilized. Thus, from July 2016, financing for project 1 consultants was

² Masalli–Astara road comprised Sections A (22.15 kilometers [km]), B (22.85 km), C (16.4 km), and Lenkeran bridge of the North–South highway.

³ ADB. 2011. Change in Project Scope and Reallocation of Loan Proceeds for Loan 2354-AZE: MFF for Road Network Development Program, Project 1. Memorandum. 15 June (internal).

⁴ ADB. 2011. *Periodic Financing Request Report: Azerbaijan Road Network Development Program, Proposed Tranche*. Manila.

⁵ ADB. 2006. *Transport Sector Development Strategy*. Consultant's report. Manila (TA 4582-AZE). Annex 5. Road No. M3 (Alyat–Astara state border with Iran) was identified in the state program for Road Development and Reconstruction in Azerbaijan (2006–2015).

⁶ Government of Azerbaijan. 2003. *State Program on Poverty Reduction and Economic Development, 2003–2005*. Baku.

⁷ ADB. 2020. *Completion Report: Road Network Development Program, Project 3 in Azerbaijan*. Manila.

transferred to project 3. Consulting services' total cost amounted to \$4.2 million, or \$3.2 million more than planned because of the project's 2.8-year extension.

7. Project 3 was classified category A for environment and involuntary resettlement, and category C for indigenous peoples. Its environmental impact assessment concluded that overall environmental impacts were limited to the construction phase and could be minimized by mitigation measures included in the environmental management plan. Construction of sections B and C required about 172 hectares of privately owned land and 88 hectares of public land. More than 4,500 people (1,200 households) were expected to be affected, but only 1,288 persons were reported affected and subsequently compensated. There were no social and cultural disruptions brought to the affected households and communities. The project had no adverse impact on indigenous people because ethnic Azeris accounted for most of the population in the project area. Other ethnic groups, such as the Talysh, were also not adversely affected.

8. The project was categorized as having some gender elements and a positive impact on gender. It was expected to promote women's participation in monitoring project impacts on local communities, and civil works contractors were encouraged to employ women during construction. The project implementing unit (PIU) was to develop and implement a gender plan with the assistance of the supervision consultants.

D. Implementation Arrangements

9. The Ministry of Transport (MOT) was the executing agency while the Azer Road Service Open Joint-Stock Company (ARS) was the implementing agency. The ARS chairman was responsible for project 3's overall supervision. The PIU in ARS—comprising ARS staff and a team of externally contracted technical, safeguards, financial, and support staff—handled daily project implementation activities. A project director headed the PIU and reported to the ARS chairman. A steering committee was also established, composed of representatives from the ARS, Minister's Office, the Ministry of Economic Development, the Ministry of Finance, MOT, and the PIU director to supervise and monitor the MFF program. MOT's deputy minister headed the steering committee that was to meet semiannually to ensure interagency coordination, review implementation progress, and provide approvals and guidance.

10. Following the MOT's reorganization in January 2016, ARS assumed responsibility as the executing agency from February 2016 and changed its name to Azeravtoyol State Agency (AAY). The project steering committee was not established because the government concluded that the committee would duplicate existing coordination and reporting arrangements. Instead, the government held meetings, which the deputy prime minister usually chaired, with the representatives from AAY, the Ministry of Economy, Ministry of Finance, and the MOT. The PIU's project director reported to AAY's Investment Department head. From January 2014, a management consulting firm engaged under project 1 of the Second Road Network Development Program assisted the PIU in project management, procurement, and capacity development.⁸ The design and supervision consulting firm assisted the PIU in contract administration and on-site supervision, contractor quality control and assurance, safeguard compliance monitoring, and project monitoring and evaluation.

11. The project generally complied with covenants specified in the loan agreements, and no covenant was modified, suspended, or waived. Out of 32 covenants, 28 were complied, 3 were partly complied, and 1 was not complied. The partly complied with covenants involved the

⁸ ADB. 2007. *Azerbaijan Second Road Network Development Program*. Manila.

submission of audited project financial statements that was delayed up to 8 months. The project steering committee was not established, thus, the government held ad hoc meetings with agencies involved in the project. Lastly, only about 50% of the actions envisaged in the gender action plan were implemented. The project did not comply with the special loan covenant on installing vehicle weighing stations on the project road because of poor coordination between the construction activities of the PIU and AAY's Road Maintenance Department.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

12. The PCR rated the project highly relevant. It indicated that the project was aligned with the government's development plans and ADB's country strategy. The Masalli–Astara expressway was critical for shortening and modernizing the Baku–Astara part of the country's north–south transport corridor, which anchored Azerbaijan as a link between European markets and the Persian Gulf's logistical and economic hubs. The DMF's outcome indicators were on the development of the country-wide road network and the outcome indicators followed the approach of project 1, which had country-wide road indicators because these were the best available statistics. Although access road rehabilitation was part of the project output, there was no output indicator related to access roads.

13. This validation notes that the project completed the Masalli–Astara expressway, which was critical to the Baku–Astara part of the country's north–south transport corridor. Prior to project approval, the government of Azerbaijan had focused on large scale infrastructure development.⁹ ADB's support was also narrowed toward physical infrastructure with priorities in energy, transport, and water supply and sanitation.¹⁰ There was no country partnership strategy at the time. The project was aligned with both government development plan and ADB's country operations business plan for Azerbaijan.

14. The project, however, did not demonstrate innovative design features or transformative effects. The project also had an overly optimistic traffic forecast at appraisal. Although the traffic forecast was lowered in project 3's PFR, it was still overly optimistic due to forecasting methodology that was used. It assumed without strong evidence, that a countrywide figure for GDP was representative of a relatively small southeastern area of Azerbaijan. If GDP is to be used in traffic forecasts, then the variable should reflect economic activity in the project area. Had a more conservative traffic forecast been developed, the design of the project would likely have been less costly. On the whole, this validation assesses the project relevant.

B. Effectiveness in Achieving Project Outcomes and Outputs

15. The PCR rated the project effective because it achieved the outcomes and output targets. To achieve the project outcome of an efficient, safe, and sustainable southern road corridor from Baku, four targets were to be met by 2015. Total funding for road maintenance increased to \$185 million in 2017 (target: \$150 million). Road traffic accidents decreased by 30% in 2015 from the 2005 baseline figure, substantially more than the 5% DMF target. The project achieved its two expected outputs. First, the 22.9-kilometer (km) section B and the 16.4 km section C of the Masalli–Astara expressway were completed in September 2017. The PCR assessed this output

⁹ Government of Azerbaijan. 2008. *State Program on Poverty Reduction and Sustainable Development, Republic of Azerbaijan, 2008–2015*. Baku.

¹⁰ ADB. 2011. *Country Operations Business Plan: Azerbaijan, 2011–2013*. Manila.

partly achieved because of completion delays. This validation views implementation delay is an efficiency criterion and should not be considered in the rating of effectiveness. Second, the international roughness index (IRI) for sections B and C of the expressway was to be maintained at no higher than 5 within 5 years after project completion, compared with the average IRI value of 11 in 2006. This output was achieved because the IRI index was estimated at 2 after 2018.

16. Project 3 was appropriately classified as A for environment and involuntary resettlement, and C for indigenous peoples. It was processed within the environmental framework prepared for the overall MFF. Environmental assessment was completed for project 3 in accordance with the environmental assessment and review framework. The government was compliant with ADB's environment policy (2002) and the country's laws and regulations in preparing the environmental impact assessment reports. The project's environmental impact assessment concluded that its environmental impacts were limited to the construction phase and could be minimized through mitigation measures.

17. The impact on land acquisition and resettlement was assessed in accordance with the government's resettlement framework and in compliance with ADB's Involuntary Resettlement Policy (1995) and the country's laws and regulations. A land acquisition and resettlement framework was prepared, specifying compensation provisions and procedures on preparation and implementation of resettlement plans. A project specific land acquisition and resettlement plan was prepared for sections B and C and updates were prepared to reflect project design changes. The project also had no adverse impact on indigenous peoples.

18. Gender activities included gender-sensitive road safety awareness training for communities along the project road and employment of women from the project communities as engineers and for administrative support. However, the impact of the gender action plan was limited. There was little direct employment of women in project activities. Because of the nature of construction work, as well as cultural factors, the project's gender composition of consultants and workers hired was skewed toward men. The contractor hired 2 women for administrative support and 57 as auxiliary staff (canteen workers, utility workers, and office cleaners). On the whole, this validation assesses the project effective.

C. Efficiency of Resource Use

19. The economic internal rate of return (EIRR) at completion was calculated for the entire Masalli–Astara expressway (sections A, B, and C) because separate EIRRs for sections B and C were not possible. The EIRR at appraisal was also for the entire Masalli–Astara expressway. The PCR rated the project inefficient because the EIRR was reevaluated at 3.8% at completion, compared with 12.8% at appraisal. The reasons for the low EIRR were the actual cost of project 1 (section A) was about 60% higher than expected at appraisal in 2007, and traffic was significantly lower than expected, with average traffic on the Masalli–Astara expressway estimated at 4,800 vehicles per day, compared with 9,200 expected at appraisal. The PCR noted that the economic downturn in 2015–2016 (following the oil price crunch in 2014) and the projected traffic that was much lower than expected (mainly because of the economic downturn) were not foreseen at appraisal.

20. This validation finds the EIRR calculation appropriate based on sound methodology and assumptions. Given that there was little or no growth in traffic on the project road, the project's economic benefits were likely non-incremental, thus, valued in terms of resource cost savings and time savings. The PCR did not assess process efficiency and did not raise any issues

regarding disbursements, procurement, implementation arrangements, and safeguards. This validation assesses the project inefficient.

D. Preliminary Assessment of Sustainability

21. The PCR rated the project likely sustainable. AAY conducted routine and periodic maintenance through its regional units and financed by the State Road Maintenance Fund established in December 2006. The government programmed and allocated adequate funds and resources annually for road maintenance based on a presidential decree. Total spending for road maintenance increased from \$55 million in 2006 (about \$9,700/km) to about \$177 million in 2019 (about \$11,500/km). With assistance from the World Bank, AAY established seven new specialized regional road maintenance units solely responsible for highway maintenance, including one exclusively for maintaining the new Alat–Astara highway. This validation assesses the project likely sustainable.

III. OTHER PERFORMANCE ASSESSMENTS

A. Preliminary Assessment of Development Impact

22. The PCR rated the project's development impact satisfactory. Its expected impact was greater economic development in Azerbaijan and expanded trade with neighboring countries. Trade with neighboring countries increased from \$2.2 billion in 2006 to \$2.7 billion in 2020.¹¹ Freight traffic by road grew with improved road network and road conditions, reaching 16.9 million ton-km in 2018. Passenger transport by road also grew throughout the country reaching 25.3 million passenger-km in 2018. The project provided opportunities for further commercial, economic, and industrial development, including business and employment prospects. With reduced travel time, most villagers could go to town centers more frequently, up from 5 to 17 times a year. The nonphysical elements, specifically project management, helped to strengthen AAY's performance as the country's highway and regional road network developer and operator. This validation assesses the project's development impact satisfactory.

B. Performance of the Borrower and Executing Agency

23. The PCR rated the performance of the borrower and executing agency satisfactory. The government provided counterpart funds and support without delays. The executing agency coordinated and regularly monitored construction progress and the quality of physical works. The PIU monitored on-site project implementation and prepared progress reports. The project steering committee was not established as expected, resulting in weaker interagency coordination and problem-solving. The government and AAY capably supported ADB missions during project preparation and implementation and at completion. AAY ensured that ADB-recognized external auditors audited project accounts and financial statements, although several audit reports were submitted late. The executing agency established the project performance management system. AAY submitted the PCR on time. This validation also assesses the performance of the borrower and executing agency satisfactory.

C. Performance of the Asian Development Bank

24. The PCR rated ADB's performance satisfactory. ADB headquarters administered the project until February 2014, when it was delegated to the ADB resident mission. ADB

¹¹ The PCR reported that trade turnover with neighboring countries reached \$3.8 billion in 2018.

headquarters, however, continued providing guidance to the executing agency and resident mission on procurement and sector-specific technical issues. ADB headquarters and resident mission staff jointly conducted most project review missions. Despite issues with the gender action plan implementation, delayed submission of project audit reports, and the apparent lack of connection between the DMF's outcome and output and their indicators, no financial management and results management experts joined the review missions. ADB's approval of documents during processing and implementation was on the whole timely, and the payment of claims was prompt. This validation assesses ADB's performance satisfactory.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

25. The PCR's overall rating of the project was less than successful. It rated the project highly relevant, effective, and likely sustainable, but inefficient because of the low EIRR. This validation holds a similar assessment with the PCR's ratings except for relevance. This validation downgrades the rating from highly relevant to relevant because the project did not demonstrate innovative design features or transformative effects, and due to the overly optimistic traffic forecast. Overall, this validation also assesses the project less than successful.

Overall Ratings

Validation Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Highly relevant	Relevant	Innovative and transformative effects not demonstrated. The traffic forecast was over optimistic leading to a less than optimal project design.
Effectiveness	Effective	Effective	
Efficiency	Inefficient	Inefficient	
Sustainability	Likely sustainable	Likely sustainable	
Overall Assessment	Less than successful	Less than successful	
Preliminary Assessment of Impact	Satisfactory	Satisfactory	
Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	Satisfactory	Satisfactory	
Quality of PCR		Satisfactory	Para. 32.

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = project completion report.

Source: ADB (IED).

B. Lessons

26. The PCR identified five lessons. First, additional geotechnical surveys after completion of detailed engineering design can lead to additional cost and implementation delays. Second, project steering committees can promote a more integrated and accountable project support implementation. Third, establishing coordination mechanisms between the PIUs and road maintenance units during project preparation will improve coordination of functions between the asset management and construction units. Fourth, engaging auditors early in the implementation process can avert late submission of audited project financial statements. Lastly, improved transparency and accountability of road maintenance funding can extend the road network's productive life and promote road sector sustainability.

27. This validation agrees with the PCR lessons and adds two more. First, a road transport program benefits from a solid engineering design undertaken during project preparatory stage. For instance, the detailed design, based on a precise analysis (e.g., technical inputs, standards specifications, and cost estimates, among other things) helps minimize potential cost overrun that often result to implementation delays. Moreover, design details could benefit from reliable traffic forecasts (i.e., use of reliable income elasticities of demand) and adequate surveys, including geological hazards. This could help in developing appropriate design and in preventing major scope and design changes during implementation. On the whole, identification of any potential design issues, along with appropriate risk mitigation strategies during the design phase, helps enhance readiness and quality of entry.

28. Second, securing funding allocation for critical components during project preparation helps improve economic viability and the achievement of expected results. For example, projects 1 and 3 of the whole program required the rehabilitation of 120 km access roads to sections A, B, and C. These were key project components since most of the economic benefits were to be derived from local roads traffic. However, projects 1 and 3 failed to rehabilitate the secondary roads due to lack of firm financial sources. This was a contributing factor to the lower than expected traffic volume and consequently, to a low EIRR.

C. Recommendations for Follow-Up

29. The PCR suggested four recommendations. First, to ensure that detailed engineering designs are robust, engaging an independent engineer would be useful to review the scope of works for the detailed engineering designs and validate the cost estimates and adequacy of geotechnical, hydrological, and other surveys. Second, implementation of the project's soft components, such as road maintenance financing, axle load regulations, and gender equity requires effective coordination between all stakeholders. Therefore, arrangements are needed to design and operationalize interagency project oversight and intra-agency coordination. Third, remedial measures should be instituted to avoid delays in the submission of audited financial statements in future projects. And, fourth, ADB should continue to dialogue with the government and AAY, focusing on vehicle axle load control, road maintenance funding and efficient contractual arrangements, road sector asset management, road safety and emission control, and gender equity. This validation has no further recommendations to offer.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Reporting

30. According to the PCR, the project monitoring and reporting arrangements were overall satisfactory. AAY provided ADB with monthly progress reports, and PIU established a project performance monitoring system. The PCR did not assess the project performance monitoring system's design or effectiveness. The design and supervision consultant supervised and monitored the contractors' work including their conformity with environmental and social impact controls, traffic controls, and the road safety action plan during construction.

31. An external auditor established and audited the projects' separate financial accounts. AAY submitted the annual project financial statement audit reports to ADB as required. The contractors prepared grievance redressal mechanisms and maintained a grievance register where all complaints and comments were logged, with details of the complainants, and how and when they were resolved. In total, 25 grievances were recorded: 17 for section B and 8 for section C. There were no unresolved grievances at completion.

B. Comments on Project Completion Report Quality

32. The PCR was succinct and assessed all the evaluation criteria. Its main shortcoming was giving highly relevant rating without adequate substantiation and the absence of the project performance monitoring system's assessment. Nevertheless, this validation assesses the quality of the PCR satisfactory.

C. Data Sources for Validation

33. Data sources used are the report and recommendation of the President, the PCR, project documents including mission reports, ADB and country development strategies, and country laws and rules.

D. Recommendation for Independent Evaluation Department Follow-Up

34. The PCR suggested that to enable a comprehensive assessment, a project performance evaluation could be undertaken in 2022–2023, which by then the project road will have operated for over 4 years. In validation's view, there is no need to undertake a project performance evaluation because the findings, lessons, and recommendations in the PCR and PCR validation are clear, and those should be implemented as early as possible.