

Validation Report
April 2021

Nepal: Air Transport Capacity Enhancement Project

Reference Number: PVR-739
Project Number: 38349-013
Loan Number: 2581
Grant Number: 0181



Raising development impact through evaluation

ABBREVIATIONS

ADB	– Asian Development Bank
A-PAPI	– Abbreviated Precision Approach Path Indicator
BTOR	– back-to-office report
CAA	– Civil Aviation Act
CAAN	– Civil Aviation Authority of Nepal
CPS	– country partnership strategy
DMF	– design and monitoring framework
DSC	– design and supervision consultant
EIRR	– economic internal rate of return
FIDIC	– Fédération Internationale des Ingénieurs-Conseils (International Federation of Consulting Engineers)
FY	– fiscal year
ICAO	– International Civil Aviation Organization
MOTCA	– Ministry of Culture, Tourism, and Civil Aviation
PCR	– project completion report
PCU	– project coordination unit
PIU	– project implementation unit
PPMS	– project performance monitoring system
TIA	– Tribhuvan International Airport
VAGS	– visual alignment guidance system

NOTE

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

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PROJECT BASIC DATA

Project number	38349-013	PCR circulation date	20 Aug 2020	
Loan and Grant numbers	2581 and 0181	PCR validation date	Apr 2021	
Project name	Air Transport Capacity Enhancement Project			
Sector and subsector	Transport	Air transport		
Strategic agenda	Inclusive economic growth			
Safeguard categories	Environment	B		
	Involuntary resettlement	C		
	Indigenous peoples	C		
Country	Nepal	Approved (\$ million)	Actual (\$ million)	
ADB financing (\$ million)	ADF: 70.00 (L2581) 10.00 (G0181)	Total project costs	92.00	106.47
	OCR: 0.00	Loan L2581	70.00	28.26
		G0181	10.00	9.04
		Borrower	12.00	69.17
		Beneficiaries	0.00	0.00
		Others	0.00	0.00
Cofinancier	-	Total cofinancing	0.00	0.00
Approval date	23 Nov 2009	Effectiveness date	23 Aug 2010	6 Dec 2010
Signing date	25 May 2010	Loan and grant closing date	30 Jun 2015	31 Dec 2018
		Financial closing date		29 Oct 2019
Project officers	D. Lee	Location ADB headquarters	From Dec 2010	To Apr 2011
	T. Suzuki	in Japan (seconded)	Jul 2011	Feb 2013
	W. Tawisook	ADB headquarters	Apr 2010	Jul 2011
	N. Pradhan	Nepal Resident Mission	Feb 2013	May 2014
	K. Yeo	ADB headquarters	May 2014	Apr 2017
			Apr 2017	Oct 2019
IED review Director	N. Subramaniam, IESP			
Team leader	S. Shin, Senior Evaluation Specialist, IESP*			

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

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I. PROJECT DESCRIPTION

A. Rationale

1. Due to Nepal's mountainous terrain, air transport plays a critical role in the country's administrative, economic, and social development by providing essential links between Kathmandu (the capital), Nepal's administrative and commercial centers, and other countries. Nepal's airport network has Tribhuvan International Airport (TIA) in Kathmandu, four regional airports, and 42 other domestic airports, of which 27 were operational at the time of project

appraisal.¹ International air traffic increased to 3.11 million in 2017 from about 1.83 million passengers in 2008, while domestic air traffic grew to 1.99 million in 2017 from 1.04 million passengers.² Domestic air services carried a considerable volume of freight due to the limited road network and land transportation services. TIA has the most air traffic activity, especially international, and has absorbed the substantial air traffic growth. A safe and reliable air transport system is essential for government's tourism development targets.

2. Safety and capacity concerns at the TIA and the domestic airports needed immediate solutions to be fully compliant with International Civil Aviation Organization (ICAO) standards and safe practices for aircrafts. The first four concerns were inadequate runway end safety areas, non-availability of basic visual aids for aircraft landing, a parallel taxiway needed within the runway strip, and an international apron area too close to the runway. Another five areas needing attention were severely congested domestic terminal building and the existing international terminal nearing design capacity; outdated navigational aids; aircraft operations and air traffic management requiring review and updating; inadequate water and power supply; and sewage treatment and waste disposal system. The project was to address these safety issues and capacity constraints in TIA. It was also aimed at upgrading and improving communication equipment, visual approach aids, and weather equipment in the domestic airports of Lukla, Rara, and Simikot.

3. The civil aviation regulation and operation of Nepal's airports, as well as air traffic control and navigation system, were under the jurisdiction of the Civil Aviation Authority of Nepal (CAAN), an autonomous state authority that the Ministry of Culture, Tourism and Civil Aviation (MOTCA) supervised. CAAN required institutional enhancement especially on its operational efficiency and management capacity to cope with the increased air traffic demand in the medium term. However, the shortage of qualified and trained staff and limited management systems had constrained CAAN. The project aimed to address main bottlenecks, such as safety compliance with international standards, capacity constraints, and CAAN's organizational efficacy.

B. Expected Impacts, Outcomes, and Outputs

4. The project's envisaged impact was improved transport connectivity promoting broad-based economic growth in Nepal. The three expected outcomes were improved safety and capacity at TIA with reconfigured and upgraded airside infrastructure to international safety standards; enhanced safety at Lukla, Rara, and Simikot airports with additional safety infrastructure; and CAAN's improved institutional capacity.

5. There were three intended outputs. Output 1 was reconfigured TIA's airside for safety, improved landside infrastructure, and upgraded communication navigation surveillance and/or air traffic management equipment. Output 2 was improved basic safety infrastructure at Lukla, Rara, and Simikot airports. Output 3 was enhanced CAAN's organizational and management capabilities, with existing regulations updated and a strategy developed to adapt the regulatory framework to international standards.

¹ ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Asian Development Fund Grant to Nepal for Air Transport Capacity Enhancement*. Manila.

² CEIC Data. www.ceicdata.com/en/nepal/air-traffic-passenger-movement.

C. Provision of Inputs

6. The Asian Development Bank (ADB) approved the loan and grant in November 2009. It became effective in December 2010, almost 4 months later than planned in view of prior discussions between the Ministry of Finance (MOF) and the CAAN on the terms with the Ministry of Law and Justice and the MOTCA. The loan and grant actual closing date were delayed by 3.5 years with two extensions. The civil works contract was awarded in December 2012 and the equipment contract in August 2012. The capacity development consultancy financed under the grant was awarded in December 2011.³

7. The project was to be completed in 5 years, but it was delayed mainly on TIA's civil works contract. It took a year to recruit and contract the design and supervision consultant (DSC). Civil works contracts were also delayed due to the contractor's weak planning and execution, minimal resources and equipment, dependence on weak sub-contractors, insufficient staff, and the DSC's weak contract administration and supervision.⁴ Other factors were problems in transporting filling materials from the quarry sites due to local disturbances, and CAAN's limited support in resolving local issues and obtaining the preferred quarry site closer to TIA, which was the contractor's responsibility.⁵ Natural events, such as the Gorkha earthquake in 2015, the long monsoon season, and the long period of fuel shortage, also contributed to delays.

8. Actual total project cost was \$106.5 million against the estimated total project cost of \$92 million at appraisal. ADB financed \$37.3 million at completion compared with the estimated \$80 million. Government funded \$69.2 million against estimated \$12.0 million. Only \$28.3 million of the loan and \$9 million of the grant were disbursed by loan and/or grant closing due to implementation delays, and thereafter, the government financed the project. The project cost increase was mainly due to the additional \$23 million in civil works because of some re-procured contracts, prolonged project implementation period, and escalated price. The project completion report (PCR) noted that project contingencies⁶ and additional government counterpart funds covered the increase in civil works cost. The actual number of person-months for international (116 person-months) and national (531 person-months) consultants over 48 calendar months for DSCs, as well as the person-months for international (118 person-months) and national (82 person-months) consultants over 36 calendar months for capacity development were the same as appraisal estimate. Contract extension and new supervision contracts were not given. Project management advisory consultants were not recruited.

9. The project was classified as category B based on ADB's Environmental Policy (2002). The initial environmental examination concluded that the project was not expected to have any significant adverse environmental impacts. Since the civil works improvements were within the existing airport boundaries, acquisition of private property and/or land as well as physical displacement of peoples were not required, and no indigenous peoples were affected. The project was classified as category C for involuntary resettlement and indigenous peoples. During implementation, CAAN assured the communities of prioritization in possible employment in the

³ ADB. 2020. *Completion Report: Air Transport Capacity Enhancement Project in Nepal*. Manila.

⁴ ADB (South Asia Department). 2015. Project Review Mission to Nepal: Aide-Mémoire. Back-to-office report (BTOR). 23 February (internal).

⁵ The Pashupati Area Development Trust quarry site was closed in May 2014 due to investigation of Commission for Investigation of Abuse of Authority. Only 40% of filling materials was available in the Pashupati quarry airside infrastructure improvements at TIA, Simikot, and Rara. Most of its available earth filling material could have been transported before May 2014, if the original work schedule was followed. ADB (South Asia Department). 2015. Special Project Administration Mission to Nepal. Aide-Mémoire. 1–11 September (internal).

⁶ The contingency amount of \$11.72 million estimated was not utilized as shown in the PCR's Appendix 3 table.

project, and contractors would not differentiate wages between men and women for work of equal value.

10. During implementation, a transport project preparation facility financed through an Asian Development Fund grant of \$12 million was approved in October 2010 and became effective in April 2011. This facility was to identify and prepare high priority projects, such as feasibility studies, safeguard due diligence, detailed engineering designs, bidding documents, and procurement assistance for advance contracting and potential government and development partners funding. The air transport component was to prepare capacity enhancement and safety improvements at TIA, other regional airports, and domestic airports serving remote areas. Capacity development support to establish an enabling environment for preparing and implementing public-private partnerships in the road and air transport subsectors was envisaged.⁷

D. Implementation Arrangements

11. CAAN was the executing agency responsible for policy, technical guidance, and interagency coordination. It established a project coordination unit (PCU) responsible for overall project management with the Deputy Director General for Air Transport Planning and Development as head. Two project implementation units (PIUs) were planned at appraisal but for efficiency reasons, only one was created for day-to-day monitoring and execution of the infrastructure and capacity development components.

12. The PCU and PIU held weekly meetings to assess implementation progress, identify potential issues, and formulate action plans. Their staff gained project implementation experience through the project and the capacity development program. The PCR considered the institutional arrangement adequate. However, it noted that the PIU director was replaced several times and the DSC was remiss in providing good contractual management support. This validation notes that while the DSC performed well during the detailed design stage, it was less responsive during work supervision due to limited capability and experiences to identify and resolve site issues in dealing with contractual concerns.⁸ This validation assesses the implementation arrangements satisfactory. However, with stronger DSC support, the project performance could have been better.

13. Of the 31 loan covenants, 24 were complied with, 5 partially complied with, and 2 not complied with. The required CAAN's financial statements were the two covenants not complied with, either due to nonavailability or non-submission to ADB. The following were partially complied with. First, CAAN did not ensure that personnel in key positions in the PCU and the PIUs remained in their posts. Second, the required project performance monitoring system (PPMS) was not established, and annual survey and evaluation were not done. However, CAAN was able to monitor the design and monitoring framework (DMF) indicators and incorporated the monitoring results in the progress reports that ADB last received in September 2018. Third, in lieu of a midterm review, a special project administration mission was fielded to review project progress as the civil works contractor was terminated. Fourth, the project progress reports that CAAN submitted to ADB had insufficient information. Also, the borrower's PCR was not submitted to

⁷ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Grant to Nepal for the Transport Project Preparatory Facility*. Manila.

⁸ ADB (South Asia Department). 2015. Review Missions to Nepal. BTORs. 23 February and 18 January (internal); ADB (South Asia Department). 2020. PCR Mission to Nepal. BTOR, 9 March (internal).

ADB. Fifth, the final audited project financial statement for fiscal year (FY) 2019 was still under preparation during PCR preparation.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

14. The PCR rated the project relevant as it supported the government's development plans and programs to enhance the air transport system's safety and reliability. The project was aligned with ADB's country partnership strategy, ADB's Strategy 2020, and ADB's strategy on improving infrastructure and public service while assisting policy reforms. The PCR noted that two performance indicators related to output 1 were dropped from the project scope before civil works began, due to technical feasibility issues or change in financing source. First, based on ICAO's assessment, the instrument landing system and/or localizer that the Japan International Cooperation Agency (JICA) funded was removed during the detailed design stage. Second, the relocation of the Nepal army and domestic airlines hangars as per airport master plan were cancelled after agreement on the optimization of the available funding envelope. Paving a runway at Rara Airport, another performance indicator related to output 2, was also discarded due to shortage of funds. CAAN undertook this activity using its own funds.⁹ The PCR determined that the project financing modality of stand-alone investment, with pre-identified output deliverable during a specific timeframe, was appropriate. However, the PCR noted weaknesses in the DMF on the selected outcome indicators, such as outputs stated as outcome indicators and overlapping of outcome and impact indicators. The government financed the delayed outputs that were not completed within the project duration.

15. This validation notes the project's alignment to the government's Three-Year Interim Plan (2007/08–2009/10), which prioritized transport and communication with 25.8% of total government investment's allocation.¹⁰ The project promoted public–private partnership in infrastructure and revised relevant laws to ensure private sector participation. Strategies to construct and operate airports were to be adopted and investments made annually to improve airport safety and services.¹¹ Under the Three-Year Plan, FY2014–2016, airports were to be modernized, including the establishment of an enabling environment for private sector investment. This validation notes that the project was aligned with ADB's country partnership strategies (CPSs), such as the CPS 2005–2009¹² that recognized the potential of transport in contributing to inclusive growth, and the need for airport facilities and improved roads to ease future bottlenecks. At CPS 2005–2009 midterm review,¹³ the government requested advancing the implementation of the Civil Aviation Sector Development Project to 2009 in view of its immediate need. In subsequent CPSs in 2010–2012 and 2013–2017, and the country operations business plan in 2018–2020,¹⁴ ADB committed to provide assistance on airport infrastructure and services.

⁹ ADB (South Asia Department). 2020. Project Completion Review Mission. Aide-Mémoire. 19–24 February (internal).

¹⁰ Government of Nepal, National Planning Commission. 2007. Three Year Interim Plan (2007/08–2009/10). Unofficial Translation. Kathmandu.

¹¹ Foreign loan assistance for TIA was indicated including construction and renovation works of runways, aprons, terminals, and the control tower building. For CAAN's institutional strengthening, implementation of doable recommendations to improve CAAN's operational efficiency was to be considered.

¹² ADB. 2004. *Country Strategy and Program: Nepal, 2005–2009*. Manila.

¹³ ADB. 2008. *Country Partnership Strategy Midterm Review: Nepal, 2005–2009*. Manila.

¹⁴ ADB. 2009. *Country Partnership Strategy: Nepal, 2010–2012*. Manila; ADB. 2013. *Country Partnership Strategy: Nepal, 2013–2017*. Manila; and ADB. 2017. *Country Operations Business Plan: Nepal, 2018–2020*. Manila.

16. The DMF was well constructed and showed the outputs and outcome linkages. The project scope was aligned with strategies for civil aviation. However, the changes in project scope were not reflected in the DMF as they were processed during implementation. The cancellation of some output indicators was made for valid reasons, such as technical or funding limitations and may have not all been anticipated during the design stage. The instrument landing system at the TIA, based on ICAO assessment and the abbreviated precision approach path indicator (A-PAPI) at Lukla Airport, which could not be calibrated due to insufficient straightline approach, were notable and should have been excluded from the project. It was not clear though when the exclusion of the TIA localizer was decided. The runway paving at Rara Airport was also excluded from the scope after the detailed design due to inadequate funding. On the whole, this validation assesses the project relevant.

B. Effectiveness in Achieving Project Outcomes and Outputs

17. The PCR rated the project ineffective in achieving its intended outputs and outcomes. There were performance indicators developed for each of the three outcomes. Outcome 1 was TIA's improved safety and capacity. Its first performance indicator had five sub-indicators associated with enhancing safety standards, in accordance with best international practices. The first sub-indicator target on the airport emergency service improvement from ICAO's rescue fire-fighting category 8 to 9 was achieved at project closing. The other four indicator targets were not achieved as the linked outputs were being implemented at loan and/or grant closing. The second performance indicator for outcome 1 reported that the TIA's international and domestic passenger handling capacity exceeded the targeted volumes.¹⁵ However, the increase could not be attributed to the project as refurbishing of the international passenger terminal was ongoing and scheduled for completion in 2020. The third performance indicator reported that the size of the completed domestic passenger terminal was partially achieved as the Nepal army occupied the proposed terminal site, and the performance indicator on level of service for IATA's grade improved from D to B. It was partially achieved as it was rated under the revised system at sub-optimal level.¹⁶

18. Outcome 2 was enhanced safety at the Lukla, Rara, and Simikot airports. The PCR noted that only the visual alignment guidance system (VAGS) and A-PAPI for Lukla Airport were procured and installed. Only snowplows and fire extinguishers were acquired for Rara and Sinikot airports instead of runway threshold identifier lights, runway end lights, and air traffic control and/or meteorological equipment. For outcome 3 of CAAN's improved institutional capacity, the PCR noted that some training programs for the staff were delivered, but its reorganization was pending until the Civil Aviation Act (CAA) was approved. The reorganization was also not envisaged under the project, but the outputs were used to prepare the CAA and would assist in the implementation once passed into law.

19. On outputs, the PCR observed that some civil works were under construction at loan and/or grant closing for completion by 2023. Under output 1, four of the eight indicators on TIA's airside improvements were not achieved, two were dropped, and two were achieved. On TIA's landside improvements, one indicator was achieved, and another was not achieved. Under output 2 indicators, i.e., improving the basic safety infrastructure at domestic airports, two indicators were

¹⁵ In 2019, international passenger handling capacity was 4.14 million passengers per annum against the 2.9 million targets, and for domestic passengers, it was 3.2 million against 1.5 million target. ADB. 2020. *Completion Report: Air Transport Capacity Enhancement Project in Nepal*. Manila.

¹⁶ The IATA published a new concept of level of service (LOS) in 2014 narrowing down previous service six levels to four: under-provided, sub-optimum, optimum, and over-design. The target LOS for the domestic terminal was B standard, but its equivalent under the revised 4-tier LOS measure could not be determined.

reported to be achieved—one was paving Rara Airport’s runway which was dropped from the project scope but implemented using CAAN’s own funding—and one partially achieved. For output 3, i.e., enhancing CAAN’s organizational and management capabilities, four of seven output indicators were achieved. Three items were awaiting parliament approval: draft CAA, strategy to separate regulatory and service functions with legal framework and implementation plan, and due diligence studies for private sector participation.¹⁷ Two indicators were partially achieved: (i) the human resources development plan, although it was unclear if staff training policy and program were included; and (ii) an operational accounting software system, financial and management information system. The documents and tenders on the accounting software and financial management system were prepared and undergoing review.

20. This validation acknowledges most of the PCR’s findings on project outcomes and output indicators, including the attribution on the increase in TIA’s annual passenger volumes in 2019 to the project. Given that some outputs for improving TIA’s safety and capacity were either dropped or partially achieved as of loan and/or grant closing, it was not probable that the linked outcomes would be achieved. On the enhanced safety at remote domestic airports, this validation notes that the A-PAPI for Lukla Airport was relocated to Rajbiraj Airport in 2019 as calibration for use in Lukla Airport could not be undertaken due to insufficient straight-line approach to the runway. This was not the intended location for the equipment based on the DMF and may be considered as a revision of project scope. Only the VAGS was operational at Lukla Airport (footnote 9). Some outputs for enhanced CAAN’s organizational and management capabilities were also delivered. However, final approvals were pending which were the responsibilities of MOTCA and CAAN. CAAN’s reorganization was not achieved pending CAA’s approval. A subsequent ADB project was to assist CAAN on reorganization and institutional strengthening.¹⁸

21. The PCR observed that safeguard measures were implemented satisfactorily. CAAN attended adequately to gender issues and ensured local communities were prioritized for employment in the project. Civil works contracts contained compliance clauses on these undertakings that CAAN and DSC monitored. The project encouraged women to travel and participate in socioeconomic activities. Overlooked by the PCR, this validation recognizes that while most of the land utilized for the project was government land, some private and communal land was required. Landowners were fully compensated at replacement cost and special assistance provided for vulnerable groups, in line with ADB guidelines. Since the project failed to deliver most of the infrastructure component outputs that subsequently led to the nonachievement of envisaged project outcomes especially for the civil works contract, this validation assesses the project ineffective.

C. Efficiency of Resource Use

22. The PCR rated the project less than efficient with the recomputed economic internal rate of return (EIRR) at 14.4%, lower than the 21.1% estimated at appraisal, but still considered viable as it was above the 12% hurdle rate. The PCR used a similar methodology to that of appraisal with updated data, and it explained that the lower EIRR was due to the cost overrun in civil works, implementation delays, and price escalations. Sensitivity analysis of worst-case scenario of 20% higher maintenance cost and a 20% benefit reduction resulted in an EIRR of 11.6%. This validation notes that the PCR computed project benefits from 2017 when TIA’s civil works were ongoing and only Lukla Airport’s VAGS was operational. The PCR did not explain how the benefits

¹⁷ National air transport development plan and corporate business plan were being reviewed.

¹⁸ ADB. 2020. *Report and Recommendation of the President to the Board of Directors: Proposed Policy-Based Loan and Technical Assistance Grant to Nepal for the Civil Aviation Sector Improvement Program*. Manila.

from Lukla Airport were estimated. The passenger forecast did not consider the effect of COVID-19 pandemic on international and domestic traveler volumes, given that the PCR preparation was during the pandemic. One option would have been to apply a higher decrease in benefits for 2020–2021 of the forecast, but it was noted that international and domestic passenger traffic would be severely affected for 2020 and 2021.¹⁹

23. This validation also notes that the capital expenditures was up to 2020 only, while there were some civil works re-procured for about 700 meters of new taxiways, 700 meters of link taxiways, and 80,000 square meters of new international and domestic aprons. These were part of the cancelled civil works contract and were re-procured using government funding, but the final actual cost may have not been available during PCR preparation.

24. The poor performance of the civil works contractor and the DSC's weak contract administration and supervision were also major causes of project delay. As early as 2014, there were issues with the contractor's performance. ADB project review missions expressed this concern (footnote 4). The closure of the quarry was also a contentious issue and the contractor's reason for the delays, although the contractor was responsible for its material sources. The DSC issued correction notices to the contractor, but its performance continued to deteriorate. CAAN took measures, such as high-level meetings with the contractor's headquarters, and tried to secure quarry sites. Fourteen notices to correct required measures to accelerate the work were issued to the contractor, but satisfactory remedial actions were not taken. ADB contracted and mobilized an International Federation of Consulting Engineers' (FIDIC) lawyer twice who participated in the project review missions to assist CAAN in resolving the protracted issues with the contractor. The FIDIC specialist assessed the contractor's performance unacceptable for most of the components.²⁰ The civil works contract was cancelled in December 2016. Considering these reasons, this validation assesses the project less than efficient.

D. Preliminary Assessment of Sustainability

25. The PCR rated the project likely sustainable. Even during project implementation, TIA's air traffic and passenger movements had increased, exceeding the project's forecast traffic. TIA's operating revenue increased by 15.2% in FY2018 and 16.4% in FY2019. The PCR surmised that based on appraisal estimates, about 6%–7% of the increase in total traffic would be due to the project's infrastructure improvement, safety upgrading, and management enhancement. This validation notes the PCR's attribution of traffic growth to the project with little basis since during this period, the project was delayed and not yet operational. The PCR itself expressed doubts on this attribution.

26. Based on the project's reestimation of its contribution to CAAN's revenues and capital expenditures, the recomputed financial internal rate of return before taxes based on actual capital

¹⁹ The COVID-19 pandemic outbreak contributed to Nepal's decelerated tourism growth to 1.8% in FY2020. Tourism was the first sector the pandemic hit in February 2020, contracting 70% of tourist arrivals from the Peoples' Republic of China. Travels were restricted in mid-March, and tourist arrivals dropped to zero from April 2020 onward. This was in stark contrast to the government's international arrivals target increase from 1.2 million to 2 million and raising an estimated \$2 billion. The sector also had \$1 billion estimated revenue loss and lost 1 million jobs in restaurants, hotels, and the airline industry. This service sector growth reached its lowest level since FY2002, at 1%, with a significant contraction in the transport and hotel sectors. Labor migrants from Nepal returned reducing 43.3% of remittances between mid-March and mid-May 2020 compared to the same period in the previous year. World Bank Group. 2020. Post-Pandemic Nepal: Charting a Resilient Recovery and Future Growth Directions. *Nepal Development Update*. Washington, DC.

²⁰ ADB (South Asia Department). 2016. Special Project Administrative Mission to Nepal. BTOR. 22–29 August (internal).

costs, prevailing operation and maintenance cost, and existing revenue was 4.1%, higher than the estimated weighted average cost of capital of 2.05%. The project could be rated financially viable. But this validation notes that the effects of the COVID-19 pandemic on TIA's aircraft and passenger traffic, its main revenue source, have not yet been considered (footnote 19). The PCR recognized that CAAN had set up an Aviation Development Fund in 2014 to support TIA's capital and operation and maintenance expenditures. However, if its funding source is TIA's revenues, the pandemic would have affected it. Overall, the effect of the pandemic would determine CAAN's revenue streams from 2020 onward. But even with the uncertainties on air traffic recovery, this validation views that pent-up demand would make up for the current low traffic. Considering these reasons, this validation assesses the project likely sustainable.

III. OTHER PERFORMANCE ASSESSMENTS

A. Preliminary Assessment of Development Impact

27. The PCR rated the project's development impact less than satisfactory as the project was ongoing during PCR preparation. International and domestic passenger traffic grew in 2017 by 112% and 395% from 2008. However, these cannot be attributed to the project as the work was ongoing. The project's development impact is not measurable now and should be assessed when it is anticipated to become evident and determinable at least 3 years after completion of the two revised civil works contracts in 2020 and 2023. The COVID-19 pandemic has negatively affected the tourism sector and related industries and the project's completion would spur the economy when the situation normalizes. Therefore, this validation assesses the project's development impact, at this time, less than satisfactory.

B. Performance of the Borrower and Executing Agency

28. The PCR rated the performance of the borrower and executing agency satisfactory. The PCR acknowledged that government agencies, mainly the MOF, the MOTCA, and the National Planning Commission participated actively in coordinating and supervising the project. CAAN made adequate institutional arrangements ensuring that the PCU and PIU were staffed with the required expertise. This validation notes that it did not fully comply with the loan covenant on tenure of staff and officials. The PCR observed that the government and CAAN provided sufficient counterpart funding, filled the financing gap for the cancelled sub-outputs, and re-procured civil works which extended beyond loan and/or grant closing. CAAN improved its project management and implementation capacity from the training that capacity development consultant provided, although there was no evaluation to support this.

29. This validation notes that the consulting services for capacity development contract was completed as scheduled, but CAAN and MOTCA were unable to expedite the inter-ministry reviews and parliamentary approval required of some outputs such as the CAA, which would trigger CAAN reorganization. CAAN did not develop and operate the PPMS although it submitted improved project monitoring reports. The PCR claimed that the PPMS was developed (footnote 3) but noted that the relevant loan covenant was only partially complied with. This validation notes that once the civil works contract was cancelled, CAAN acted expeditiously to ensure that re-procurement would proceed immediately and the funding to complete the contracts not covered by ADB loan/grant after closing made available. Given the above discussion and the decisiveness the government, MOTCA, and CAAN showed in implementing the project, this validation assesses their performance satisfactory.

C. Performance of the Asian Development Bank and Cofinanciers

30. The PCR rated ADB’s performance satisfactory. ADB headquarters, with Nepal Resident Mission’s assistance, was responsible for project administration and fielded 13 project missions including two special administration missions to help resolve contract management issues. The PCR recognized the missions’ performance in analyzing implementation issues and providing inputs to prepare action plans and technical support to expedite project progress. The government also recognized ADB missions for providing timely advice and technical support. ADB extended loan and/or grant closing twice for a total of 3.5 years, but the loan and grant were closed when project implementation was only less than half complete with 42.7% of the original loan amount disbursed.

31. The PCR noted, but did not elaborate, lapses in due diligence that led to cancelling some sub-outputs, although ADB did not process changes in scope nor revise the DMF. This validation understands that the cancellations were justified and occurred for technical or financing reasons. For example, the paving of Rara Airport’s runway was deleted due to funding limitation, but CAAN used own funds to implement it, or JICA funded TIA’s localizer. This validation notes that ADB took a cautious track in cancelling the civil works contract. It assesses ADB’s performance satisfactory and recognizes ADB’s action in supporting management of civil works.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

32. Overall, the PCR rated the project less than successful. The project was relevant as it was aligned with the government’s development plan, ADB’s CPS on Nepal, and ADB Strategy 2020. However, the project was ineffective²¹ since most of the civil works were not completed by loan and/or grant closing, less than efficient because it was significantly delayed, and likely sustainable considering the institutional and financial arrangements for CAAN to maintain facilities and equipment. This validation assesses the project relevant, ineffective, less than efficient, and likely sustainable as discussed in part II.

Overall Ratings

Validation Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Relevant	Relevant	
Effectiveness	Ineffective	Ineffective	
Efficiency	Less than efficient	Less than efficient	
Sustainability	Likely sustainable	Likely sustainable	
Overall assessment	Less than successful	Less than successful	
Preliminary assessment of impact	Less than satisfactory	Less than satisfactory	
Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	Satisfactory	Satisfactory	
Quality of PCR		Satisfactory	

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = project completion report. Source: ADB (IED).

²¹ The PCR rated the project ineffective as given in part II, section B and in the overall ratings table. This validation considers this as the actual PCR rating. The less than effective rating in the PCR’s overall assessment section could just be treated as an oversight.

B. Lessons

33. The PCR identified three project-level lessons. First, enhancing the capacity of executing agency in project and contract management can help avoid implementation delays of future projects. Second, when a large amount of materials is needed for project implementation, delegation and sharing of responsibilities is needed to ensure supply. Third, the proper use of project monitoring system and improved database, or records management, would help document contracts and scope changes during implementation. The ADB's South Asia Transport and Communications Division also conveyed the importance of sufficiently assessing the capacity and supervising the performance of the domestic contractors. It is also significant to minimize project setbacks in future projects, perform due diligence in carefully evaluating the contractor's capacity during prequalification and bidding evaluation, and closely monitor the contractor's performance including its risk management and financial capacity throughout project implementation.

34. This validation adds two lessons. First, establishing the critical requirements for project readiness creates an enabling environment in facilitating the implementation of project activities. Without these requisites, project risks (e.g., institutional factors, procurement risk and delays, among other things) can be greater which could lead to cost and time overruns. A well-defined implementation arrangement at the onset between executing and contracting agencies would convey clear guidance on the respective functions and scope of operations required during various stages of implementation. These could include various aspects of project administration and monitoring, procurement, and contract management support. If the executing agencies have capacity constraints and systemic weaknesses, the perceived risks are likely to be more complex. In this case, risk mitigation measures, such as careful assessment of agencies' capacities based on experiences with ADB's past projects, could provide valuable entry points in enhancing institutional capacity of agencies.

35. Second, establishing a system for project performance and benefit monitoring, and ensuring its operation after post-project completion helps facilitate the systematic tracking of project results. Weak monitoring and reporting of implementation issues and the insufficient collection and analyses of project benefits and socioeconomic data would hamper project evaluation and lead to noncompliance with loan covenants. The project planned for a PPMS, and DMF indicators were to be collected at baseline and monitored annually. But in this project, the PPMS submitted only one annual report. Having a performance monitoring system in place prior to and during implementation and even after project completion helps in monitoring the status and results of project activities. Such a system supports the identification of preventive measures and facilitates resolution to any implementation issue that could arise. All these help in ensuring that project activities are implemented, as planned.

C. Recommendations for Follow-Up

36. Together with the PCR, this validation strongly suggests that ADB continue monitoring and coordinating with CAAN through the Nepal Resident Mission not only when all pending outputs are completed, but also on the progress of parliamentary action on some outputs under the capacity development component. This includes the draft CAA which is the trigger to CAAN's reorganization. This validation suggests that ADB follow up with CAAN on submitting its annual audited financial statements, to determine whether CAAN is compliant with the loan covenant on debt service coverage ratio.²²

²² In the PCR's Appendix 12, it mentioned that CAAN has to maintain a debt service coverage ratio of at least 1.3 from end of FY2009/2010 onwards.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Reporting

37. The PCR did not provide adequate information whether the PPMS was operational. It noted that the replacement of construction supervision consultant for the re-procured civil works contract monitored the DMF indicators and prepared progress reports without the PPMS. Given the deficiency in the required data for PCR preparation, the project outputs, outcomes, and impacts could not be accurately assessed.²³ This validation reiterates the importance for CAAN to collect monitoring data for the baseline, at completion, and annually thereafter.

B. Comments on Project Completion Report Quality

38. The PCR provided information to appreciate the project, the issues, and their resolution providing good reference for future ADB projects in Nepal. The PCR was fair in rating project performance and was candid in recognizing the outcomes that were not directly attributable to the project. It was also comprehensive on project implementation progress, issues, and actions, although no explanation was provided as to why a change in scope was not processed and the project DMF not updated. The PCR provided sufficient information to draw forth an evaluative project assessment, and this validation assesses the PCR quality satisfactory.

C. Data Sources for Validation

39. The data sources were the report and recommendation of the President, PCR, back-to-office reports of ADB missions; staff review meeting minutes; Nepal's Interim Plans 2008–2010; CPS for Nepal for 2005–2009, 2010–2012, 2013–2017, and 2018–2020; and World Bank's *Nepal Development Update*, July 2020.

D. Recommendation for Independent Evaluation Department Follow-Up

40. The PCR recommended that the project performance evaluation report be prepared in 2024 at the earliest. This validation confirms this as it would allow the measurement of outcomes and impacts when all project outputs are completed. Development in the civil aviation sub-sector would also be evident by then, especially CAAN's reorganization after parliament's approval of the CAA. It is also expected that by 2024, airport traffic would have normalized post-COVID-19 pandemic, but the situation will need to be assessed at that time.

²³ The PCR indicated that the PPMS was not updated. However, ADB's South Asia Transport and Communications Division conducted a PCR mission and site visit in February 2020 to discuss with CAAN and validate the achievements listed in the DMF.