

SECTOR ASSESSMENT (SUMMARY): TRANSPORT (AIR TRANSPORT)

A. Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Nepal is landlocked and bordered to the north by the People's Republic of China, and to the south, east, and west by India. Geographically, Nepal has three distinct areas: the Himalayas in the north, a mid-hill region in the middle of the country, and the lowland plains of the Terai in the south. Civil aviation is crucial to transport, trade, and tourism in landlocked Nepal, and is an indispensable link for the hilly and mountainous parts of the country that are inaccessible by road. Nepal has a large airport network, made up of one international airport, Tribhuvan International Airport (TIA) in Kathmandu, and 53 domestic airports, including 4 domestic hub airports, and 22 nonoperational airports. Two of the domestic hub airports, Gautam Buddha Airport (GBA) and Pokhara Airport, are being upgraded to international airports; the GBA is expected to be completed in 2020 and Pokhara Airport in 2021.¹

2. **Air traffic capacity.** TIA in Kathmandu is the only international gateway for passenger and goods traffic by air in Nepal. TIA has been in service since 1949 and is located in the Kathmandu Valley about 5 kilometers from the city center. The airport has a single asphalt runway that measures 3,050 meters long and 46 meters wide, is orientated 02/20, and has no instrument landing system on account of topographical constraints. The international terminal handles 30 international airlines, connecting 15 countries. TIA is also the largest domestic airport in Nepal, served by 10 domestic airlines.

3. The volume of air traffic at TIA has increased significantly from 1998 to 2018 despite periodic declines in air traffic. These declines occurred in (i) 2000–2002 mainly because of the 11 September 2001 terrorist attacks and the severe acute respiratory syndrome outbreak, (ii) 2006 because of political instability in Nepal, and (iii) 2015 because of an earthquake in Nepal. However, TIA has since achieved steady growth, reaching about 33,900 international aircraft movements in 2018.² There are an average of 340 takeoffs and landings per day at TIA, serving half of the domestic flights in the country. The airport has the capacity to handle 1,350 passengers per hour but needs to handle 2,200 passengers during peak hours. This rising demand has already stretched the capacity of airside facilities and terminals. In May 2018, the Ministry of Culture, Tourism, and Civil Aviation extended TIA's daily operations from 18 hours (from 6 a.m. to 12 midnight) to 21 hours (from 6 a.m. to 3 a.m. the next day) to manage the traffic congestion. Furthermore, against a backdrop of robust tourism demand, a steady annual increase of 3%–5% in air traffic is expected toward 2028.³ TIA's proximity to the Kathmandu city center does not allow its expansion beyond the current airport boundary. The increasing demand should therefore be handled through (i) more efficient use of the available areas within the TIA premises and (ii) distribution of the concentrated international air traffic to the other airports. To address prevailing issues, the Civil Aviation Authority of Nepal (CAAN) prepared the TIA master plan for infrastructure improvement up to 2028 under Asian Development Bank (ADB) assistance.⁴ The master plan aims at enhancing the safety and efficiency of aircraft operations while also contributing to an increase in airside capacity. It also proposes a new international terminal building to be constructed as a landside facility to accommodate the increasing number of international passengers.

¹ The other two domestic hub airports are Biratnagar Airport and Nepalgunj Airport.

² Government of Nepal, Civil Aviation Authority of Nepal (CAAN). 2018. [Aviation Safety Report 2019](#). Kathmandu.

³ Government of Nepal, CAAN. 2013. *National Airports Plan Air Traffic Demand*. Kathmandu. The projection was made based on pre-COVID scenario.

⁴ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Grant to Nepal for the Transport Project Preparatory Facility*. Manila.

4. **Institutional arrangement.** The Department of Civil Aviation was formally established under the Ministry of Work, Communications, and Transport of the Government of Nepal in 1957. It is responsible for the regulation of civil aviation and operation of the nation's airports, air traffic control, and navigation system. Nepal became a member of the International Civil Aviation Organization (ICAO) in 1960. The CAAN was established as an independent regulatory body in 1998 under the Nepal Civil Aviation Authority Act, 2053 (1996) and became the regulator of civil aviation as well as the service provider in the areas of air navigation and aerodrome operations. Nepal has maintained a traditional civil aviation sector structure whereby the functions of regulation, safety oversight, and service provision are handled by one entity—CAAN. The CAAN comprises four directorates and three departments, together with the TIA civil aviation office and civil aviation academy, to oversee air navigation services, safety regulation, aerodrome operations, and aviation security of all airports in Nepal. The CAAN had 873 employees in 2016, which was less than the approved staffing of 1,065 (i.e., a vacancy rate of 18%).⁵ To support airport development works, in 2014, the CAAN introduced an airport development fee of NRs1,000 to be paid by all passengers departing from TIA. The income from this fee increased from NRs1.65 billion in fiscal year (FY) 2016 (ended 15 July 2016) to NRs1.89 billion in FY2018, and is expected to reach NRs2.64 billion in FY2019.⁶ The CAAN has an annual budget of NRs45.17 billion in FY2019, mainly focused on construction and improvement of various airport infrastructure, including TIA runway rehabilitation works, construction of a parallel taxiway, and a new helipad. About 46% of the total budget came from loans and grants, 33% from bank reserves, and 6% from the airport development fee.

5. **Aviation safety.** The Universal Safety Oversight Audit Programme (USOAP) under ICAO is responsible for conducting aviation safety oversight audits to identify deficiencies of ICAO member states. The 2017 USOAP audit of the CAAN identified a negative safety oversight margin in air navigation as well as in support in organization, legislation, and accident and incident investigation, even though the CAAN had significantly improved its safety oversight capability. The USOAP, in its 2017 audit, increased the rate of effective implementation of the CAAN from 46.96% in 2009 to 66.76% in 2017, above the Global Aviation Safety Plan (GASP) benchmark of 60%.⁷ During 2009–2018, 21 accidents involving Nepalese-registered aircrafts claimed 164 lives. These accidents and fatalities were mainly because of controlled flight into terrain (74% of fatalities), loss of control in flight (24% of fatalities), and runway excursion (footnote 7). There were 192 incidents in 2016 and 159 in 2017, in which air operation and maintenance were found to be the predominant reason.⁸ The European Commission has concerns about the appropriateness of the CAAN's governance structure (which combines both the regulator and service provider functions) to supervise safety standards and requirements in civil aviation operations, and has banned Nepalese airlines from flying to the European Union because of a lack of safety oversight by the aviation authority of Nepal.⁹

2. Government's Sector Strategy

6. The government's Aviation Policy, 2063 (2006) mandates a liberal, open-skies approach.¹⁰ The policy calls for the upgrading of TIA and other airports, and the strengthening of the institutional capabilities and effectiveness of the CAAN. Priorities are given to the

⁵ Government of Nepal, CAAN. 2016. [Civil Aviation Report 2016](#). Kathmandu.

⁶ Government of Nepal, CAAN. 2018. [CAAN High Lights of Policy, Budget and Program FY2075–2076](#). Kathmandu.

⁷ Government of Nepal, CAAN. 2018. [Aviation Safety Report 2019](#). Kathmandu.

⁸ Government of Nepal, CAAN. 2017. [Aviation Safety Report 2018](#). Kathmandu.

⁹ European Commission. 2019. [Aviation: Commission updates the EU Air Safety List to maintain highest level of protection for passengers](#). News release. 16 April.

¹⁰ Government of Nepal; Ministry of Culture, Tourism, and Civil Aviation. 2006. *The Aviation Policy, 2063*. Kathmandu.

(i) completion of airport facilities at TIA in accordance with the TIA master plan, (ii) upgrading of Pokhara Airport and GBA as international airports, (iii) start of construction of a second international airport for the capital at Nijgadh, (iv) blacktopping of domestic airports, (v) aviation safety, and (vi) capacity enhancement and separation of CAAN's roles into regulatory and service entities.¹¹

7. The initial phase of the TIA development in accordance with the master plan has been carried out through ADB's assistance to the Air Transport Capacity Enhancement Project (ATCEP).¹² The project scope of the ATCEP includes (i) extension of the northern part of the parallel taxiway to reduce the usage of its single runway for taxiing; (ii) expansion of the international apron areas to accommodate more aircrafts at TIA; (iii) extension of the runway by 300 meters to the south to make it 3,350 meters long; and (iv) provision of air navigation equipment, including an approach lighting system, to comply with international safety standards. However, because of poor performance of the selected civil works contractor and the subsequent delay in re-tenders for repackaging and redesigning of the terminated contract, the loan was closed in December 2018 without fully completing the original scope of work. The remaining scope is being implemented by government funds. However, further development of airside facilities is required to complete the TIA master plan to meet international safety standards as well as the forecast demand in 2028. The airside facilities include the (i) relocation of the hangars to the east side of TIA, (ii) construction of a parallel taxiway on the southern part, and (iii) construction of new domestic aprons. Upgrading of Pokhara Airport is 37% underway with completion in 2021, and upgrading of the GBA is 73% underway with completion in 2020.

8. An ICAO validation mission in July 2017 concluded that the CAAN had attained a safety compliance rate higher than the GASP benchmark (para. 5), which removed significant safety concerns about the civil aviation sector in Nepal. In 2018, the CAAN published the Nepal Aviation Safety Plan, 2018–2022 in line with ICAO's GASP and commenced related activities. The bifurcation of the CAAN into a regulator and a service provider was proposed in the Nepal Aviation Safety Plan as per ICAO's GASP. However, it has yet to be fully implemented.

9. Following the recommendation by ICAO's USOAP in 2015, legislation under the Nepal Civil Aviation Act 2073 (2017) (revised draft) proposed the bifurcation of CAAN's functions as a regulator and service provider. The government further modified the draft bill in July 2019. In February 2020, two draft bills were tabled in the federal Parliament to (i) amend and consolidate laws regarding the CAAN, and (ii) establish an aviation service body proposed to be called the air service authority of Nepal (ASAN). The new regulatory body, the Civil Aviation Authority of Nepal (CAANepal), will be responsible for the oversight of aviation safety, security, and civil aviation organizations. The air service authority will focus on the operation and management of airport service and air navigation service. The unbundling of the regulator and service provider is mandatory as per international criteria.

¹¹ A new national aviation policy is being developed. A draft new aviation policy was prepared by a task force under the Ministry of Culture, Tourism, and Civil Aviation and submitted to the ministry in February 2020. Under the draft national aviation policy, the social and economic development of the country will be promoted by the development of the civil aviation sector with the participation of the private sector. The new policy intends to make the civil aviation sector secure, reliable, competitive, systematic, affordable, and credible. It also emphasizes that aviation safety standards will be maintained above average global standards by meeting the standards determined by ICAO. Air traffic control, flight information services, and advisory services will be made more effective and efficient through the use of technology for service synchronization.

¹² ADB. 2009. [*Report and Recommendation of the President to the Board of Directors: Proposed Loan and Asian Development Fund Grant to Nepal for the Air Transport Capacity Enhancement Project*](#). Manila.

10. **Impact of COVID-19.** The outbreak of the coronavirus disease (COVID-19) has serious negative impacts on Nepalese aviation and tourism sectors. All international flights were temporarily suspended in March 2020. The depth and duration of the shock are uncertain. There could be several scenarios on how soon international connectivity will be restored, depending partly on the length of containment measures adopted by Nepal and other major economies. However, the importance of the tourism industry to the Nepalese economy will remain unchanged over the medium term. The government needs to continue improving the performance of the civil aviation sector in terms of safety and service standards to prepare for the future bounce-back of international travelers and kickstart the economy post-pandemic.

B. ADB Sector Experience and Assistance Program

11. From 1969 to 2017, ADB financed 553 loans, grants, and technical assistance in Nepal for a total amount of \$5.72 billion, including 63 projects in the transport sector for \$986.1 million. ADB's strategic objectives in the transport sector include enhancing global and local connectivity to promote inclusive growth. ADB's strategy is aligned with the South Asia Subregional Economic Cooperation's objectives of facilitating trade and improving connectivity for national and transnational markets through multimodal transport systems (which include air transport). This, in turn, contributes to the government's sector objectives of increased promotion of tourism through better air connectivity into and within Nepal.

12. ADB's involvement in Nepal's aviation sector started with a \$70 million loan and a \$10 million grant to Nepal through the ATCEP in 2010. The project aimed to enhance safety and capacity at TIA and three remote domestic airports—Lukla, Rara, and Simikot. The works at TIA included the reconfiguration and upgrade of airfield infrastructure to meet international safety standards and the refurbishing of the terminal infrastructures. Basic safety improvements were carried out at the three remote domestic airports, including a visual approach guidance system, an abbreviated precision approach path indicator at Lukla Airport, runway threshold identifiers and runway end lights, air traffic control equipment, and meteorological equipment at Simikot and Rara airports. Even though the government is still completing the original scope of work (para. 7), the ATCEP nevertheless improved overall sector management by implementing a 3-year capacity development program for the CAAN. The ATCEP also supported the preparation of a draft of the new civil aviation legislation to split the CAAN.

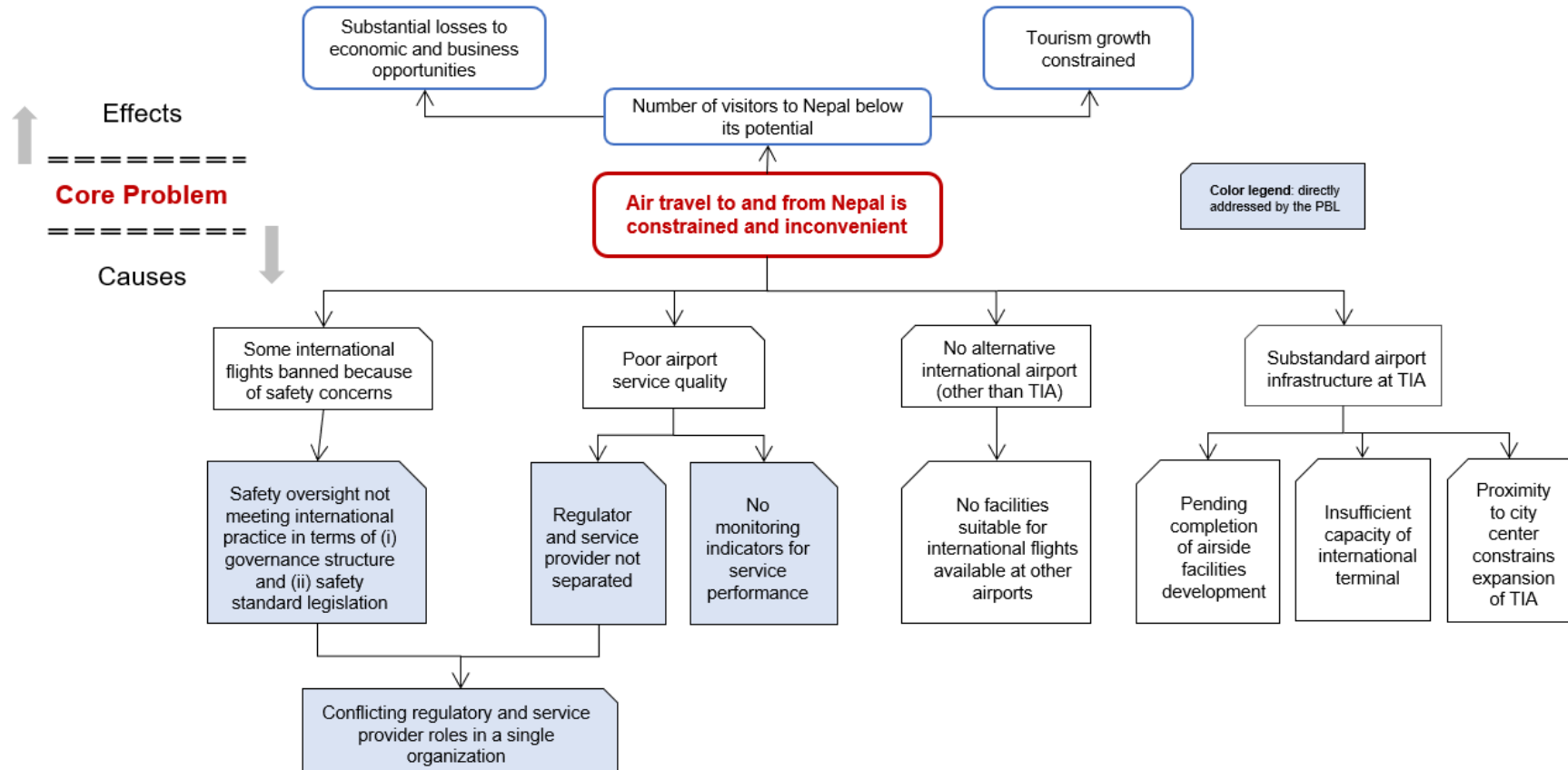
13. To accommodate the increasing number of tourists to Lumbini, ADB is funding the upgrade of the GBA, one of the four domestic hub airports in Nepal, via the South Asia Tourism Infrastructure Development Project.¹³ The project includes the construction of a new runway, development of a new terminal building, installation of communication and navigation equipment, and construction of a visitor information center and other amenities. The physical construction is still ongoing and will be completed in 2020.

14. The TIA master plan was successfully completed in 2017 under the Transport Project Preparatory Facility.¹⁴ The master plan has structured the future development of TIA, including reconfiguration of airside and landside structures. ADB will continue to support the enhancement of the airside capacity of the TIA and sector reform to improve the efficiency, competitiveness, and connectivity of Nepal's aviation industry.

¹³ ADB. 2014. [*Report and Recommendation of the President to the Board of Directors: Proposed Loan for Additional Financing and Administration of Grant for Additional Financing to Nepal for the South Asia Tourism Infrastructure Development Project*](#). Manila.

¹⁴ ADB. 2010. [*Report and Recommendation of the President to the Board of Directors: Proposed Grant to Nepal for the Transport Project Preparatory Facility*](#). Manila.

Problem Tree for Transport (Air Transport)



PBL = policy-based loan, TIA = Tribhuvan International Airport.
Source: Asian Development Bank.