

The logo of the Asian Development Bank (ADB), consisting of the letters 'ADB' in a white serif font inside a black square.

Technical Assistance Report

Project Number: 52201-002
Knowledge and Support Technical Assistance (KSTA)
November 2018

Papua New Guinea: Preparing the Civil Aviation Investment Program

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 16 November 2018)

| | | |
|---------------|---|----------|
| Currency unit | – | kina (K) |
| K1.00 | = | \$0.297 |
| \$1.00 | = | K3.367 |

ABBREVIATIONS

| | | |
|------|---|---|
| ADB | – | Asian Development Bank |
| ICAO | – | International Civil Aviation Organization |
| NAC | – | National Airports Corporation |
| PNG | – | Papua New Guinea |
| RAA | – | Rural Airstrips Agency |
| TA | – | technical assistance |

NOTE

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

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KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

| | | | |
|---|--|--|--|
| 1. Basic Data | | Project Number: 52201-002 | |
| Project Name | Preparing the Civil Aviation Investment Program | Department/Division | PARD/PATE |
| Nature of Activity | Capacity Development, Policy Advice | Executing Agency | Department of Transport, Department of Treasury |
| Modality | Regular | | |
| Country | Papua New Guinea | | |
| 2. Sector | Subsector(s) | ADB Financing (\$ million) | |
| ✓ Transport | Air transport | | 1.50 |
| | | Total | 1.50 |
| 3. Strategic Agenda | Subcomponents | Climate Change Information | |
| Inclusive economic growth (IEG) | Pillar 1: Economic opportunities, including jobs, created and expanded | Climate Change impact on the Project | Medium |
| Environmentally sustainable growth (ESG) | Disaster risk management Global and regional transboundary environmental concerns Urban environmental improvement | ADB Financing | |
| | | Adaptation (\$ million) | 0.20 |
| 4. Drivers of Change | Components | Gender Equity and Mainstreaming | |
| Governance and capacity development (GCD) | Client relations, network, and partnership development to partnership driver of change Institutional development Institutional systems and political economy | Some gender elements (SGE) | ✓ |
| Partnerships (PAR) | Bilateral institutions (not client government) International finance institutions (IFI) Official cofinancing | | |
| Private sector development (PSD) | Public sector goods and services essential for private sector development | | |
| 5. Poverty and SDG Targeting | | Location Impact | |
| Geographic Targeting | No | Nation-wide | High |
| Household Targeting | No | | |
| SDG Targeting | Yes | | |
| SDG Goals | SDG9 | | |
| 6. Risk Categorization | Low | | |
| 7. Safeguard Categorization | Safeguard Policy Statement does not apply | | |
| 8. Financing | | | |
| Modality and Sources | | Amount (\$ million) | |
| ADB | | 1.50 | |
| Knowledge and Support technical assistance: Technical Assistance Special Fund | | 1.50 | |
| Cofinancing | | 0.00 | |
| None | | 0.00 | |
| Counterpart | | 0.02 | |
| Government | | 0.02 | |
| Total | | 1.52 | |
| Currency of ADB Financing: USD | | | |

I. INTRODUCTION

1. The Government of Papua New Guinea (PNG) requested assistance from the Asian Development Bank (ADB) to continue supporting civil aviation following successful achievements under the ongoing Civil Aviation Development Investment Program.¹ The subsequent program is well aligned with ADB's Strategy 2030 to expand connectivity to markets, jobs, social services and protection, and strengthening governance and institutions. It will contribute to environmental sustainability, climate change and disaster resilience, and gender equality.²

2. The knowledge and support technical assistance (TA) project will analyze prevalent aviation issues and prepare and/or update the longer-term aviation road map, policy framework, and investment program considering lessons from the ongoing program.³ The outputs of the TA will help develop a second civil aviation investment program for ADB assistance.⁴ The TA is listed in ADB's country operations business plan for PNG, 2018–2020.⁵

II. ISSUES

3. Air transport services play a critical role in PNG's domestic mobility because of the country's geography. PNG sits in the eastern half of the island of New Guinea, north of Australia, in the southwest Pacific Ocean. It comprises both the mainland and some 600 offshore islands. The population is about 7 million, of which approximately 85% lives in rural areas while the other 15% lives in the 10 major urban areas.

4. The government's Medium-Term Development Plan III prioritizes tourism, agriculture, and connectivity as key development targets, with high expectations for air transport.⁶ This strategic plan, aligned with the current administration's term until 2022, would be the main guiding document for all segments of the economy to deliver on their operational plans. For the transport sector, strategic directions are provided in the National Transport Strategy, which aims to provide an affordable and equitable balance between transport services that serve PNG's main economic sectors and those that provide reliable access to PNG's widely distributed rural population.⁷ The National Transport Strategy sets out the government's key policy and institutional reforms, targeting aviation intuitions, market-entry and competition regulations, ownership of airports and operators, cost recovery and community service obligations, role of private sector, service standards, aviation safety and security, and environmental standards.

5. The ongoing investment program focuses on improving compliance of the major airports operated by the National Airports Corporation (NAC) with the safety and security standards of the International Civil Aviation Organization (ICAO) and provides long-term maintenance with total of \$480 million ADB loans. By completion of the investment program in 2019, key results will be (i) 13 airport terminals and landside facilities built or upgraded; (ii) 15 airport runways, taxiways, and airside facilities improved, including security fencing; and (iii) ICAO certification of Jacksons

¹ ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility to Papua New Guinea for the Civil Aviation Development Investment Program*. Manila.

² ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

³ Initially included as transaction TA in the same amount.

⁴ The TA first appeared in the business opportunities section of ADB's website on 13 September 2018.

⁵ ADB. 2017. *Country Operations Business Plan: Papua New Guinea, 2018–2020*. Manila.

⁶ Government of Papua New Guinea, Department of National Planning and Monitoring. 2018. *Papua New Guinea, Medium Term Development Plan III*. Port Moresby.

⁷ Government of Papua New Guinea, Department of Transport. 2013. *National Transport Strategy*. Port Moresby.

International Airport. The investment program helped restructure the Civil Aviation Authority into legal entities with separate functional responsibilities—i.e., the Civil Aviation Safety Authority to regulate the safety and security of civil aviation; the NAC to run 22 domestic airports, including Jacksons International Airport; and PNG Air Service Limited to manage air traffic services. Recognizing the critical need for connectivity for the rural population, the government has also entered into contract with the Rural Airstrips Agency (RAA), which operates and maintains about 60 of the 450 airstrips that were once usable.⁸

6. The government’s priority for aviation as outlined in the Medium-Term Development Plan III is to provide connectivity to PNG’s rural hinterlands, especially the economically vibrant isolated market segments, through provision of safe, reliable, and cost-effective air transport services that promote tourism and greater socioeconomic activities. In doing so, strategic focus will be (i) to continue strengthening aviation policies and institutions and to achieve ICAO and Civil Aviation Safety Authority compliance for all remaining airports; (ii) to upgrade and modernize landside and airside facilities for selected airports to handle larger jets and meet demand for passenger and cargo transport; (iii) to increase usage of rural airstrips by up to 50%, which will ensure equitable and balanced delivery of public services to a wider population; and (iv) to enable public–private partnership for Jacksons International Airport.

7. The absence of feasible land transport in many parts of PNG, unsafe and poor state of rural airstrips and airport infrastructure, and lack of adequate funding and investment continue to limit connectivity. Weak policies and regulations and a suboptimal tariff structure make business unprofitable for airline operators and create weak and inefficient aviation institutions.

8. Therefore, TA is required to analyze lessons from the investment program and issues constraining aviation. The TA project will (i) prepare and/or update the subsector road map for aviation and the aviation policy framework and medium- to long-term investment plan, identifying critical policy actions needed to achieve operational efficiency, compliance with ICAO safety standards, and the provision of equitable and affordable air transport services to the wider PNG population; (ii) introduce hub-and-spoke concepts for air transport services and validate the feasibility of modernizing and upgrading selected national and regional airports, and the viability of selected rural airstrips; and (iii) undertake due diligence to prepare the ensuing investment program, including an assessment of the aviation segment; technical, economic, and financial appraisals; and environmental, social, gender, and poverty impact assessments.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

9. The TA is aligned with the following impact: affordable and equitable balance between transport services that serve PNG’s main economic sectors and those that provide reliable access to its widely distributed rural population (footnote 5). The TA will have the following outcome: a comprehensive civil aviation investment program suitable for ADB financing prepared.⁹

⁸ The RAA is a Goroka-based not-for-profit organization established in 2014. The RAA’s activities are aimed at improving aviation safety and providing greater access to essential services for remote communities. These services include health, education, community development, and commercial markets for cash crops. The RAA receives budget appropriations from the government to restore and oversee operation and maintenance of rural airstrips, but funding has been unstable and declining.

⁹ The design and monitoring framework is in Appendix 1.

B. Outputs, Methods, and Activities

10. The proposed TA approach is to develop an integrated program toward (i) delivery of basic services and sustainable connectivity; (ii) infrastructure investments and capacity development; and (iii) aviation policy interventions to enable efficiency, cost recovery, and equitable service delivery. The TA is expected to comprehensively tackle physical and nonphysical bottlenecks in close coordination with other development partners. It will consist of:

11. **Output 1: Aviation road map, policy framework, and investment program prepared.** The TA will review existing aviation policy and regulatory framework, undertake deeper analysis of the main investment and noninvestment bottlenecks, and prepare an overall subsector growth strategy and policy framework as well as an investment program. The policy framework will identify the main challenges and operating conditions related to cost recovery, sustainability, efficiency, competition, targets for change and reform actions, and recommend measures to address them. It will also identify gender-inclusive policy actions.

12. **Output 2: Hub-and-spoke system for air transport services prepared.** In light of the government's three pronged "tourism–agriculture–connectivity" development plan, the NAC is focusing on an integrated strategy to link functional and maintainable rural airstrips to selected regional airports (about five or six that comply with PNG civil aviation regulations), thus linking those regional airports to one or more of the country's main national airports (the busiest and most crucial, which are ICAO compliant). This "hub–and–spoke" system is intended to facilitate the government's strategy. The infrastructure of the identified rural airstrips and regional and national airports require modernization and upgrading to handle larger-body aircraft and terminal facilities that are more versatile, functional, and efficient. The TA will help scope out and prioritize investments for upgrading and modernization by applying this hub-and-spoke approach.

13. **Output 3: Due diligence for investment projects undertaken.** Based on the results of outputs 1 and 2, the TA will identify investment, institutional development, and capacity building proposals for subsequent ADB and other donors' programmatic support. Investments will mainly target modernization of key national and regional airports under the NAC and strategically selected rural airstrips structured around the "hub-and-spoke" concept. High readiness will be the key determinant for screening the projects. Large-scale land acquisition or disputed ownership would be avoided. The TA project will assess feasible approaches to developing rural airstrips and will develop models for funding support. The priority physical and nonphysical investments include (i) upgrading and modernizing Tokua, Madang, and other critical airports being developed under the ongoing program; (ii) new or upgrading of air traffic control towers and radar facilities for Jacksons, Nadzab, Tokua, and Madang airports; and (iii) capacity, systems, and skills development to strengthen aviation institutions. Due diligence will identify gender-inclusive actions and measures (e.g., ensuring that women are involved in skills development and designing airports to be gender-inclusive).

C. Cost and Financing

14. The TA is estimated to cost \$1.515 million, of which \$1.5 million will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-6). The key expenditure items are listed in Appendix 2. The government will provide counterpart support in the form of counterpart staff and other in-kind contributions.

D. Implementation Arrangements

15. ADB will administer the TA. The Transport, Energy and Natural Resources Division of ADB's Pacific Department will select, supervise, and evaluate consultants. The executing and implementing agencies of the government, as indicated in Table 1, will provide counterpart support in the form of counterpart staff and other in-kind contributions. They will also provide available technical feasibility studies and designs, data and information access, and facilitation of liaisons with stakeholders; and will guide the implementation of the TA to achieve the TA outputs and desired outcomes within the agreed implementation period.

16. The implementation arrangements are summarized in the table.

| Implementation Arrangements | | | |
|----------------------------------|--|--|----------------|
| Aspects | Arrangements | | |
| Indicative implementation period | January–December 2019 | | |
| Executing agencies | Department of Transport and Department of Treasury | | |
| Implementing agency | Output 1: Department of Transport and Department of Treasury Outputs 2 and 3: National Airports Corporation, Rural Airstrips Agency, Papua New Guinea Air Service Limited, Civil Aviation Safety Authority, and Accident Investigation Commission | | |
| Consultants | To be selected and engaged by ADB | | |
| | Firm: QCBS | 50 person-months (output-based contract) | \$1.15 million |
| | Individual: ICS | International expertise (15 person-months) | \$300,000 |
| | Individual: ICS | National expertise (10 person-months) | \$50,000 |
| Disbursement | The TA resources will be disbursed following ADB's <i>Technical Assistance Disbursement Handbook</i> (2010, as amended from time to time). | | |

ADB = Asian Development Bank, ICS = individual consultant selection, QCBS = quality- and cost-based selection, TA = technical assistance.

Source: Asian Development Bank.

17. **Consulting services.** A firm will be recruited using quality- and cost-based selection with a 90:10 quality-cost ratio and full technical proposal. ADB will engage consultants and carry out procurement following the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions. In addition, individual international and national consultants will be recruited through individual consultant selection procedures as needed for the duration of the TA to provide direct specialist advice to the ADB team in aviation policies, regulations, and subsector analysis, and oversight of the firms' activities and outputs.¹⁰

E. Governance

18. The TA will support financial management assessments, procurement capacity assessments, and risk assessments and risk management plans of the executing and implementing agencies. Based on the assessments, the TA will suggest measures to address the capacity gaps and risks that will form part of the loan documents.

¹⁰ Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 3).

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$1,500,000 on a grant basis to the Government of Papua New Guinea for Preparing the Civil Aviation Investment Program, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

| Impact the TA is Aligned with | | | |
|--|--|---|--|
| Affordable and equitable balance between transport services that serve Papua New Guinea's main economic sectors and those that provide reliable access to its widely distributed rural population (National Transport Strategy) ^a | | | |
| Results Chain | Performance Indicators with Targets and Baselines | Data Sources and Reporting Mechanisms | Risks |
| Outcome A comprehensive civil aviation investment program suitable ADB financing prepared | a. Ensuing investment program approved by ADB by April 2020 (2018 baseline: Not applicable) b. Concept paper for a second civil aviation investment program approved by ADB by July 2019 (2018 baseline: Not applicable) | a. ADB's report and recommendation of the President. b. ADB concept paper | Political environment constrains policy reforms in the sector |
| Outputs 1. Road map, policy framework, and investment program prepared 2. Hub-and-spoke system for air transport services prepared 3. Due diligence for investment projects undertaken | By 2020: 1a. Gender-inclusive subsector assessments, updates, and lessons from previous ADB assistance for aviation during 2019–2018 are undertaken (2018 baseline: Not applicable) 1b. Gender-inclusive road map, policy framework, and investment program developed in consultation with key stakeholders and endorsed by Department of Transport (2018 baseline: Not applicable) 2a. Design of hub-and-spoke system agreed upon with key stakeholders (2018 baseline: Not applicable) 2b. Key investment priorities and policy actions identified (2018 baseline: Not applicable) 3a. Technical, economic, and financial appraisals; environmental, social, gender and poverty impact assessments; and procurement assessments completed for priority projects | 1a–b. TA output reports 2a–b. TA output reports 3a–b. TA output reports | Lack of land availability and/or land disputes delay due diligence works |

| Results Chain | Performance Indicators with Targets and Baselines | Data Sources and Reporting Mechanisms | Risks |
|---|--|---------------------------------------|-------|
| | 3b. Entry points for supporting women's employment and skills development identified | | |
| <p>Key Activities with Milestones</p> <p>1. Road map, policy framework, and investment program prepared</p> <p>1.1 Recruit and mobilize consulting firm by Q1 2019.</p> <p>1.2 Recruit individual consultants by Q1 2019.</p> <p>1.3 Hold stakeholder consultations in Q2–Q3 2019.</p> <p>1.4 Endorse road map, policy framework, and investment plan by Q4 2019.</p> <p>2. Hub-and-spoke system for air transport services prepared</p> <p>2.1 Recruit and mobilize consultants by Q1 2019 (same activities as in 1.1 and 1.2 above).</p> <p>2.2 Hold stakeholder consultations in Q2–Q3 2019.</p> <p>2.3 Endorse hub-and-spoke system and list of investment priorities by Q3 2019.</p> <p>3. Due diligence for investment projects undertaken</p> <p>3.1 Recruit and mobilize consulting firm by Q1 2019 (same activities as in 1.1 and 1.2 above).</p> <p>3.2 Draft concept paper for the ensuing investment program prepared by Q2 2019.</p> <p>3.3 Approve concept paper for the ensuing investment program by Q3 2019.</p> <p>3.4 Complete due diligence for investment projects by Q4 2019.</p> | | | |
| <p>Inputs</p> <p>ADB: \$1.5 million</p> <p>Note: The government will provide counterpart support in the form of counterpart staff and other in-kind contributions. The government will also provide available technical feasibility studies and designs, data and information access, and facilitation of liaisons with stakeholders.</p> | | | |
| <p>Assumptions for Partner Financing</p> <p>No partner financing proposed.</p> | | | |

ADB = Asian Development Bank, Q = quarter, TA = technical assistance.

^a Government of Papua New Guinea, Department of Transport. 2013. *National Transport Strategy*. Port Moresby. Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

| Item | Amount |
|--|----------------|
| Asian Development Bank^a | |
| 1. Consultants | |
| a. Remuneration and per diem | |
| i. International consultants | 1,100.0 |
| ii. National consultants | 200.0 |
| b. Out-of-pocket expenditures | |
| i. International and local travel | 90.0 |
| ii. Office space rental and related facilities | 25.0 |
| iii. Surveys | 20.0 |
| iv. Workshops, seminars, and conferences | 10.0 |
| v. Reports and communications | 10.0 |
| 2. Contingencies | 45.0 |
| Total | 1,500.0 |

Note: The technical assistance is estimated to cost \$1.515 million, of which contributions from the Asian Development Bank are presented in the table above. The government will provide counterpart support in the form of counterpart staff and other in-kind contributions. The value of government contribution is estimated to account for 1% of the total TA cost.

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-6).

Source: Asian Development Bank estimates.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/LinkedDocs/?id=52201-002-TARreport>

1. Terms of Reference for Consultants