

Validation Report
June 2020

Republic of Uzbekistan: Central Asia Regional Economic Cooperation Corridor 2 Road Investment Program

Reference Number: PVR-663
Project Number: 42107-023, 42107-033,
and 42107-043
Loan Numbers: 2635, 2746, and 2868



Raising development impact through evaluation

ABBREVIATIONS

ADB	–	Asian Development Bank
CAREC	–	Central Asia Regional Economic Cooperation
EIRR	–	economic internal rate of return
IRI	–	international roughness index
km	–	kilometer
MFF	–	multitranche financing facility
PCR	–	program completion report
PMU	–	program management unit
PPMS	–	project performance management system
PVR	–	project completion validation report
RRF	–	Republican Road Fund
RRP	–	report and recommendation of the President

NOTE

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

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PROGRAM BASIC DATA

Project number	42107-023, 42107-033, and 42107-043	PCR Circulation Date	16 July 2019	
Loan number	2635, 2746, and 2868	PCR Validation Date	Jun 2020	
Program name	Central Asia Regional Economic Cooperation Corridor 2 Road Investment Program			
Sector and subsector	Transport	Road transport		
Strategic agenda	Inclusive economic growth			
Safeguard categories ^a	Environment		B	
	Involuntary resettlement		B	
	Indigenous peoples		C	
Country	Republic of Uzbekistan		Approved (\$ million)	Actual (\$ million)
ADB financing (\$ million)	ADF: 360.00	Total project costs ^b	738.00	390.69
	OCR: 240.00	Loan		
		L2635 (Tranche 1)	115.00	83.73
		L2746 (Tranche 2)	240.00	183.56
		L2868 (Tranche 3)	245.00	67.12
		Borrower		
		Tranche 1	31.00	17.86
Tranche 2	49.00	23.37		
Tranche 3	58.00	15.05		
Approval Date MFF 0042 L2635 L2746 L2868	20 Apr 2010 21 Apr 2010 31 Mar 2011 5 Jun 2012	Effectiveness date L2635 L2746 L2868	15 June 2010 12 May 2011 14 Oct 2012	17 May 2010 6 May 2011 9 Nov 2012
Signing Date L2635 L2746 L2868	1 May 2010 12 Apr 2011 30 Aug 2012	Closing date L2635 L2746 L2868	30 Sep 2013 30 Jun 2014 30 Jun 2015	19 Dec 2014 11 Aug 2017 9 Jan 2018
Project Officers	O. Norojono S.A. Khan N. Singru K. Luu P. Karki	Location ADB headquarters ADB headquarters ADB headquarters ADB headquarters ADB headquarters	From Jan 2010 Dec 2010 Jan 2012 Jan 2015 Jan 2018	To Dec 2010 Jan 2012 Jan 2015 Dec 2017 Mar 2018
IED review Director Team Leader	N. Subramaniam, IESP S. Shin, Senior Evaluation Specialist, IESP ^c			

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

^a The safeguards categories shown are that of tranches 2 and 3. Tranche 1 is B on environment, C on involuntary resettlement, and C on indigenous peoples.

^b The total approved project cost of \$738 million included \$303 million for project 3, which was later revised to \$117 million.

^c Team members: H. Hettige (Quality reviewer), F. De Guzman (Senior Evaluation Officer), and P. Choyowski and C. Mason (Consultants).

I. PROGRAM DESCRIPTION

A. Rationale

1. Uzbekistan is a key transit point for trade among countries in Asia, especially Central Asia and Europe. Railways had dominated the freight market, but its market share fell from 90% in 1997 to 57% in 2009. Road traffic was expected to grow by 10% annually up to 20,000 passenger car units daily by 2039. Market share for general cargo was also expected to grow. Increased motorization, presence of many private road hauling companies, and shorter hauls of manufactured goods increased the volume of road freight traffic. In 2009, roads accounted for 43% of freight by ton-kilometers (km) and 81% of passengers by passenger-km.

2. The A380 highway, a section of Central Asia Regional Economic Cooperation (CAREC) Corridor 2, connected Uzbekistan to Afghanistan, Kazakhstan, the Kyrgyz Republic, Tajikistan, and Turkmenistan. Highway investments were planned in Kazakhstan to connect Beyneu (on the border with Uzbekistan) with A380 highway of Uzbekistan and the port of Aktau on the Caspian Sea. The two highways were to provide Uzbekistan and other countries in Central Asia with direct access to the Caspian Sea, South Asia, and the Black Sea (via Armenia, Azerbaijan, and Georgia). However, the pavement of the A380 highway had deteriorated markedly due to deferred maintenance and increased traffic.

3. According to the report and recommendation of the President (RRP), the investment program comprised reconstruction of about 222 km of road of the A380 highway and improved planning, project management, logistics, road asset management, and community facilities.¹ The multitranche financing facility (MFF) was the modality selected and the investment was to be split into three separate projects. All conditions for the MFF, a coherent strategy and sector road map, a policy framework, an investment program, and a financing plan were in place. Past recommendations to engage with the government over a longer time horizon were followed.²

B. Expected Impact, Outcome, and Outputs

4. According to the design and monitoring framework in the RRP, the target impact of the investment program was sustainable economic development for Uzbekistan. The target outcome was better transport connectivity and efficiency along the Uzbekistan section of CAREC Corridor 2. The three target outputs were reconstruction of the Uzbekistan section of CAREC Corridor 2 road; an operational cross-border facility; and road sector sustainability, strategy, and plans adopted by the Republican Road Fund (RRF).

C. Provision of Inputs

5. According to the program completion report (PCR),³ the Asian Development Bank (ADB) approved the investment program in April 2010. Tranche 1 was approved on the following day, tranche 2 was approved in March 2011, and tranche 3 in June 2012. Tranche 1 was expected to become effective in June 2010, tranche 2 in May 2011, and tranche 3 in October 2012. The actual effectivity was close to these respective dates. The loan closing dates were 1 year, 3 years, and

¹ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranche Financing Facility to the Republic of Uzbekistan for the Central Asia Regional Economic Cooperation Corridor 2 Road Investment Program*. Manila.

² ADB. 2009. *Project Completion Report: Road Rehabilitation Project in Uzbekistan*. Manila.

³ ADB. 2019. *Completion Report: Central Asia Regional Economic Cooperation Corridor 2 Road Investment Program in the Republic of Uzbekistan*. Manila.

2.5 years delayed, respectively, for tranche 1, tranche 2, and tranche 3 with one, two, and three extensions, respectively. Delays experienced under project 1 included the unfamiliarity of the executing agency with ADB procedures and its requirements; deficiency in program management unit (PMU) capacity due to changes in the team, low salary, and vacant positions; canceled procurement of equipment and software designed to support the road asset management system due to lengthy internal procurement procedures; lengthy government approval of contracts; and slow processing of registration of approved contracts.

6. The investment program was estimated at \$738 million. The actual total program cost was \$552 million since the 47 km section of the road in Karakalpakstan Republic under project 3 was not implemented. This section required a major realignment to bypass the towns of Turtkul and Beruni, and hence required an in-depth study of alignment options and substantial land acquisition and resettlement. The expected cost for the project was lowered by \$186 million. ADB approved \$600 million equivalent for the investment program, with \$240 million from its ordinary capital resources and \$360 million equivalent from the Asian Development Fund.⁴ The counterpart financing was of \$138 million equivalent. At completion, the actual cost of the investment program was \$390.7 million, of which 86% was from ADB.⁵ Lower costs for civil works contracts, consulting services, and equipment, unutilized allocations for physical and price contingencies, and savings in taxes and duties resulted in cost savings.

7. The program cost included 372 person-months of consulting services by a firm for \$4.7 million and another 28 person-months of individual consulting services for \$600,000. The PCR did not provide information on actual expenditure details on these.

8. Projects 1, 2, and 3 did not have major environmental impacts of a regional or international nature. Civil works did not involve land acquisition, involuntary resettlement, nor affect ethnic minority groups. The RRF prepared a community and gender action plan.⁶ The action plan was not mainstreaming gender activity but had some direct gender benefits including improving mobility, job opportunities, and access to health in the villages along the route. This plan was to be executed under projects 1 and 3. However, further needs assessments were required, which were to be conducted during implementation of project 1.

D. Implementation Arrangements

9. The RRF as the executing agency established a PMU and appointed a director at appraisal. The PMU was structured around teams, each with a specific mandate on technical, legal, procurement, monitoring, reporting and evaluations, safeguards, community and gender development, due diligence, and administration. The Custom Committee helped the RRF with work on the cross-border facility. Implementation arrangements were as envisaged at appraisal. In 2011, the PMU experienced high staff turnover due to low salaries but staff turnover stabilized after the government increased salaries.

10. Most loan covenants were complied with. The loan and project agreements included 21 covenants, of which all except for two were complied with. The covenant for the RRF to allocate sufficient resources to implement the road asset management system by June 2016 was partly

⁴ If the ordinary capital resources financing increased to \$300 million, any additional financing was to reduce Special Funds financing, so that the total under the MFF did not exceed \$600 million.

⁵ Based on ADB Loan and Grant Financial Information Services, ADB canceled unutilized loan proceeds of \$30.32 million from tranche 1, \$56.44 million from tranche 2, and \$25.48 million from tranche 3.

⁶ The RRF is a quasi-independent agency under the auspices of the Ministry of Finance responsible for programming, planning, and budgeting of the common use roads comprising international, national, and local roads.

complied with. Due to delays and the lengthy internal procurement process of RRF, the software enhancement module and traffic count equipment designed to support the road asset management system was canceled. This validation finds this covenant not complied with. The covenant that the government ensures that appropriate entities (such as nongovernment organizations) disseminate information on the risks of sexually transmitted infections, including HIV/AIDS, to the civil works employees and to members of local communities around the A380 highway, particularly females, was partly complied with. The civil works awareness campaign was not carried out satisfactorily under project 3 due to the reluctance of the contractor.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

11. The PCR rated the program relevant at appraisal and completion since the intended outputs and outcome were aligned and consistent with the country's development plans, priorities, and Transport Sector Strategy (2006–2020) and road map,⁷ which prioritized on improving the regionally important A380 highway, upgrading cross-border facilities, and strengthening institutional effectiveness. It was aligned with Strategy 2020 of ADB, its country strategy and program for Uzbekistan for 2006–2010,⁸ as well as its country operations business plan for 2010–2011.⁹ It was also aligned with gender mainstreaming activities of ADB and with its CAREC Transport and Trade Facilitation Strategy and Action Plan.

12. The program design at completion remained relevant despite two deviations from the original program design. The first was a change to the pavement design in project 1 to deal with an existing asphalt pavement that was too weak for the 13-ton axle load of the reconstructed road with cement concrete pavement. The second was the reduction of two sections of 87 km under project 3 to only cover the first section of 40 km due to the need for a major realignment of 47 km of road, which required a substantial resettlement and land acquisition, and an in-depth study of alignment options.

13. This validation assesses the investment program relevant. The National Road Development Program for 2009–2014,¹⁰ and the government policy emphasized the importance of upgrading and maintaining strategic road corridors to international standards.¹¹ The investment program was aligned with the Uzbekistan Country Strategy and Program 2006–2010, which considered regional cooperation in transport through transport corridors a strategic priority. Country Operations and Business Plan 2010–2011 of ADB, was consistent with its Uzbekistan Country Partnership Strategy 2012–2016.¹² It was also aligned with the Strategy 2020 and Midterm Review of ADB,¹³ which included infrastructure development and regional cooperation as strategic directions. It was consistent with CAREC sector strategies, including the 2008 CAREC Transport and Trade Facilitation and Action Plan and the 2020 CAREC Transport and

⁷ ADB. 2005. *Technical Assistance to the Republic of Uzbekistan for Transport Sector Strategy (2006–2020)*. Manila.

⁸ ADB. 2006. *Country Strategy and Program for Uzbekistan, 2006–2010*. Manila.

⁹ ADB. 2010. *Country Operations Business Plan: Uzbekistan, 2010–2011*. Manila.

¹⁰ Republic of Uzbekistan. 2009. Presidential Resolution No. PP-1103. *On Measures for the Reconstruction and Improvement of the Uzbek National Highway for 2009–2014*. Tashkent.

¹¹ Republic of Uzbekistan. 2006. Resolution of the President of Uzbekistan, PP-535. *On Measures for Development of Common Use Roads in 2007–2010*. Tashkent.

¹² ADB. 2012. *Country Partnership Strategy: Uzbekistan, 2012–2016*. Manila.

¹³ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila; and ADB. 2014. *Midterm Review of Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

Trade Facilitation Strategy,¹⁴ which emphasized network sustainability and the need to establish trade corridors. At completion, the program remained consistent with the priorities of the government in the Accelerated Development Program for 2011–2015,¹⁵ which included improving the A380 highway. This validation notes that the project completion validation report (PVR) for tranche 1 assessed project 1 relevant.¹⁶ The PVR for tranche 2 assessed project 2 relevant.¹⁷ The PCR for the MFF rated project 3 under tranche 3 relevant.

14. This validation finds the design appropriate since the road was intended to accommodate heavy vehicles from within and outside Uzbekistan. Road traffic was expected to grow by 6.5% annually and reach about 16,000 vehicles per day by 2039. The projects were to widen the existing two-lane road into a four-lane divided road within the existing right-of-way and replace the existing asphalt concrete with cement concrete pavement, following category 1 international standards, with a design speed of 120 km/hour. The number of lanes and pavement type were adopted in accordance with the program for developing the national roads of Uzbekistan during 2009–2014.

B. Effectiveness in Achieving Project Outcomes and Outputs

15. The PCR rated the program effective since the projects achieved its target outcome and substantially achieved its target outputs. According to the design and monitoring framework in the PCR, the average total long-haul traffic volume was to increase from 1,000 to 2,000 vehicles per day between 2009 and 2018. This actually increased to 5,000, 5,063, and 6,414 vehicles per day in 2015, 2016, and 2017, respectively. The investment program also targeted cross-border traffic at Daut-ata border post to increase from 25 to 50 trucks per day between 2008 and 2018. This indicator increased to 30 and 79 trucks per day in 2015 and 2017. Travel time from Daut-ata to Bukhara was to reduce from 13 to 10 hours by 2018, which actually reduced to 12 hours in 2013, to 10.6 hours in 2016, and 10.2 hours in 2017. Cross-border time was to be reduced from 2 hours to 20 minutes per truck by 2018, and this indicator was achieved by 2017. The accident rate on the A380 highway was to be reduced from an estimated 150 accidents per year in 2008 to 75 accidents by 2018. The accident rate was reduced to six accidents in 2014, to 14 accidents in 2016, and to nine accidents in 2017. Roads with cracks of more than 10% and 10 potholes per kilometer were to be reduced from 60% in 2008 to 50% by 2018. Roads with cracks were essentially eliminated.¹⁸

16. A population of 4.5 million was to be the beneficiary of the program and 5,000 women were to be community development program beneficiaries.¹⁹ In 2014, the investment program benefited 1.7 million persons in Khorezm. In 2016, it benefited 1.8 million in Khorezm, 1.8 million in Bukhara, and 1.7 million in Karakalpakstan. In 2017, it benefited 1.8 million persons in Bukhara region. Project 1 successfully implemented the community development program. It developed and successfully implemented a gender action plan to mitigate impacts on communities living within the project areas with over 75% of gender targets achieved. It achieved gender benefits by

¹⁴ ADB. 2008. *CAREC Transport and Trade Facilitation Strategy and Action Plan*. Manila; and ADB. 2014. *CAREC Transport and Trade Facilitation Strategy 2020*. Manila.

¹⁵ Republic of Uzbekistan. 2010. *Resolution No. 1446 of the President Accelerated Development Program (2011–2015) for Infrastructure, Transport and Communications*. Tashkent.

¹⁶ ADB. 2016. *Validation Report: Central Asia Regional Economic Cooperation Corridor 2 (Tranche 1) in Uzbekistan*. Manila.

¹⁷ ADB. 2018. *Validation Report: Central Asia Regional Economic Cooperation Corridor 2 (Tranche 2) in Uzbekistan*. Manila.

¹⁸ The cracks that did exist were minor and will be sealed with chemical compound.

¹⁹ The beneficiaries include people and local businesses, traders, neighboring countries, and Uzbekistan communities living along the corridor.

providing workshops and training, as well as knowledge sharing on livelihood skills development, basic health and sanitation, and reproductive health. At the local government and community levels, 150 males and 100 females attended orientation training and community needs assessments while 127 males and 100 females participated in a series of gender awareness trainings. A local nongovernment organization also conducted livelihood training, taxation, and business planning to 100 persons and more than 200 women received indirect benefits from these trainings. The project also developed training modules and conducted workshops in 2016 on entrepreneurship, gender awareness, and HIV/AIDS prevention in Bukhara for communities in the project area and in Gazli and Romitan towns. Representatives of women's committee, the local government authority cadaster, tax committee, and commercial banks participated in the workshops. In total, 142 participants (60% women) attended trainings to improve their knowledge on the legal entity forms of enterprises, ADB gender policy, and the consequences of HIV/AIDS and STD-related issues.

17. The three target outputs included the Uzbekistan section of CAREC Corridor 2 road reconstructed, an operational cross-border facility, and road sector sustainability strategy and plans adopted by the RRF. By 2017, 222 km of road was to be reconstructed with an international roughness index (IRI) of less than 4 meters per kilometer. In 2014, project 1 completed and opened to traffic a 50-km four-lane road section from km 440 to km 490 with IRI of 2 meters per kilometer. In December 2016, project 2 completed and opened to traffic an 85-km four-lane road section from km 355 to km 440 with IRI of 2 meters per kilometer. In March 2017, project 3 completed and opened to traffic a 40-km four-lane road section from km 315 to km 355 with IRI of 2 meters per kilometer. This validation views that the 47 km of the canceled road section under project 3, if this was a change in scope, would have required an approval by ADB management or Board in advance.²⁰

18. In 2014, the investment program installed a cross-border scanner with a scanning capacity of 15–20 minutes per truck at the Customs Department. Related to the road sector sustainability strategy and plans adopted by the RRF, the investment program established an independent quality control system for road works and developed a public–private partnership framework. In 2015, it completed the installation of equipment and training for the State Customs Committee. Relating to the pilot on CAREC Corridor 2 road section for road asset management system (RAMS) implementation for programming, funds were allocated in 2014 for developing road system management using the Highway Development and Management 4 model and RAMS, and training on RAMS for two persons in Uzbekistan and the United Kingdom and 10 persons in Germany. However, procurement of software enhancement modules and traffic counting devices for RAMS was canceled due to implementation delays and the lengthy internal procurement process. Related to piloting improved routine maintenance contract, Uzavtoyul in 2014, approved the RAMS consultant reports and adopted the technical guidance documents for pavement testing, bridge management, and routine maintenance. Also in 2014, related to the community and gender-sensitive capacity building on community utilization of the highway, the investment program rehabilitated the women's training facility, engaged a technical assistance consultant, and purchased an ambulance and bicycles as part of community development program. In 2016, it also expanded public awareness on gender development issues, transmission of communicable diseases, and human trafficking, and held training workshops on entrepreneurship, gender awareness, and HIV/AIDS in Gazli and Romitan. Also, the investment program procured pile-

²⁰ Para. 10 of the PCR discussed that, "The 47 km in Karakalpakstan Republic, originally envisaged under Project 3 was not pursued because it was determined that this section would require a major realignment (about 50 km) to bypass Turtkul and Beruni towns and hence required in-depth study looking into various alignment options, and substantial land acquisition and resettlement."

boring equipment, was commissioned in 2013. Except for one that was partly achieved, all other outputs were achieved.

19. This validation also notes that the PVRs that had been prepared for tranches 1 and 2 assessed projects 1 and 2 effective. The PCR for the MFF rated project 3 under tranche 3 also effective. This validation assesses project 3 under tranche 3 and the investment program effective. Therefore, this validation assesses the investment program effective.

C. Efficiency of Resource Use

20. The PCR rated the investment program efficient since all projects remained economically viable at completion. The calculated economic internal rate of return (EIRR) for the project road sections altogether was estimated at 16% at appraisal and re-evaluated at 13.3% at completion. The aggregate EIRR was based on the sum of resource flows from three re-evaluations: the EIRR recalculations for projects 1 and 2, and the EIRR recalculated for project 3 in this PCR under validation.²¹ Resource flows were brought to 2016 prices using the manufacturing unit value index of the World Bank.

21. The PCR and PVR for tranche 1 rated project 1 efficient. The PCR for tranche 2 also rated project 2 efficient, while the PVR assessed it less than efficient since the EIRR at completion was 9.3%. The PCR for tranche 3 rated project 3 efficient.

22. This validation finds several shortcomings in the EIRR calculation. First, the standard conversion factor was 0.9.²² This number hints that the standard conversion factor was not calculated but rather it was an estimate and likely overvalued. Given that there is and has been a vibrant free market in the sum, the standard conversion factor should have been based on the ratio of the official exchange rate to the free market exchange rate. Second, the PCR did not identify which costs and benefits were tradable and non-tradable. Therefore, this validation finds it difficult to confirm the appropriateness of the shadow pricing exercise in the EIRR calculation. Vehicle operating costs savings are likely tradable, while time savings are not. Crash cost savings could be both tradable and non-tradable. Use of the manufacturing unit value index of the World Bank to adjust vehicle operating costs savings may be appropriate but use of this index to adjust time savings and crash cost savings would likely not be.²³

²¹ ADB. 2015. *Completion Report: Central Asia Regional Economic Cooperation Corridor 2 Road Investment Program (Tranche 1) in Uzbekistan*. Manila; and ADB. 2018. *Completion Report: Central Asia Regional Economic Cooperation Corridor 2 Road Investment Program (Tranche 2) in Uzbekistan*. Manila.

²² The Central and West Asia Department (CWRD) clarified that the adopted standard conversion factor (SCF) of 0.90 was taken from the PCR (SCF) of project 1 and in the interests of adopting a common approach, the same value was used for all three projects. CWRD further indicated that applying the ADB simplified method to trade data for 2011–2016 gives an SCF of 0.93, in practice with little difference from the value used. Following were the reasons stated by CWRD for not considering on using the ratio of the official to the unofficial exchange rate as a guide to the SCF: first, the ratio between the official and parallel market rate has changed considerably over time, making the choice of ratio difficult; and, second, the ratio depends on the risks involved in the informal market and the proportion of foreign exchange traded on it. CWRD pointed out that the SCF adopted is not materially different from that derived using the standard ADB simplified trade-weighted methodology.

²³ CWRD indicated that it was necessary to bring the results for L2635 to 2016 prices for the combined re-evaluation and actual values used in the Highway Development and Management 4 model analysis in terms of values of journey time were correctly shadow-priced and treated as non-tradable and adjusted using the SCF and the basis for estimating the change in the incidence of crashes is very approximate. CWRD acknowledged that the PCR validation makes the valid point that using the manufacturing unit value index to adjust the project's journey time and crash cost savings may be inappropriate but pointed out that using gross domestic product per head to make the adjustment increases the combined EIRR significantly, from 13.3% to 14.3%.

23. Third, all economic benefits from the project roads were assumed to be non-incremental and valued in terms of vehicle operating costs savings. This assumption presumes that there was no generated traffic or traffic diverted from other routes, for example, from the highway linking Navoi and Turtkul through Zarafshan, which the assumption may not be fully realistic. The PCRs for the three projects should have developed a “without project” forecast scenario, which would have been the basis for existing traffic, and the benefits valued in terms of resource cost savings (namely, vehicle operating costs savings). To the “without project” forecast scenario, the volume of diverted traffic should have been added, the benefits of which should also be valued in terms of vehicle operating costs savings.²⁴ The difference between “without project” forecast scenario and the “with project” forecast scenario is the generated traffic, and their benefits should be valued in terms of willingness to pay or consumers’ surplus. The omission of generated traffic from calculation likely overestimated the economic benefits of the projects.

24. Fourth, it is not clear how the economic analysis treated the economic benefits of transit traffic, namely, the trucks that transit the project roads, originating in one country with a final destination in another. According to project documentation, this is the main benefit that the projects aimed to generate. If a truck that is owned by an entity in country 1 transits Uzbekistan to deliver goods to country 2, then the economic benefit of the project roads and the vehicle operating cost savings accrue to the entity in country 1, not to Uzbekistan. The same is true regarding time savings and crash costs savings. Without considering to which country economic benefits of the projects accrue, the EIRR is likely over-estimated.²⁵ Given these shortcomings, the less than efficient rating in the PVR for project 2, the relatively low EIRR of 13.3% calculated in the PCR, and the likelihood of over-estimation of economic benefits, this validation assesses the project 3 under tranche 3 as well as the investment program less than efficient.²⁶

D. Preliminary Assessment of Sustainability

25. The PCR rated the investment program likely sustainable. Revenue earned by the RRF increased 611% during 2006–2013 and amounted to \$500 million equivalent in 2017. Operating and maintenance expenditures of the A380 highway are anticipated to increase, which are expected to be funded by RRF revenues. Revenue forecasts up to 2020 show a 133% increase in receipts from the corporate levy that applies to those who own vehicles. The total volume of goods transported on the roads increased by 45% during 2008–2016, while the number of passengers using road transport increased by 34% during the same period. This increase should generate additional revenues to the RRF. The decision to upgrade the design from asphalt to concrete pavement is expected to positively impact the sustainability of the projects, as the concrete pavement should increase its service life.

26. The program contributed to institutional reforms in road subsector of Uzbekistan. The establishment of Transyo’ Iquirilish, a state-owned equipment pool company, contributed to more efficient road maintenance. Uzavtoyul was restructured under Presidential Resolution No. 2776 of February 2017 and became the State Committee of the Republic of Uzbekistan for Roads, in charge of developing and monitoring road sector policy implementation. Uzavtoyul accepted the newly developed cement concrete maintenance guidelines for maintaining the reconstructed road sections. In accordance with the Resolution of the Cabinet of Ministers of Uzbekistan of

²⁴ CWRD clarifies that there is no good case for including either generated or diverted traffic.

²⁵ CWRD indicates that while accepting a small percentage of benefits do not accrue to Uzbekistan, correction for this would have had little impact on the EIRR.

²⁶ CWRD disagrees with this rating and views that IED has not demonstrated that correcting the shortcomings in the analyses would reduce the EIRR to below 12%. (Please see Appendix 1).

March 2017, the State Inspectorate on Control Over Quality of Road Construction Works was established under the Cabinet of Ministers regulating construction quality of roads.

27. The PCRs and PVRs for tranches 1 and 2 rated projects 1 and 2 likely sustainable. The PCR for the MFF rated project 3 under tranche 3 likely sustainable. This validation assesses project 3 under tranche 3 and also the investment program likely sustainable.

III. OTHER PERFORMANCE ASSESSMENTS

A. Preliminary Assessment of Development Impact

28. The PCR stated that the investment program had a significant impact on regional cooperation by helping improve regional connectivity and increasing inter-regional trade between Uzbekistan and its neighboring countries. The improvement of the A380 highway increased tourism in Bukhara and Khiva. Regional trade volume tripled due to increased road capacity and improved road quality. Between 2009 and 2017, the number of freight vehicles crossing the border at the Daut-ata customs post increased from 10,190 to 28,823. Economic activities within the project area increased with the construction of new residential housing and commercial facilities, such as restaurants and truck stop areas. This validation assesses the development impact of the investment program satisfactory.

B. Performance of the Borrower and Executing Agency

29. The PCR rated the performance of the borrower and the executing agency satisfactory. Under project 1, it experienced delays (para. 5). Subsequently, the RRF showed significant improvement in implementation. As the staff of the RRF and the PMU became more familiar with processes and procedures and administrative arrangements, the workflow became smoother and issues were resolved faster. The assignment of an experienced person as the PMU director during implementation ensured continuous leadership and smoother execution. The RRF processed all payments to contractors, consultants, and goods suppliers, and the PMU submitted all the required project reports in a timely manner. The remaining delays were primarily due to civil works contractual issues. This validation assesses the performance of the borrower and the executing agency satisfactory.

C. Performance of the Asian Development Bank and Cofinanciers

30. The PCR rated the performance of ADB satisfactory. ADB headquarters administered projects 1 and 3 with the active involvement of the Uzbekistan Resident Mission. Project 2 was implemented by headquarters during the first half of its implementation and subsequently delegated to the resident mission. ADB maintained a sound and positive working relationship with the RRF, the PMU, and other agencies throughout the program implementation period. ADB fielded inception, regular review, midterm review, and special project administration missions to monitor progress and resolve implementation issues promptly. ADB guided the RRF and the PMU in approving advance action and in preparing and evaluating documents related to the procurement of civil works, goods, and consulting services. It also shared critical findings and made recommendations on project planning, procurement, construction management, contract administration, compliance with covenants, the road asset management system, the community development program, and safeguards for smooth project implementation. Safeguards requirements were monitored more efficiently with the 2010 appointment of a full-time, in-country safeguard specialist. The specialist provided day-to-day support to ongoing projects, which

contributed to the enhancement of the capacity of RRF in environmental and social safeguards. This validation assesses the performance of ADB satisfactory.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

31. The PCR rated the overall investment program successful based on its findings of relevant, effective, efficient, and likely sustainable. The projects were relevant and continued to be relevant to the transport sector programs of the government, its development strategies, and the country strategy of ADB and the CAREC program. The output and outcome targets were achieved. The projects reduced travel time and vehicle operating costs and lowered road accidents. The PCRs and PVRs for tranches 1 and 2 also rated their respective projects successful. The PCR also rated project 3 under tranche 3 overall successful. This validation assesses the overall investment program relevant, effective, and likely sustainable but less than efficient. The economic benefits of the investment program are likely overestimated because benefits were not properly identified, quantified, and valued. Nevertheless, this validation assesses the investment program successful. Table below provides a summary of ratings.

Overall Ratings for the MFF

Validation Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Relevant	Relevant	
Effectiveness	Effective	Effective	On the canceled 47 km road section for project 3, if this was a change in scope, then it would have required an approval by management and board in advance.
Efficiency	Efficient	Less than efficient	The EIRR in the PCR is likely overestimated as benefits were not properly identified, quantified, and valued.
Sustainability	Likely sustainable	Likely sustainable	
Overall Assessment	Successful	Successful	
Preliminary Assessment of Impact	Significant	Satisfactory	
Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	Satisfactory	Satisfactory	
Quality of PCR		Satisfactory	Para. 37.

ADB = Asian Development Bank, EIRR = economic internal rate of return, IED = Independent Evaluation Department, km = kilometer, MFF = multitranchise financing facility, PCR = project completion report.

Source: ADB (IED).

B. Lessons

32. The PCR identified four lessons. First, future projects should plan integrated road sections on a corridor to achieve optimum regional economic impacts, instead of developing only isolated parts of a corridor. Second, project schedules should take into account the actual construction period available in a year, and possible flaws in initial designs that may require additional

surveys.²⁷ Third, procurement of civil works needs to continue after detailed designs and bills of quantities are completed, avoiding “partial design–build” approach. Fourth, gender training subcomponents under projects 1 and 3 showed successful results, therefore, future projects could also include livelihood development components and mentorship programs for providing microloans and financial business management training to local communities.

33. This validation suggests three more lessons.

- (i) **Country-level lesson.** For investments of a regional character, it is important to assign economic benefits to the appropriate country, if not, economic viability of the investment may be grossly misrepresented.
- (ii) **Project-level lesson.** The project performance management system (PPMS) is necessary to provide the data for the identification and quantification of economic benefits. The PPMS should be established at the project preparation stage with baseline data collected and maintained through implementation to project completion.
- (iii) **Results framework and methodology-level lesson.** For investments of a regional character, an EIRR for the region should be prepared in the first instance for the regional investment. This will confirm (or not) the economic viability of the regional plan and then identify which countries benefit or do not benefit. A country specific EIRR and economic net present value would then follow to put the investment in proper perspective.

C. Recommendations for Follow-Up

34. The PCR suggested three recommendations. First, future projects should include clearer construction specifications to ensure consistency in applying international road design, and construction standards and specifications. Second, to enable better sustainability of road projects, ADB should continue its policy dialogue with the government regarding the road asset management system, maintenance of national highways, and adoption of mechanisms to ensure financial sustainability of road maintenance. Third, the government should ensure that adequate project management staff support is available after the closing date of a loan.

35. This validation suggests one more recommendation. It would be beneficial to evaluate the entire investment that was made in CAREC Corridor 2 to establish the economic viability of the investment for the region. This potential evaluation will quantify the net economic benefits that accrue to the countries in the region and identify policy implications regarding the operation of the highways, such as the need for tolling.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Reporting

36. The project management and construction supervision consultant submitted internal and external monitoring reports, monthly progress reports, and a final report on social safeguards. The PMU submitted quarterly progress reports to ADB. The RRF ensured that

²⁷ Time available needs to consider weather conditions, working hour regulations, limited logistical infrastructure for project materials, equipment, and labor, as well as delays in contractor mobilization.

separate accounts for each project were maintained and audited annually. The audited project financial statements and auditor's reports were submitted to ADB, although there were some instances of delays. There was no requirement to implement a PPMS in the RRP.

B. Comments on Project Completion Report Quality

37. The main shortcoming of the PCR was the economic analysis, where costs and benefits were not appropriately identified, quantified, and valued. This likely led to an EIRR that was overestimated. However, overall, the PCR was well prepared, was succinct, and addressed the main evaluation criteria. Therefore, validation assesses the quality of the PCR satisfactory.

C. Data Sources for Validation

38. Data sources were RRP, PCR, PVRs, country strategies, and mission reports.

D. Recommendation for Independent Evaluation Department Follow-Up

39. The PCR suggested that a project performance evaluation be carried out in mid-2021. By then, the road project under the last tranche will have operated for 5 years and the program impacts can be better assessed considering traffic volumes, maintenance arrangements, and social impacts. This validation suggests that a program performance evaluation be carried out instead on the entire CAREC Corridor 2 investment as soon as these investments for this corridor are completed.

APPENDIX 1: Linked Documents

Project Validation Report on the Republic of Uzbekistan: Central Asia Regional Economic Cooperation Corridor 2 Road Investment Program

1. Central and West Transport and Communication Division, CWRD Comments on Final PVR
<https://www.adb.org/sites/default/files/evaluation-document/615471/files/cwtc-comments-l2635-2746-2868.pdf>
2. IED Response to Central and West Transport and Communication Division, CWRD Comments
<https://www.adb.org/sites/default/files/evaluation-document/615471/files/ied-response-l2635-2746-2868.pdf>