

Facility Administration Manual

Project Number: 43141-044
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Multitranche Financing Facility Papua New Guinea: Civil Aviation Development Investment Program (Tranche 3)

The multitranche financing facility administration manual is an active document progressively updated and revised as necessary, particularly following any changes in project costs, scope, or implementation arrangements. This document, however, may not reflect the latest project or program changes.

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Facility Administration Manual Purpose and Process

The Facility Administration Manual (FAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with Government and Asian Development Bank (ADB) policies and procedures. The FAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the FAM.

The National Airports Corporation is wholly responsible for the implementation of ADB financed projects, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by the National Airports Corporation of its obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At Loan Negotiations the borrower and ADB shall agree to the FAM and ensure consistency with the Loan¹ agreement. Such agreement shall be reflected in the minutes of the Loan Negotiations. In the event of any discrepancy or contradiction between the FAM and the Loan Agreement, the provisions of the Loan Agreement shall prevail.

After ADB Board approval of the project's proposal changes in implementation arrangements are subject to agreement and approval pursuant to relevant Government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval they will be subsequently incorporated in the FAM.

¹ The name of the operational financing document may vary on a project to project basis; this reference shall be deemed to encompass such variations, e.g., a Framework Financing Agreement, as applicable.

Abbreviations

ADB	=	Asian Development Bank
ADF	=	Asian Development Fund
AFS	=	audited financial statements
ATM	=	air traffic management
CADIP	=	Civil Aviation Development Investment Program
CADOT	=	Civil Aviation Section, Department of Transport
CASAPNG	=	Civil Aviation Safety Authority of Papua New Guinea
CEMP	=	construction environmental management plan
CMS	=	consultant management system
CNS	=	communication, navigation, and surveillance
CPP	=	consultation and participation plan
CQS	=	consultant qualification selection
CSRN	=	consulting services recruitment notice
DEC	=	Department of Environment and Conservation
DMF	=	design and monitoring framework
EA	=	executing agency
EARF	=	environmental assessment and review framework
EIA	=	environmental impact assessment
EMP	=	environmental management plan
EO	=	environmental officer
ESMS	=	environmental and social management system
FAM	=	facility administration manual
GAP	=	gender action plan
GDP	=	gross domestic product
GRM	=	grievance redress mechanism
ICAO	=	International Civil Aviation Organization
ICB	=	international competitive bidding
IEE	=	initial environmental examination
IP	=	indigenous peoples
LIBOR	=	London interbank offered rate
MFF	=	multitranchise financing facility
NAC	=	National Airports Corporation
NCB	=	national competitive bidding
NGOs	=	nongovernment organizations
OCR	=	ordinary capital resources
PCR	=	project completion review
PNG	=	Papua New Guinea
PNGASL	=	PNG Air Services Limited
PIU	=	project implementation unit
PPP	=	public private partnership
PSC	=	project steering committee
QCBS	=	quality- and cost based selection
RP	=	resettlement plan
SPRSS	=	summary poverty reduction and social strategy
SPS	=	ADB's Safeguard Policy Statement (2009)
TOR	=	terms of reference
TSSP	=	Transport Sector Support Program

I. PROJECT DESCRIPTION

1. **Rationale.** Civil aviation supports the social and economic development of Papua New Guinea (PNG) by providing safe, efficient, reliable, sustainable, and affordable aviation services and infrastructure and provides all-weather access to the country and improves the mobility of communities. In addition, it provides access to non-commercial destinations, thereby meeting important service obligations to the community. Capacity constraints and deteriorating infrastructure, however, threaten the safety and security certification of airports and place these objectives at risk. The National Airports Corporation (NAC) has a well-articulated sector development plan for dealing with the risks but requires support to carry out the plan and meet its obligations. External funding to rehabilitate and upgrade the national airports and support their certification will advance the Medium Term Development Strategy objectives of economic growth, rural development, poverty reduction, and human resource development. Without the improvements, PNG's recent rapid economic growth may stall.

2. **Multi-tranche Financing Facility (MFF).** The Asian Development Bank (ADB) modality-multi-tranche financing facility (MFF) is the most suitable mode of financing for the Civil Aviation Development Investment Program (CADIP) because it (i) supports the Government's long-term vision for the civil aviation sector, as outlined in the NAC's current plans; (ii) enables ADB to sustain the long-term partnership that is needed to build institutional capacity; (iii) allows ADB to strengthen and improve NAC's long term strategic plans and to actively pursue policy dialogue throughout the investment program; (iv) allows the lessons of early tranches (or interchangeably projects) to be applied in subsequent tranches, and reforms to be implemented and efficiency to improve with the help of incentives; and (v) provides certainty to private companies interested in pursuing long-term opportunities in the civil aviation sector. With the MFF facility, the Government and the NAC will be able to implement projects with financing certainty matched with realistic implementation timetables.

A. Impact and Outcome

3. CADIP will establish a sustainable civil aviation network to support the economic growth of the country. The investment program will result in safer, more secure, and more efficient all-weather access to air transport services in the project areas through (i) better airport facilities; (ii) safer and more secure air travel; (iii) more accessible markets, natural resource and mineral sites, and livelihood opportunities; and (iv) reduced costs of air travel to all the project areas. It will help achieve the Government's goal of securing and maintaining Civil Aviation Safety Authority of PNG (CASAPNG) and International Civil Aviation Organization (ICAO) certification for the safety and security standards at its airport operations and facilities.

B. Outputs of the Investment Plan

4. CADIP will firstly concentrate on carrying out priority actions to comply with CASAPNG and ICAO security and safety standards, and then on increasing capacity for growth in services. The outputs will be as follows: (i) rehabilitated airport infrastructure, including runways, taxiways, and aprons; (ii) upgraded runways and passenger terminals that can accommodate larger aircraft; (iii) communication, navigation, surveillance, and firefighting equipment; (iv) better maintained facilities; and (v) an institutionally strengthened and reformed NAC and its operational units. The inputs will comprise financing for civil works and consulting services in program administration, construction supervision, and support for the ongoing institutional reforms.

- (i) **Output 1: Reformed institutions.** The investment program will help strengthen and sustain the operation of NAC, PNG Air Services Limited (PNGASL), and Civil Aviation Safety Authority of PNG (CASAPNG) by supporting the three agencies to update strategy, prepare and implement own projects on schedule, and improve compliance with the CASAPNG and ICAO safety and security standards. To execute the tasks, specialized capacity development for NAC, PNGASL, and CASAPNG has been provided based on training plans submitted by the agencies. Individual consultants have also been mobilized to strengthen the capacity of the project implementation unit (PIU).
 - (ii) **Output 2: Improved infrastructure.** The majority of the national airports are not designed for current operating aircraft size and weight and have reached their design life. In addition, most airports are not completely secured by security fencing due to a lack of maintenance and theft.
 - (iii) **Output 3: Improved operations.** PNGASL uses a network of communication, navigation, and surveillance (CNS) and air traffic management (ATM) systems to provide air traffic management and navigation services in accordance with international best practices to meet the commercial needs of its customers and comply with domestic and international regulations. The 2012 Australian Agency for International Development (AusAID) diagnostic study revealed that the current CNS and ATM systems are fragile and in dire need of upgrading if safety risks are to be effectively managed into the future. AusAID has allocated funds for surveys, equipment, and capacity development to air traffic management and air navigation services. In addition, program will enhance firefighting capacity at airports, runway lightning at selected airports to make night operations safe and other airport safety equipment.
5. The outputs of Tranches 1, 2 and 3 are summarized in the following paragraphs.
- (i) **Outputs of Tranche 1.** The first tranche outputs: (i) improvements in pavements and fencing identified as requiring emergency works to comply with CASAPNG and ICAO safety and security standards; (ii) support for engineering design, preparation of bid documents, procurement by the NAC, and preparation by the NAC of investment proposals for subsequent projects and tranches for ADB approval; and (iii) consulting services to NAC for the supervision of airport improvement contracts. The major projects planned and completed under Tranche 1 are supply of 3 fire tenders, installation of Instrument Landing System at Jackson airport, Mt. Hagen airport terminal building (domestic and international component) project, Hoskins airport upgrade, the new Port Moresby domestic apron, as well as the installation of security fencing at Kavieng, Wewak, Gurney and Goroka.
 - (ii) **Outputs of Tranche 2.** Tranche 2 is financing the (i) improvements in pavements of 4 national airports (Chimbu, Girua, Goroka, and Vanimo) and fencing at five national airports (Buka, Chimbu, Girua, Momote, and Vanimo) which required emergency works to comply with CASAPNG and ICAO safety and security standards; (ii) support for engineering design, preparation of bid documents,

procurement by the NAC, and preparation by the NAC of investment proposals for subsequent projects and tranches for ADB approval; and (iii) consulting services to NAC for the supervision of airport improvement contracts.

6. The major projects under implementation include the Goroka Airport Upgrade (pavement strengthening, runway extension to achieve the required overall length for F100 aircraft of similar aircraft capacity, terminal building and ATC Control Tower) project, Vanimo pavement strengthening (pavement strengthening, airport security fence and new terminal building), Girua airport upgrade (pavement strengthening and new terminal building), Chimbu Pavement Strengthening and Airport Security Fence as well as the installation of airport security fencing at Momote and Buka.

7. Tranche 2 is also financing the: (i) supply of new communication, navigation, and surveillance (CNS) and air traffic management (ATM) and 9 fire bowsers, (ii) replacement of visual approach slope indicator systems (Goroka, Kavieng, and Vanimo) and airport standby power supply systems (Buka, Gurney, Kavieng, Madang, Momote, Nadzab, Port Moresby, Tokua, and Wewak), and (iii) establishment of market sheds as community service obligations (Buka, Girua, Goroka and Momote). Rescue and fire vehicles and firefighting equipment were procured to improve airport rescue services in Mount Hagen, Nadzab, and Tokua. A new fire station will be built for Goroka whilst the fire stations at Mt. Hagen, Nadzab and Tokua are being renovated and refurbished so as to keep these fire trucks in good condition.

8. **Outputs of Tranche 3.** Tranche 3 outputs will include the continued strengthening of human resource capacity for the reformed institutions of NAC, PNG ASL, and CASA PNG as well as include the PNG Accidents Investigations Commission; improved airport infrastructure at 12 national airports to meet international safety and security standards; and assist NAC to implement efficient systems and processes to improve long-term airport operations.

- (i) **Output 1. Reformed Institutions.** Tranche 3 will help strengthen and sustain the operation of NAC, PNGASL, and CASAPNG by supporting the three agencies to update their business strategies, improve compliance with the CASAPNG and ICAO safety and security standards and develop business processes for airline service charges, landing fees, terminal facility charges and passenger facility charges for sustainable operations.
- (ii) **Output 2. Improved Infrastructure.** Tranche 3 will finance the improvements of airports infrastructure to meet the safety and security certification and the airline future capacity operations. The infrastructure improvements include extension of runways of 5 airports, building 6 new terminals, and improvements of taxiways and aprons.
- (iii) **Output 3. Improved Operations.** Tranche 3 will support the improvement of air maintenance practices by providing runway lights at 7 national airports for safe night operations, implementation of asset management system, long-term maintenance contracts for at least 9 national airports, and capacity development of women staff for airport maintenance and operations, air traffic safety and security.

9. The major sub projects under Tranche 3 includes the Momote Airport Upgrade for pavement strengthening and asphalt overlay, runway extension and new terminal building, Mt. Hagen pavement strengthening and new ATC tower, Mendi pavement strengthening, airport

security fencing and new terminal building, Kavieng upgrade pavement strengthening, runway extension and new terminal building, Buka upgrade pavement strengthening, runway extension and new terminal building, Gurney upgrade runway extension and renovations and refurbishments to existing terminal building, Madang upgrade pavement strengthening and new terminal building, Wewak upgrade pavement strengthening and new terminal building, Vanimo runway extension and associated works and airport security fencing at Kerema, Kiunga and Tari. A new airport fire station will be built for Madang and Mt. Hagen in Tranche 3. Runway lights will be installed at 7 airports to make them safe for night operations.

10. NAC is responsible for the operation and maintenance of all national airports. However, pavements of runways, aprons, and airport facilities have deteriorated especially smaller airports due to the obsolete infrastructure design standards and absence of appropriate maintenance. If not corrected, unsafe airports need to be closed due to the high risk of life threatening incidents. Tranche 3 will improve and maintain the pavements of 6 small airports. NAC has procured basic airport maintenance equipment during Tranches 1 and 2 and will continue to do so under Tranche 3 to carry out pavement maintenance to be done by maintenance contractors as well as by the NAC airport safety officers stationed at their respective airports. Tranche 3 will also focus on the improvement of airport maintenance practices by awarding long term maintenance contracts to at least 5 national airports.

11. Individual International consultants and a firm for design and supervision will be mobilized to assist the PIU in designing and implementing projects under Tranche 3. Through their engagement, the consultants will conduct workshops and on-the-job training based on a structured training program to improve NAC staff capacity. Consultants will be mobilized to assist PIU in preparing/updating NAC procurement policies and guidelines in addition to the procurement of goods above.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

12. The PIU is adequately staffed and continues its functionality with specialists in technical, procurement, financial, safeguards, monitoring and reporting. NAC has completed technical designs of civil works of four major airports out of the total nine airports under Tranche 3, including pavement rehabilitation and associated works. In addition, security fencing and associated works design is also ready as a part of advance action. Master bidding document for all ICB works has been approved as part of project readiness. Additional two packages are under preparation to be included in advance contracting. Individual consultants hired under Tranche 2 will supervise procurements of Tranche 3. Environment and social safeguard documents for all subprojects have been prepared and posted on the ADB website.

1. Project Implementation Unit

13. The PIU established at NAC for Tranches 1 and 2 will continue to implement Tranche 3. Consultants hired under Tranche 2 will complete the design of remaining projects and supervise procurements of Tranche 3. External consultants and DSC firm will be engaged under Tranche 3 to support the PIU staff to execute the plans and implementation of Tranche 3. The external consultants will also be required to provide capacity building to PIU staff with a long-term view to ensuring that in-house capacity in the areas of business strategies and processes is built up over the term of Tranche 3 and remains within NAC after project completion including review of

procurement guidelines of NAC. This national talent retention contributes to longer-term institutional development of NAC.

2. Counterpart Staff

14. CADIP PIU is fully staffed and functional with staff hired under Tranche 1 and tranche 2. PIU is headed by an experienced Program Director who will supervise the day-to-day management of Tranche 3. The Program Director will be supported by technical, financial and administrative staff within the PIU to deliver the outcomes of Tranche 3. The team will be supported by international consultants. The Acting Managing Director/CEO of NAC will provide the Program Director with direction and guidance.

15. In addition to the current filled positions, PIU will be further strengthened by adding new positions² under Tranche 3. Described in Table 1 are required positions to implement Tranche 3. The terms of reference of the PIU staff is in Appendix 1. NAC has already appointed existing staff (such as Social Safeguards Officer) or is in the process of recruiting staff to the positions and will ensure their continuation prior to the commencement of Tranche 3. The PIU includes an environmental officer (EO) who has experience having implemented the environmental requirements for tranches 1 and 2. The contract of the EO as well as other key personnel will be extended to cover tranche 3. The counterpart staff will work with international consultants mentioned in Section VI. D.

Table 1: CADIP PIU Personnel Tranche 3 Requirements

NAC Staff	Months
Program Director (x1)	30
Civil Engineers (x11)	318
Mechanical/Electrical Engineer (1)	12
Architect (x1)	30
CAD Draftsman (x5)	150
Environmental Officer (x1)	30
Building Technical Officer (1)	6
Project Management Accountant (x1)	30
Accounts Officers (x3)	90
Project Analyst (x1)	30
Administration Manager (x1)	30
Administration Officer (x2)	60
Driver (x1)	30
Executive Secretary (Receptionist) (x1)	30
Social Safeguards Officer (x1)	30
ARFF Officer	30
Electrical Supervisor	30
TOTAL MONTHS (person)	936 months

3. Project Steering Committee

² The PMU is currently staffed with 25 members. The new positions for Tranche 3 are three engineers, one architect, two draftsman, one building technical officer and one accounts officer.

16. A Project Steering Committee (PSC) established under Tranches 1 and 2 will continue to: (i) oversee and monitor project implementation, including policy and coordination, technical design and tendering, progress reports, and audited accounts for Tranche 3; and (ii) provide policy and implementation guidance to the NAC Managing Director/CEO for Tranche 3.

4. Advance Action

17. Contracting action for works under Tranche 3 commenced in January 2016 with the calling of bids for Momote airport upgrading project. A master bidding document has been approved for all ICB works under Tranche 3. The second project under advance contracting advertised in June 2016 for the Mt Hagen airport rehabilitation.

18. The project readiness activities for Tranche 3 including those for Tranches 1 and 2 are summarized in Tables 2, 3 and 4.

Table 2: Project Readiness Activities for Tranche 1													
	2009								2010				
Indicative Activities	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Responsible
Fact-Finding Mission													ADB/Gov/EA
Fact Finding Wrap Up													ADB/Gov/EA
Management Review Meeting													ADB/Gov/EA
Investment Program Appraisal													ADB
Staff Review Meeting													ADB
Loan Negotiations													ADB/Gov
ADB Board Approval													ADB
Loan Agreement Signing													ADB/Gov
Loan Effectiveness													ADB

ADB = Asian Development Bank, EA = executive agency, Gov = Government

Table 3: Project Readiness Activities for Tranche 2														
	2013									2014				
Indicative Activities	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Responsible
Fact-Finding Mission														ADB/GoV/EA
Fact Finding Wrap Up														ADB/GoV/EA
PIU established and operational (ongoing under T1)														GoV/EA
Staff Review Meeting														ADB
Advance Action for Procurement														EA
NEC/MESC Approval														Gov
Loan Negotiations														ADB/GoV/EA
Advance action for consulting services														EA
ADB Approval														ADB
Loan Agreement Signing														ADB/GoV/EA
Loan Effectiveness														ADB

ADB = Asian Development Bank, EA = executive agency, GoV = Government, MESC = Ministerial Economic Sector Committee, NEC = National Executive Council.

Table 4: Project Readiness Activities for Tranche 3																	
	2016												2017				
Indicative Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Responsible
Fact-Finding Mission																	ADB/GoV/EA
Fact Finding Wrap Up																	ADB/GoV/EA
PIU established and operational (ongoing under T1)																	GoV/EA
Management Review Meeting																	ADB
Advance action for procurement																	EA
NEC Approval																	Gov
Loan Negotiations																	ADB/GoV/EA
Advance action for consulting services																	EA
ADB Approval																	ADB
Loan Agreement Signing																	ADB/GoV/EA
Loan Effectiveness																	ADB

ADB = Asian Development Bank, EA = executive agency, GoV = Government, MESCC = Ministerial Economic Sector Committee, NEC = National Executive Council.

B. Overall Program Implementation Plan

Table 5: Overall Project Implementation Plan

Activities	2014				2015				2016				2017				2018				2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
A. DMF																								
1. Institutional and Sector Reforms																								
1.1 Develop and implement capacity development plan																								
1.2 Update NAC and CASAPNG strategic management plan																								
2. Rehabilitation and Improvement of National Airports																								
2.1 Land acquisition																								
2.2 Prepare design and bid documents for Tranche 3 subprojects																								
2.3 Tender and award civil works contracts																								
2.4 Develop airport maintenance program																								
2.5 Tender and award long-term performance-based maintenance contracts																								
2.6 Implement civil works contracts																								

Table 5 (continued) : Overall Project Implementation Plan																								
Activities																								
	2014				2015				2016				2017				2018				2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
3. Consulting Services (design, construction supervision, maintenance planning, and capacity development)																								
3.1 Shortlist consultants and finalize request for proposals																								
3.2 Evaluate proposals and award contract																								
3.3 Implement consulting services																								
B. Management Activities																								
Procurement plan key activities to procure contract packages																								
Consultant selection procedures																								
Environment management plan key activities																								
Gender action plan key activities																								
Communication strategy key activities																								
Inception Mission																								
Annual/Mid-term review																								
Quarterly progress report																								
Project completion report																								
Project completion review																								

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations

Project implementation Organizations	Management Roles and Responsibilities
Executing Agency: National Airports Corporation	➤ Overall responsibility in co-ordinating program, tranches, and projects, guided by the Project Steering Committee
Project Specific Management Body: Civil Aviation Safety Authority of Papua New Guinea	➤ Coordinate with National Airports Corporation to implement the program (i.e., training)
Papua New Guinea Air Services Limited	➤ Coordinate with National Airports Corporation to implement the program (i.e training)
PNG Accidents Investigation Commission	➤ Coordinate with National Airports Corporation to implement the program (i.e training)
Project Steering Committee	<ul style="list-style-type: none"> ➤ Overall guidance of program ➤ Review implementation progress and resolve Issues
Project Implementation Unit	➤ Day to day implementation of program, tranches and project under supervision of National Airports Corporation
ADB	<ul style="list-style-type: none"> ➤ Review all the documents that require ADB approval; ➤ Conduct regular loan review missions, a mid-term review, and project completion mission; ➤ Process withdrawal applications and release eligible funds; ➤ Update and post on ADB website the project information for public disclosure, and the safeguards documents in accordance with the ADB Safeguards Policy Statement (2009)

B. Key Persons Involved in Implementation

Executing Agency

National Airports Corporation

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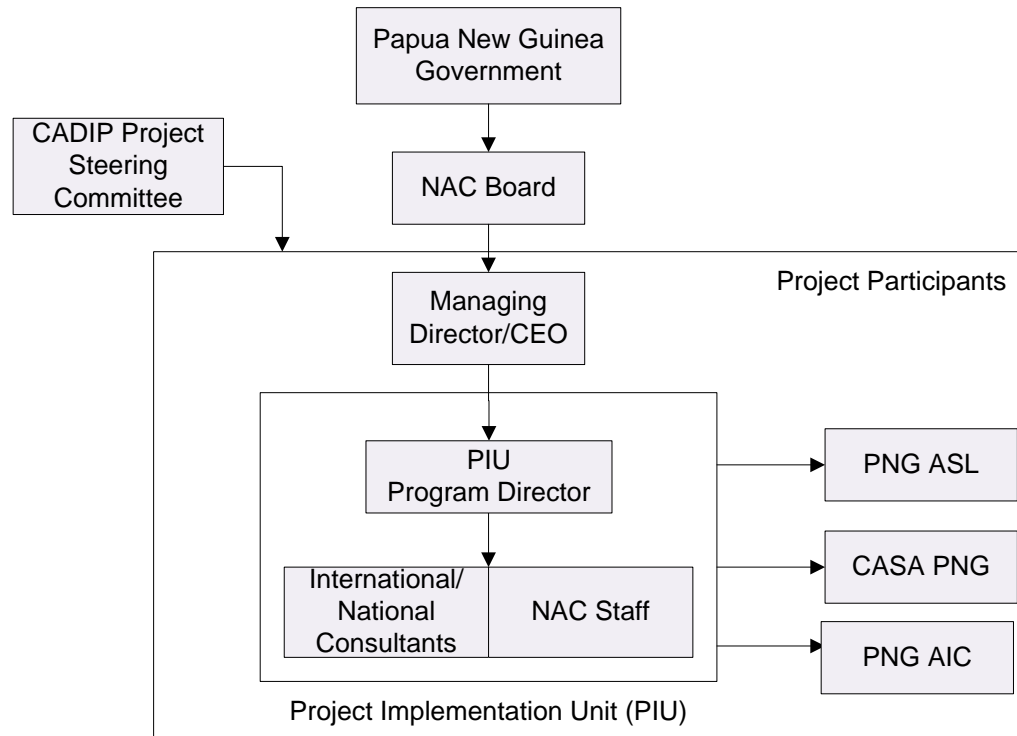
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C. Project Organization Structure

19. **Figure 1: Project Organisation Structure** below shows the reporting lines essential internal structures of key organizations involved in implementation.



CADIP = Civil Aviation Development Investment Program; CASAPNG = Civil Aviation Safety Authority of PNG; CEO = Chief Executive Officer; NAC = National Airports Corporation; PIU = project implementation unit; PNGASL = PNG Air Services Limited; PNG AIC = PNG Accidents Investigations Commission.

IV. COSTS AND FINANCING

20. The total cost of the investment program is estimated at \$640 million equivalent, including taxes and duties, physical and price contingencies, interest and other charges. ADB's contribution to the investment program is \$473 million³ which comes from ADB's special fund resources, and ordinary capital resources (OCR). The MFF will comprise several loans, conditional on the Government's submission of the related periodic financing requests, execution of the related loan agreements, and fulfilment of the terms and conditions and understandings set forth in its financing framework agreement with ADB. The investment program will be implemented over 9 years. The OCR funding will be covered by Ordinary Operations Loan Regulations applicable to London interbank offered rate (LIBOR)–based loans, and the funding from Special Funds resources by the Special Operations Loan Regulations. In both cases, any modifications introduced under the individual loan agreements will apply. The government will finance \$84 million, and the remaining \$75 million will be met through private sector participation, subject to suitable PPP arrangements.

21. **Tranche 1** combines three loans totalling \$95 million equivalent—an OCR loan of about \$25 million and two loans from Special Funds resources totalling \$70 million equivalent (a “hard-term” Asian Development Fund (ADF) loan of \$20 million equivalent and a “soft-term” ADF loan of about \$50 million equivalent). The ADB loans cover 85% of the cost of Tranche 1. The first periodic financing request was presented to the ADB Board of Directors together with the signed financing framework agreement. The government funds the remaining \$17.0 million equivalent, including local taxes and duties.

22. **Tranche 2** is a combination of two loans totalling \$130 million equivalent—an OCR loan of \$115 million and an ADF loan of \$15 million equivalent. The ADB loans cover 76.5% of the cost of Tranche 2, and the government is financing \$40 million equivalent, inclusive of taxes and duties.

23. **Tranche 3** will combine two loans totalling \$248 million equivalent—an OCR loan of \$213 million and an ADF loan of \$35 million equivalent. The ADB loans cover 90% of the cost of tranche 3, and the government is financing \$27 million equivalent, inclusive of taxes and duties and land acquisition as counterpart funding. Tables 7-11 show the detailed cost estimates of Tranche 3

24. The proposed financing plan for the investment program including Tranches 1, 2 and 3 is summarized in Table 6.

³ The MFF was originally envisaged as comprising of 4 tranches. However, due to the delay in implementation of Tranche 1 and closing of MFF in Dec 2018, remaining two tranches are merged together and are now proposed to be provided under only one subsequent tranche with financing amount of \$473 million.

Table 6: Financing Plan

Source	Amount (\$ million)	Share of Total
Investment Program		
Asian Development Bank	480.0	75%
Private Sector Participation	75.0	12%
Government	85.0	13%
Total	640.0	100%
Tranche 1		
Asian Development Bank	95.0	85%
Government	17.0	15%
Total	112.0	100%
Tranche 2		
Asian Development Bank (Ordinary Capital Resources)	115.0	68%
Asian Development Bank (Asian Development Fund)	15.0	9%
Government	40.0	23%
Total	170.0	100%
Tranche 3⁴		
Asian Development Bank (Ordinary Capital Resources)	213.0	77%
Asian Development Bank (Asian Development Fund)	35.0	13%
Government	27.0	10%
Total	275.0	100%

⁴ Rounded to zero (OCR \$77.5%, ADF 12.7% and GoPNG 9.8%).

A. Detailed Cost Estimates by Financier

Table 7: Detailed Cost Estimates by Financier for Tranche 1

(\$ million)

Item	Total \$	OCR	ADF (hard)	ADF (soft)	ADB \$ ^b	Govt \$	Share	
							ADB	Govt
A. Investment Costs^a								
1. Civil Works	76.0	16.6	13.3	33.2	63.1	12.9	83%	17%
2. Equipment	4.9	1.2	0.9	2.3	4.4	0.5	90%	10%
3. Consultants (Project Management)	14.9	3.5	2.8	7.1	13.4	1.5	90%	10%
Subtotal (A)	95.8	21.3	17.0	42.6	80.9	14.9	84%	16%
B. Contingencies^c	12.0	2.6	2.1	5.2	9.9	2.1	83%	18%
C. Financing Charges During Implementation^d	4.2	1.1	0.9	2.2	4.2	-	100%	0%
D. Total Project Cost (A+B+C)	112.0	25.0	20.0	50.0	95.0	17.0	85%	15%
% of Total Project Cost		22%	18%	45%	85%	15%		

a In 2009 prices.

b Includes taxes and duties (10% of base cost) of \$8.5 million.

c Physical contingencies computed at 10%. Price contingency computed at an average of 1.9% on foreign exchange costs and 4.0% on local currency costs.

d Includes interest charges.

ADB=Asian Development Bank, ADF=Asian Development Fund, OCR=ordinary capital resources

Sources: National Airports Corporation and Asian Development Bank

Table 8: Detailed Cost Estimates by Financier for Tranche 2

(\$ million)

Item	ADB OCR		ADB ADF		Government					Total Cost
	Amount	% of Cost Category	Amount	% of Cost Category	Amount			% of Cost Category		
					Costs	Tax and Duties	Total			
A. Investment Costs ^a										
1 Civil Works	64.1	69.1%	8.4	9.0%	11.8	8.4	20.3	21.9%	92.7	
2 Equipment	23.2	69.1%	3.0	9.0%	4.3	3.0	7.3	21.8%	33.5	
3 Consultants (Project Management)	4.3	69.0%	0.6	9.1%	0.8	0.6	1.4	21.9%	6.2	
4 Capacity Development	2.6	68.9%	0.3	8.9%	0.5	0.3	0.8	22.2%	3.7	
5 Recurrent Costs	3.3	29.3%	0.4	3.9%	6.4	1.0	7.5	66.9%	11.1	
Subtotal (A)	97.3	66.1%	12.7	8.6%	23.8	13.4	37.2	25.3%	147.2	
B. Contingencies										
1 Physical ^b	5.6	76.1%	0.7	9.9%	1.0	0.0	1.0	14.0%	7.4	
2 Price ^c	7.3	72.7%	1.0	9.5%	1.8	0.0	1.8	17.8%	10.0	
Subtotal (B)	12.9	74.1%	1.7	9.7%	2.8	0.0	2.8	16.2%	17.4	
C. Financing Charges During Implementation ^d										
1 Interest During Implementation	4.3	87.3%	0.6	12.7%	0.0	0.0	0.0	0.0%	5.0	
2 Commitment Charges	0.5	100.0%	0.0	0.0%	0.0	0.0	0.0	0.0%	0.5	
Subtotal (C)	4.8	88.3%	0.6	11.7%	0.0	0.0	0.0	0.0%	5.4	
Total Project Cost (C)	115.0	67.6%	15.0	8.8%	26.6	13.4	40.0	23.5%	170.0	
% of Total Project Costs		67.6%		8.8%				23.5%		

^a In mid-2013 prices.^b Computed at 8.4% for civil works; 8.4% for field research and development, training, surveys and studies.^c Computed at 7.5% on foreign exchange costs and 7.5% on local currency costs.^d Includes interest and commitment charges. Interest during construction has been computed at the five-year forward London interbank-offered rate plus a spread of 0.4%.

ADB=Asian Development Bank, ADF=Asian Development Fund, OCR=ordinary capital resources

Sources: National Airports Corporation and Asian Development Bank

Table 9: Detailed Cost Estimates by Financier for Tranche 3
(\$ million)

Item	ADF		OCR		GoPNG				Total Cost ^a
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	Tax	Total Gov	% of Cost Category	
A. Investment Costs^b									
1 Goods	0.0	0.0%	11.2	91.7%	0.0	1.0	1.0	8.3%	12.2
2 Civil Works	33.6	17.4%	142.5	73.6%	0.0	17.6	17.6	9.1%	193.8
3 Consulting Services	0.0	0.0%	5.4	100.0%	0.0	0.0	0.0	0.0%	5.4
Individual	0.0	0.0%	1.3	100.0%	0.0	0.0	0.0	0.0%	1.3
Design and Supervision	0.0	0.0%	3.6	100.0%	0.0	0.0	0.0	0.0%	3.6
Audit	0.0	0.0%	0.5	100.0%	0.0	0.0	0.0	0.0%	0.5
4 Training and Workshops	0.0	0.0%	3.2	100.0%	0.0	0.0	0.0	0.0%	3.2
5 Land Acquisition	0.0	0.0%	0.0	0%	8.4	0.0	8.4	100.0%	8.4
6 Project Administration ^c	0.0	0.0%	5.2	100.0%	0.0	0.0	0.0	0.0%	5.2
Total Base Cost	33.6	14.7%	167.4	73%	8.4	18.6	27.0	11.8%	228.1
C. Contingencies^d	-	0.0%	38.2	100%	-	-	-	0.0%	38.2
D. Financing Charges During Implementation^e	1.4	15.7%	7.3	84%	-	-	-	0.0%	8.7
Total Project Cost (A+B+C)	35.0		213.0		8.4	18.6	27.0		275.0
% Total Project Cost		12.7%		77.5%				9.8%	

^a Includes taxes and duties of \$18.6 million which will be financed by government counterpart funds. ADB financing may also cover taxes and duties for the project. The amount of taxes and duties to be financed by ADB: (i) are within the reasonable threshold identified during the country partnership strategy preparation process; (ii) do not represent an excessive share of the investment plan; (iii) apply only to ADB-financed expenditures; and (iv) the financing of taxes and duties is considered material and relevant to the success of the project.

^b As of 1 March 2016. In end-2015 prices.

^c Includes PIU operating costs and salaries.

^d Physical contingencies for civil works computed at 12% of base costs, and 5% for goods, consulting services, capacity development and recurrent costs. Price contingencies were computed using the escalation factors published by ADB on local and foreign components of the project costs; includes provision for potential exchange rate fluctuation using the purchasing power parity of exchange rate concept.

^e Includes interest and commitment charges. Interest during construction on the ADF loan has been computed at 2% p.a. Interest during construction on OCR loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charges for the OCR loan is 0.15% per year to be charged on the undisbursed loan amount.

Sources: National Airports Corporation and Asian Development Bank

B. Detailed Cost by Expenditure Category**Table 10: Detailed Cost Estimates by Expenditure Category for Tranche 3**

Item	(in PGK million)			(in USD million)			% of Total Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost ^a	
A. Investment Costs ^b							
1 Goods	27.2	6.8	34.0	8.9	2.2	11.2	4.9%
2 Civil Works	0.0	537.1	537.1	0.0	176.2	176.2	77.2%
3 Consulting Services	16.5	0.0	16.5	5.4	0.0	5.4	2.4%
4 Training and Workshops	9.6	0.0	9.6	3.2	0.0	3.2	1.4%
5 Land Acquisition	0.0	25.5	25.5	0.0	8.4	8.4	3.7%
6 Recurrent Cost	0.0	15.8	15.8	0.0	5.2	5.2	2.3%
7 Taxes and Duties	0.0	56.8	56.8	0.0	18.6	18.6	8.2%
Subtotal (A)	53.3	642.1	695.4	17.5	210.6	228.1	100.0%
B. Contingencies ^c							
1 Physical	76.0	0.0	76.0	24.9	0.0	24.9	10.9%
2 Price	40.6	0.0	40.6	13.3	0.0	13.3	5.8%
Subtotal (B)	116.6	0.0	116.6	38.2	0.0	38.2	16.8%
C. Financial Charges During Implementation ^d							
1 Interest During Implementation	24.4	0.0	24.4	8.0	0.0	8.0	3.5%
2 Commitment Charges	2.0	0.0	2.0	0.7	0.0	0.7	0.3%
Subtotal (C)	26.4	0.0	26.4	8.7	0.0	8.7	3.8%
Total Project Cost (A+B+C)	196.3	642.1	838.4	64.4	210.6	275.0	120.6%

^a Includes taxes and duties of \$18.6 million which will be financed by government counterpart funds. ADB financing may also cover taxes and duties for the project. The amount of taxes and duties to be financed by ADB: (i) are within the reasonable threshold identified during the country partnership strategy preparation process; (ii) do not represent an excessive share of the investment plan; (iii) apply only to ADB-financed expenditures; and (iv) the financing of taxes and duties is considered material and relevant to the success of the project.

^b As of 1 March 2016. In end-2015 prices.

^c Physical contingencies for civil works computed at 12% of base costs, and 5% for goods, consulting services, capacity development and recurrent costs. Price contingencies were computed using the escalation factors published by ADB on local and foreign components of the project costs; includes provision for potential exchange rate fluctuation using the purchasing power parity of exchange rate concept.

^d Includes interest and commitment charges. Interest during construction on the ADF loan has been computed at 2% p.a. Interest during construction on OCR loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charges for the OCR loan is 0.15% per year to be charged on the undisbursed loan amount.

Sources: National Airports Corporation and Asian Development Bank

C. Detailed Cost Estimates by Year

Table 11: Detailed Cost Estimates by Year for Tranche 3
(\$ million)

Item	Total Cost	2016	2017	2018	2019
A. Investment Costs^a					
1 Goods	11.2	0.9	5.6	3.3	1.3
2 Civil Works	176.2	17.6	70.5	70.4	17.6
3 Consulting Services	5.4	0.5	2.6	1.4	0.9
4 Training and Workshops	3.2	0.0	1.6	1.6	0.0
5 Land Acquisition	8.4	6.3	2.1	0.0	0.0
6 Recurrent Costs	5.2	2.3	1.7	1.0	0.2
7 Taxes and Duties	18.6	0.0	7.9	8.5	2.1
Total Base Cost^b	228.1	27.6	92.0	86.2	22.3
B. Contingencies^c	38.2	3.4	14.3	16.0	4.6
C. Financial Charges During Implementation^d	8.7	0.5	1.4	2.9	3.8
Total Project Cost (A+B+C)	275.0	31.5	107.7	105.1	30.7
% Total Project Cost	100%	11.5%	39.2%	38.2%	11.2%

^a Includes taxes and duties of \$18.6 million which will be financed by government counterpart funds. ADB financing may also cover taxes and duties for the project. The amount of taxes and duties to be financed by ADB: (i) are within the reasonable threshold identified during the country partnership strategy preparation process; (ii) do not represent an excessive share of the investment plan; (iii) apply only to ADB-financed expenditures; and (iv) the financing of taxes and duties is considered material and relevant to the success of the project.

^b As of 1 March 2016. In end-2015 prices.

^c Physical contingencies for civil works computed at 12% of base costs, and 5% for goods, consulting services, capacity development and recurrent costs. Price contingencies were computed using the escalation factors published by ADB on local and foreign components of the project costs; includes provision for potential exchange rate fluctuation using the purchasing power parity of exchange rate concept.

^d Includes interest and commitment charges. Interest during construction on the ADF loan has been computed at 2% p.a. Interest during construction on OCR loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charges for the OCR loan is 0.15% per year to be charged on the undisbursed loan amount.

Sources: National Airports Corporation and Asian Development Bank

D. Allocation and Withdrawal of Loan Proceeds

Table 12: Allocation and Withdrawal of OCR Loan Proceeds – Project 1 (2588-PNG)

Number	Item	Total Amount Allocated for ADB Financing (\$)		Basis for Withdrawal from the Loan Account
		Category	Subcategory	
01	Works	18,913,498		26% of total expenditure (net of tax)
01b	Works	1,543,249		26% of total expenditure (net of tax)
2	Equipment	1,237,542		26% of total expenditure (net of tax)
02b	Goods (Revised)	552,578		
3	Consulting Services	2,476,590		
3a	Project Implementation Operational and Facility Enhancement Accounting and External Audit		715,486	26% of total expenditure (net of tax)
3b	Design and Construction Supervision		1,572,452	26% of total expenditure (net of tax)
3c	Survey and Geotechnical Investigation		188,652	26% of total expenditure (net of tax)
4	Interest and Commitment Charges	2,600,000		100% of total amount due
5	Unallocated	1,100,000		
	Total	25,000,000		

Table 13: Allocation and Withdrawal of ADF Loan Proceeds – Tranche 1 (2589-PNG)

Number	Item	Total Amount Allocated for ADB Financing (SDR)		Basis for Withdrawal from the Loan Account
		Category	Subcategory	
1	Works	25,886,726		53% of total expenditure (net of tax)
2	Equipment	1,528,969		53% of total expenditure (net of tax)
3	Consulting Services	4,476,000		
3a	Project Implementation Operational and Facility Enhancement Accounting and External Audit		966,419	53% of total expenditure (net of tax)
3b	Design and Construction Supervision		2,163,780	53% of total expenditure (net of tax)
3c	Survey and Geotechnical Investigation		248,131	53% of total expenditure (net of tax)
4	Interest and Commitment Charges	728,976		100% of total amount due
5	Unallocated		0	
	Total	31,523,000		

Table 14: Allocation and Withdrawal of ADF Loan Proceeds – Tranche 1 (2590-PNG)

Number	Item	Total Amount Allocated for ADB Financing (SDR)		Basis for Withdrawal from the Loan Account
		Category	Subcategory	
1	Works	10,324,494		21% of total expenditure (net of tax)
2	Equipment	654,355		21% of total expenditure (net of tax)
3	Consulting Services	1,338,565		
3a	Project Implementation Operational and Facility Enhancement Accounting and External Audit		382,911	21% of total expenditure (net of tax)
3b	Design and Construction Supervision		857,338	21% of total expenditure (net of tax)
3c	Survey and Geotechnical Investigation		98,316	21% of total expenditure (net of tax)
4	Interest and Commitment Charges	291,586		100% of total amount due
5	Unallocated	0		
	Total	12,609,000		

Table 15: Allocation and Withdrawal of OCR Loan Proceeds – Tranche 2 (3069-PNG)

Number	Item	Total Amount Allocated for ADB Financing (\$)		Basis for Withdrawal from the Loan Account
		Category	Subcategory	
1	Works	64,104,000		69.1% of total expenditure
2	Mechanical and Equipment	23,150,000		
3	Consultants	6,808,000		
3a	Project Management		4,259,000	
3b	Capacity Development		2,549,000	68.9% of total expenditure
4	Equipment Operation and Maintenance	3,263,000		69.2% of total expenditure
5	Interest and Commitment Charges	4,774,000		100% of total amount due
6	Unallocated	12,901,000		
	Total	115,000,000		

Table 16: Allocation and Withdrawal of ADF Loan Proceeds – Tranche 2 (3070-PNG)

Number	Item	Total Amount Allocated for ADB Financing (\$)		Basis for Withdrawal from the Loan Account
		Category	Subcategory	
1	Works	5,448,000		9% of total expenditure
2	Mechanical and Equipment	1,968,000		9% of total expenditure
3	Consultants	579,000		
3a	Project Management		362,000	9% of total expenditure
3b	Capacity Development		217,000	9% of total expenditure
4	Equipment Operation and Maintenance	278,000		9% of total expenditure
5	Interest and Commitment Charges	408,000		100% of total amount due
6	Unallocated	1,095,000		
	Total	9,776,000		

Table 17: Allocation and Withdrawal of OCR Loan Proceeds – Tranche 3

No	Item	Total Amount Allocated for ADB Financing (\$)	Basis for Withdrawal from the Loan Account
		Category	
1	Civil Works*	142,541,447	73.6% of total expenditure claimed
2	Equipment*	11,154,735	91.7% of total expenditure claimed
3	Consultants, Capacity Development and Recurrent Costs*	13,747,555	100% of total expenditure claimed
4	Interest and Commitment Charges	7,317,397	100% of total amount due
5	Unallocated	38,238,866	
Total		213,000,000	

* Subject to the condition for withdrawal indicated in paragraph 6 of Schedule 2 to this Loan Agreement.

Table 18: Allocation and Withdrawal of ADF Loan Proceeds – Tranche 3

Number	Item	Total Amount Allocated for ADB Financing (SDR) Category	Basis for Withdrawal from the Loan Account
1	Civil Works*	24,854,000	17.4% of total expenditure claimed
2	Interest Charges	1,005,000	100% of total amount due
Total		25,859,000	

* Subject to the condition for withdrawal indicated in paragraph 6 of Schedule 3 to this Loan Agreement.

25. The following key assumptions underpin the cost estimates:

- (i) Exchange rate: 3.04878 = \$1.00 (as of 01 Mar 2016).
- (ii) All costs are in end-2015 prices.
- (iii) Physical contingencies for civil works were computed at 12% of base costs, and 5% for goods, consulting services, capacity development and recurrent costs.
- (iv) Price contingencies based on expected inflation over the implementation period are as follows:

Table 19: Escalation Rates for Price Contingency Calculation

Item	2016	2017	2018	2019	Average
Foreign rate of price inflation	1.5%	1.4%	1.5%	1.5%	1.48%
Domestic rate of price inflation	6.0%	6.5%	5.5%	5.5%	5.88%

Source: Asian Development Bank.

- (v) Financial charges during implementation include interest during construction, commitment charges, and any premium on cap and collar. Interest during construction on the OCR loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charges for the OCR loan are 0.15% per year to be charged on the undisbursed loan amount.

E. Contract and Disbursement S-curve

26. **Figures 2, 3 and 4** show cumulative contract awards and disbursement of tranches 1, 2 and 3.

Figure 2: S-Curve of Civil Aviation Development Investment Program, Tranche 1 (Cumulative)

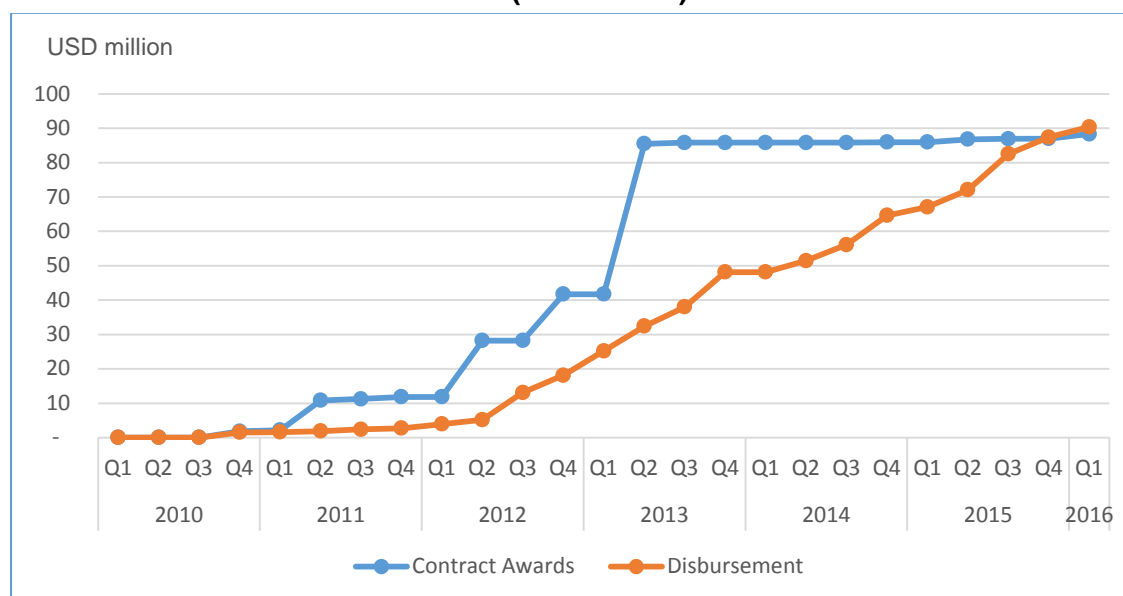


Figure 3: S-Curve of Civil Aviation Development Investment Program, Tranche 2 (Cumulative)

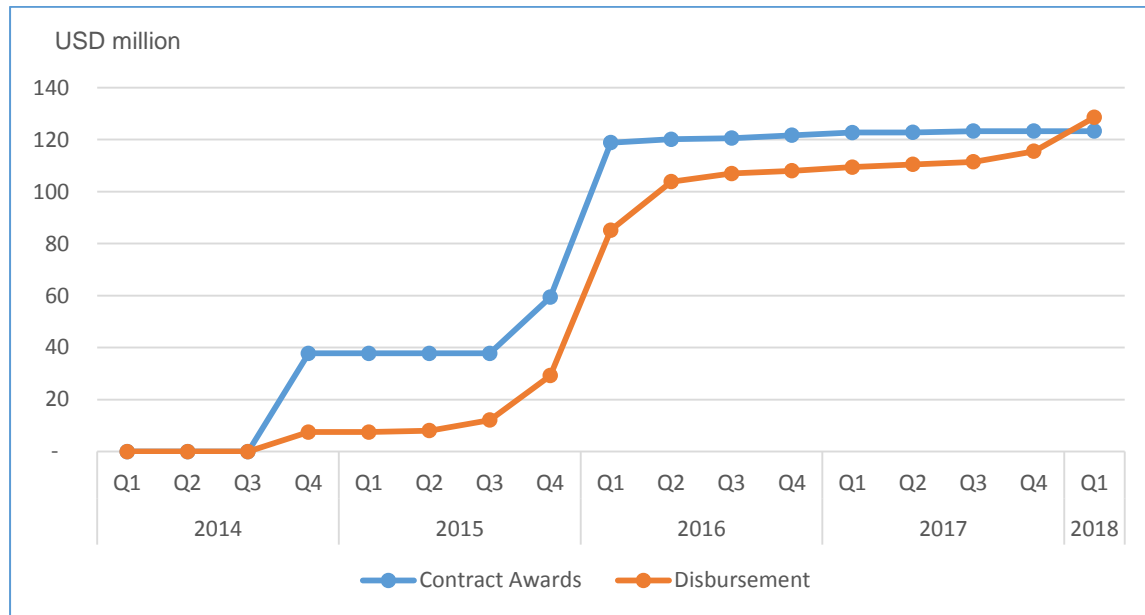
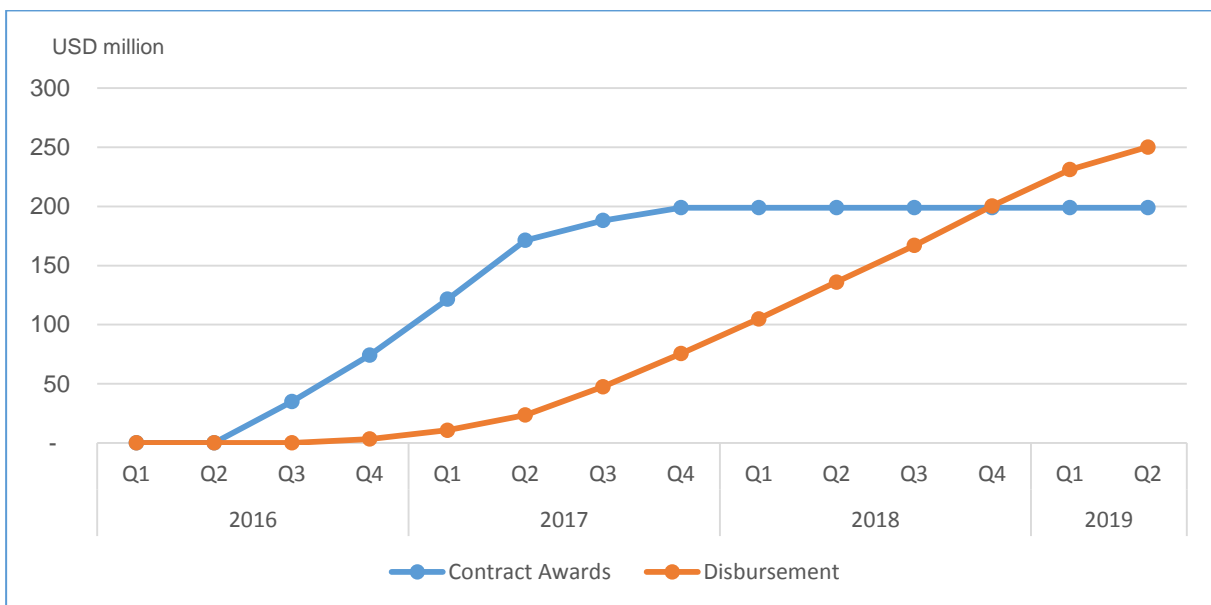


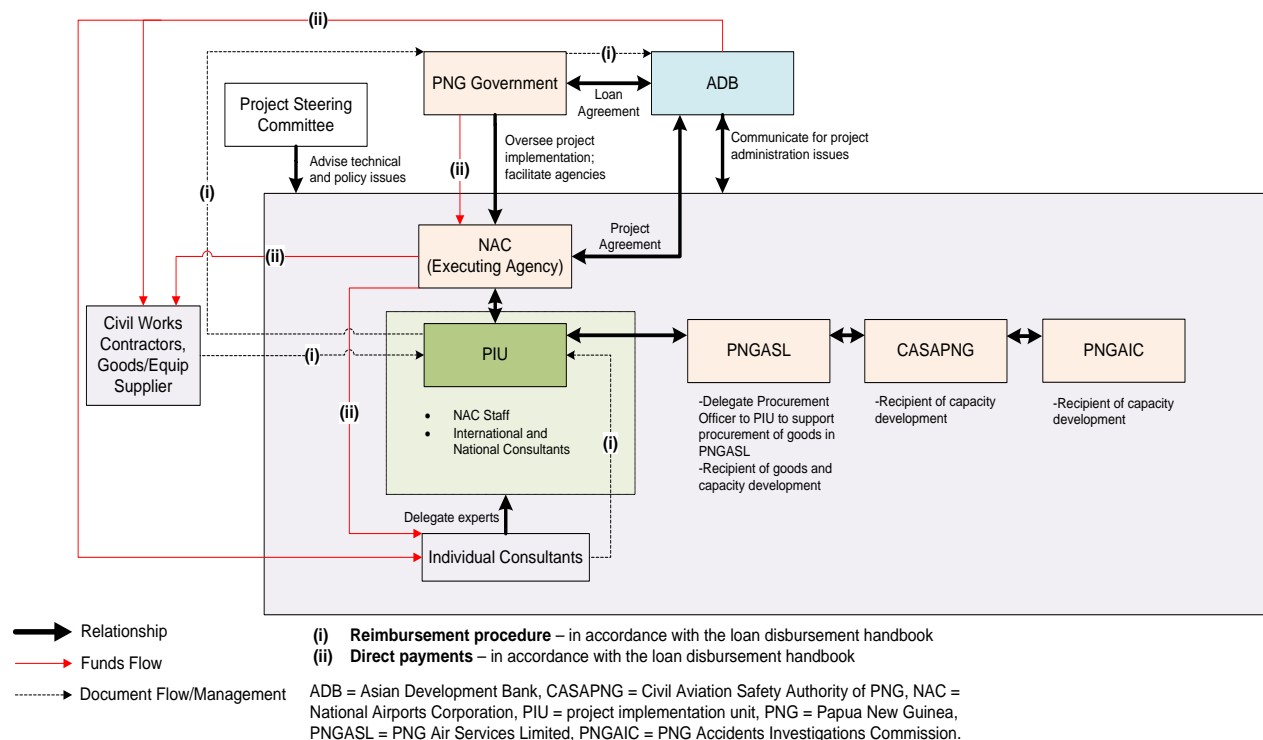
Figure 4: S-Curve of Civil Aviation Development Investment Program, Tranche 3 (Cumulative)



F. Fund Flow Diagram

27. **Figure 5** depicts funding flow in addition to document flow and relationship between the Government, NAC, PNGASL, CASA and PNGAIC.

Figure 5: Funding Flow Diagram



V. FINANCIAL MANAGEMENT

28. The Financial Management Assessment was prepared in accordance with ADB's *Guidelines for the Financial Management and Analysis of Projects*⁵ and the publication *Financial Due Diligence: A Methodology Note*.⁶ NAC was incorporated under the *Companies Act 1997* with operational and financial autonomy delegated under the NAC Constitution subject to a corporate NAC Board.

A. Financial Management Assessment

29. A financial management assessment was completed for NAC in Feb 2016 (Supplementary Appendix – Periodic Financing Request Report), including a review of the accounting and reporting

⁵ ADB. 2005. *Financial Management and Analysis of Projects*. Manila.

⁶ ADB. 2009. *Financial Due Diligence A Methodology Note*. Manila

system, internal and external auditing practices, fund disbursement, and information systems. The assessment indicates that the EA still have financial management capabilities issues and require further training for staff throughout the implementation of the project. Tranche 3 has provided consulting services for financial management to continue the reforms in the financial accounting system, develop financial rules and procedures and capacity development.

30. The risk assessment on the overall project financial management, pre-mitigation, is assessed to be Substantial. To improve the financial management and internal audit function, Tranche 2 has mobilized an international Financial Management Specialist to establish a robust financial accounting system and internal audit mechanism and this will continue for Tranche 3. Since Tranche 2, the audited project financial statements have been submitted in a timely manner. Whereas CADIP's financial accounts were audited by the PNG Auditor General's Office (AGO) from FY2010-FY2013, CADIP's FY2014 financial accounts were audited by an independent international audit firm and submitted to ADB. The project financial statements for the FY2015 are currently under audit by an international audit firm.

B. Risk Analysis

31. The risk assessment considered the staffing, internal control, accounting and reporting policies and procedures, and auditing standards and arrangements of the EA and PIU.

1. Inherent Risk

32. Inherent Risk is the susceptibility of the project financial management system to factors arising from the environment in which it operates, such as country rules and regulations and entity working environment (assuming absence of any counter checks or internal controls) and capacity of project implementation staff. A risk assessment was and the summary of this analysis is shown in Table 19.

Table 19: Risk Assessment and Mitigation Measures

Risk Type	Risk Asst⁷	Risk Description	Mitigation Measures
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⁷

H = High, S = Substantial, M = Moderate, N = Negligible or Low.

Risk Type	Risk Asst ⁷	Risk Description	Mitigation Measures
1. Country-Specific Risks	S	<p>Weak public financial management systems in the areas of (i) planning framework, prioritization, and project selection; (ii) investment programming; (iii) maintenance funding; (iv) due diligence in project preparation; (v) expenditure controls; (vi) financial reporting; (vii) trust account management, controls, accounting, and reporting; (viii) financial accountability of statutory authorities; and (ix) transparent and accountable natural resource revenue management.</p>	<p>Establishment of transparent and accountable Sovereign Wealth Fund (SWF) combined with country membership to the Extractive Industries Transparency Initiative.</p> <p>Successful piloting of statutory authority financial monitoring framework to at least 20 agencies.</p> <p>Ongoing efforts are underway by ADB and other donors to strengthen PFM arrangements, including through ADB's CDTA: <i>Supporting Public Financial Management</i>. Under this TA, ADB provided support for enhanced monitoring capacity within central agencies of statutory authorities and the introduction of annual performance agreements between boards and responsible Ministers.</p>
2. Entity-specific risks	S	<p>Weak capacity in (i) budgeting; (ii) financial modeling; (iii) airport operations; (iv) debtor recovery; (v) asset management; (vi) passenger information and third party verification of airline data; and (vii) completion of audits for the financial years 2012 through 2015.</p>	<p>The Tech1 system was procured for the purpose of facilitating control, capturing revenue and costs in a timely and accurate manner, allowing for budgeting, reporting in a timely and reliable manner, and data interrogation for NAC.</p> <p>The newly introduced Tech 1 system that NAC has procured and started using on 9th May, 2016⁸ has already laid the foundations for some key operational factors to be realized within NAC in terms of financial management in the medium to long term. These include:</p>

Risk Type	Risk Asst ⁷	Risk Description	Mitigation Measures
			<ul style="list-style-type: none"> • A fully integrated finance system, technology driven with reduced reliance on manual procedures; • Ensuring tighter compliance with tax and accounting regulations; • An Integrated Payroll, (stage 1) HR, Inventory and Asset Management (Stage 2) system; • Timely and efficient reporting to enable pro-active decision-making; • Streamlining and improvement of existing business processes; • More time available to analyze the data to see why things have happened as well as predict; • Less reliance on paper storage; • Budgeting & Forecasting functionalities for NAC Finance management; and Electronic DoA (Delegation of Authority) & Approval processes. <p>Further, implementation of third party verification of passenger figures supplied by the air operators is underway, which will involve verification of inputs from PNGASL, CASA and Immigration Services (for international movements).</p>

⁸ NAC Finance went live with Tech 1 system on 9th May, 2016.

Risk Type	Risk Asst⁷	Risk Description	Mitigation Measures
Overall Assessment of Inherent Risk	S		<p>Airport management system is part of CADIP project which will address NAC's weak capacity in airport operations & maintenance and asset management.</p> <p>NAC will engage auditor with TOR in compliance with the Auditor General's Office requirements to audit FY2015 as a high priority task and will be required to be submitted by December 2016. The same auditor will be engaged to audit previous unaudited years.</p>

2. Control Risk

33. Control Risk is the risk that the project's accounting and internal control framework are inadequate to ensure project funds are used economically and efficiently and for the purpose intended, and that the use of funds is properly reported. A financial risk assessment was carried out and the summary of this analysis is shown in Table 20.

Table 20: Financial Risk Assessment and Mitigation Measures

Risk Type	Risk Asst⁹	Risk Description	Risk Mitigation Measures
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⁹

H = High, S = Substantial, M = Moderate, N = Negligible or Low.

Risk Type	Risk Asst⁹	Risk Description	Risk Mitigation Measures
1. Implementing Entity	M	<p>NAC's weak financial management systems, particularly in budgeting, accounting, reporting and auditing, impact project financial management and use of funds.</p> <p>This weakness is negated by a dedicated CADIP PIU. While CADIP PIU resides within NAC, it has been established as an independent unit with strictly defined responsibilities to manage CADIP projects. CADIP PIU has a full team of 24 staff supported by a full-time dedicated Financial Management Accountant and 2 finance clerks, who have been working for 2 years beginning Tranche 2.</p>	<p>CADIP PIU established a CADIP Trust Account Operating Procedures Manual during Tranche 1 which is being revised and updated for Tranche 3.</p> <p>Separate reforms are underway within NAC to refine its Financial Management Policies and Procedures Manual in line with the implementation of the new Technology One financial management and accounting system. New workflows have been done for purchasing and projects. Program reporting and audit arrangements will be supported under Technology One financial management and accounting system.</p>
		No explicit Investment Program policy of where/how to report fraud, waste, misuse of assets.	Procedures for reporting fraud, waste and misuse of assets to be documented, implemented and will be added to the CADIP Trust Account Operating Procedures Manual being reviewed and updated as necessary for Tranche 3.

Risk Type	Risk Asst⁹	Risk Description	Risk Mitigation Measures
2. Funds Flow	M	<p>Funds are not released on time due to failure to provide progress reports and updates and secure timely approval.</p> <p>Bank accounts are not consistently reconciled; lack of internal control and non-adherence to policies and procedures when making payments.</p>	<p>CADIP PIU will review its policies and procedures, and conduct gaps analysis to deliver the following;</p> <ul style="list-style-type: none"> -revised standard operating procedures to ensure timely and accurate reporting -maintain ongoing negotiations with DoFT & DNPM counterparts for funding -design of training programs, conduct training to refresh and /augment capacity -internal control system compliance assessment including bank reconciliations reports with recommendations for improvement and establish specific timeframe for implementation. <p>Implementation of the new Technology One financial accounting system will improve reporting and disbursement functions, including internal control and reconciliation.</p>
3. Staffing	L	<p>Staff turnover and lack of adequate financial management skills.</p>	<p>After recent mass recruitment in CADIP, CADIP PIU staff are remunerated at market rate to ensure retention and are engaged through performance-based contracts-fixed-term contracts resulting in improved staff retention since Tranche 2.</p> <p>All contracts will be renewed in Tranche 3 for knowledge and skills retention. Quality of CADIP PIU staff capacity has improved following experiences and lessons learned from Tranches 1 and 2.</p>
		<p>Lack of performance review process for staff with poor performance (including financial breaches).</p>	<p>Six monthly performance assessments to be conducted by CADIP Program Director and staffing policies and procedures to adhere to the NAC General Orders.</p>

Risk Type	Risk Asst ⁹	Risk Description	Risk Mitigation Measures
4.Accounting and Reporting	S	<p>Non-adherence to internal control policies and procedures on accounting and reporting.</p> <p>Account and bank and subsidiary ledgers reconciliations are not performed in a timely manner. Unreconciled deficiencies exist.</p> <p>Past records and documents are not available.</p> <p>Audit findings on accounting and reporting remain unaddressed.</p> <p>Formal budget process needs to be established. Procedures are in place but not documented and followed through consistently.</p> <p>Lack of Asset Registry restricting reconciliation and proper accounting and management.</p>	<p>CADIP PIU will review its policies and procedures, and conduct gaps analysis to deliver the following;</p> <ul style="list-style-type: none"> -revised standard operating procedures to ensure timely and accurate reporting, -design of training programs; conduct training to refresh/augment capacity -internal control system compliance assessment report with recommendations for improvement including specific timeframe for implementation <p>CADIP PIU is re-establishing accounting records and documents following migration to MYOB. All financial management and accounting data will be transferred to Tech One FMIS. Reconciliation will follow suit including disposal of deficiencies. Early procedural deficiencies have been rectified after 2011 and later in 2014 Audit. Audit findings thereafter will continue to be rectified and addressed in 2016 going forward.</p> <p>Implementation of the new Technology One financial accounting system will facilitate integration with NAC financial regulations and will further improve data retention, reconciliation and proper accounting.</p> <p>Asset Management is part of CADIP project which is being factored in the tech One systems.</p> <p>Engagement of Tier-1 auditor in being sought for capacity improvement with IFMS on-going support for implementation.</p>

Risk Type	Risk Asst⁹	Risk Description	Risk Mitigation Measures
5. Internal Audit	M	Internal audit staff constraints. Weak governance.	NAC CFO will work close with CADIP IFMS to ensure Internal Audit Department includes CADIP accounts in its annual internal audits This is to be reviewed every six months from loan effectiveness.
6. External Audit-project level	L	Lack of timely audit process is leading to the covenants not being met. Qualified opinion on CADIP accounts was issued due to incomplete documentation and missing opening balances of accounts	CADIP PIU has engaged KPMG in 2014 to; -Review 2010-2013 CADIP accounts -Audit 2014 Accounts -Audit 2015 Accounts CADIP with IFMS to implement 2014 and 2015 Audit findings, recommendations and notes to the Management Letter from the signing of the 2015 PFS Audits sign off.
7. Reporting and Monitoring	M	Financial reports are produced but are based on unreconciled accounts, and not in a timely manner or on demand. Delayed budget utilization reporting. Un-integrated reporting leading to incomplete project progress reporting and reports not available on demand.	General compliance to reporting requirements have been maintained during CADIP Tranches 1 and 2 with on-going performance improvement is expected to continue during Tranche 3. CADIP Finance team with IFMS guidance have corrected and are maintaining accounts for Tranche 1 and 2 capital projects which have been reconciled and will provide the basis for transfer to NAC's Balance Sheet. Structures are being established and strengthened to ensure timely processing and reporting of information.

Risk Type	Risk Asst⁹	Risk Description	Risk Mitigation Measures
		Reporting is not suitable for user needs.	<p>Reporting to stakeholders has been prompt after the period end, with occasional short delays. These include expenditure comparisons of actual with budget, linked to project progress and forecasts of expected outcome, cash flow statements, and asset schedules.</p> <p>NAC prepares and submits to ADB quarterly and annual progress reports on project implementation and operation, with occasional short delays.</p> <p>Compliance with loan covenants, including submission of audited project financial statements, is monitored by PNRM and compliance has been maintained during Tranches 1 and 2¹⁰.</p>
8. Information Systems	M	<p>Use of stand-alone MYOB Account Right Premier v19 FMIS and Payroll System does not provide sufficient internal control and data integrity.</p> <p>Constant system failure.</p> <p>Unintegrated financial systems with NAC.</p>	<p>Daily backups of all accounting systems have been maintained on the CADIP server after introduction of MYOB general ledger accounting software. NAC and CADIP information technology system involves servers and backup servers located in separate buildings, with a daily backup procedure to tape storage.</p> <p>CADIP is in the process of migrating data to Technology One and expected to completely up and running by 31st December 2016</p>
Overall Control Risk	S		
*H= High, S=substantial, M= moderate, N= negligible or low			

ADB = Asian Development Bank; Asst = Assessment; CADIP = Civil Aviation Development Investment Program; NAC = National Airports Corporation; PIU = Project Management Unit; PNGASL = Papua New Guinea Air Services Limited; P

¹⁰ ADB. *Papua New Guinea Tripartite Country Portfolio Review – Background Paper*. Manila.

33. The assessment identified the main project financial management risks to include: (i) weak accounting and reporting capacity, weak internal control, and weak budgeting and reporting mechanisms. These risks were assessed to be Substantial and would require specific mitigating actions to minimize the risks. These actions are summarized in an FM Action Plan described below:

Table 21: Financial Management Action Plan

Action	Responsibility	Timing
Roll-out and full operationalization of Technology One financial accounting system to include CADIP PIU	NAC and CADIP PIU	31-December 2016
Engagement of external auditor with terms of reference and qualifications acceptable to Auditor General and to ADB (Re: NAC audited financial statements)	NAC	31-October 2016
Submission of NAC FY2015 audited financial statements	NAC	31-December 2016
Submission of NAC FY 2010 to FY2014 audited financial statements	NAC	30-June 2017
Submission of CADIP FY2015 audited project financial statements	CADIP PIU	Before effectiveness
Update CADIP Trust Account Operating Procedures Manual	CADIP PIU	31-December 2016
Review financial policies and procedures, and internal control systems and identify gaps and implement corrective actions	CADIP PIU	31-December 2016
Re-establish all past and current accounting records and documents and complete reconciliation	CADIP PIU	31-December 2016
Include CADIP accounts in internal audit scope annually beginning 2016	NAC	31-December 2016
Training on financial management requirements, including accounting and auditing	CADIP PIU	31-December 2016
Resolution of the Audit Findings and recommendations on the FY2014 audited project financial statements (ADB and government funds).	CADIP PIU	Before effectiveness
Transfer of CADIP Tranche 1 assets to NAC and PNG ASL	CADIP PIU, NAC and PNG ASL	31 December 2016
Review of aeronautical tariff structure	NAC	Dec 2017

NRM = Papua New Guinea Resident Mission; TA = Technical Assistance.

C. Disbursement

34. The Loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time),¹¹ and detailed arrangements agreed upon between the Government and ADB. Online training for project staff on disbursement policies and procedures is available at: <http://wpqr4.adb.org/disbursement> elearning. Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

35. Only direct payment, commitment letter, and reimbursement procedures will be used during project implementation. Imprest account procedures will not be used. A dedicated project account for counterpart funding was established under Tranche 1 and is active from which project payments funded by GoPNG will be made. The PIU will prepare project disbursement projections (budgets) of counterpart contributions and submit to NAC for approval and forward the projections to the Department of National Planning and Monitoring for release of funds in accordance with government financial management procedures. The government's contribution to project costs, including budget for tax exemption, will be budgeted for in each project year with necessary funds placed in this existing project account. The salaries of the government employees should be claimed to ADB under reimbursement procedure.

36. The PIU will be responsible for accounting for the use of the funds in line with project activities and maintaining the documents necessary for supporting reimbursement from the ADB. The PIU will prepare the withdrawal application for approval in NAC, and submit to ADB for reimbursement through the full supporting documentation method including bank statement of the project account.

37. Before the submission of the first withdrawal application, the government should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the borrower, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is stipulated in the Loan Disbursement Handbook. Individual payments below this amount should be paid (i) by the EA/IA and subsequently claimed to ADB through reimbursement, unless otherwise accepted by ADB.

D. Accounting

38. The Executing Agency (EA) will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following {accrual-based accounting following the International Financial Reporting Standards} {accrual-based accounting following the equivalent national accounting standards}. The EA will prepare project financial statements in accordance with {the government's accounting laws and regulations which are consistent with international accounting principles and practices}.

E. Auditing and Public Disclosure

39. The Executing Agency (EA) will cause the detailed project financial statements to be audited in accordance with {International Standards on Auditing} {equivalent national standards adopted by (Public Finance Management Act and the AGO)}, by an independent auditor acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the EA.

¹¹ Available at: <http://www.adb.org/Documents/loan-disbursement-handbook>.

40. The audited entity financial statements, together with the auditor's report and management letter, will be submitted in the English language to ADB within 1 month after their approval by the relevant authority.

41. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the {loan} {grant} were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).

42. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

43. The government and EA have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.¹² ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

44. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Public Communications Policy 2011.¹³ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.¹⁴

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

45. All advance contracting will be undertaken in conformity with ADB's Procurement

¹² ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

¹³ Public Communications Policy: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

¹⁴ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraph 97(iv) and/or 97(v).

Guidelines (2015, as amended from time to time) (ADB's Procurement Guidelines)¹⁵ and ADB's Guidelines on the Use of Consultants (2013, as amended from time to time) (ADB's Guidelines on the Use of Consultants).¹⁶ ADB approved advance contracting and retroactive financing for the investment program and for Tranche 1 preparation. Advance contracting will be used for the pre-feasibility work of project analysis including survey works (geotechnical studies and topography), social dimensioning, and financial, economic, environmental, and engineering design preparation for subsequent subprojects. Advance contracting for Tranche 2 was applied for procurement of civil works and recruitment of consultants for survey works (geotechnical studies and topography), social dimensioning, financial, economic, environmental, and engineering design preparation for subsequent subprojects, procurement and civil works supervision.

46. Advance contracting for Tranche 3 will be applied for recruitment of consultants, procurement of works and services for Momote airport aircraft pavement upgrading, new terminal building & associated works and Mt. Hagen airport pavement strengthening, new air traffic control (ATC) tower & associated works and airports fencing works.

47. The borrower and NAC have been advised that approval of advance contracting does not commit ADB to finance the proposed projects or related procurement costs under Tranche 3

48. Retroactive financing will be requested for Tranche 3 for eligible expenditures up to 20% of the total loan amount, incurred prior to loan effectiveness, but not earlier than 12 months before the date of signing of the legal agreement.

B. Procurement of Goods, Works and Consulting Services

49. NAC as the executing agency will undertake all procurement activities under the Facility in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time) and ADB's Procurement Guidelines (2015, as amended from time to time), as applicable, under a procurement plan approved by ADB.

50. **Procurement Thresholds for Tranches 1 and 2.** All contracts over \$3 million for civil works and over \$0.5 million for goods will undergo international competitive bidding. Contracts below these thresholds will go through national competitive bidding and, as appropriate, minor contracts below \$100,000 will be awarded through shopping.

51. **Procurement Threshold for Tranche 3.** All contracts over \$5 million for civil works and over \$2 million for goods will undergo international competitive bidding using single-stage one envelope bidding procedure. Procurement shall use the latest standard bidding documents (issued in December 2015 and as amended from time to time) which can be downloaded from ADB's website. All procurement under ICB will be subject to ADB's prior review. Minor contracts below \$300,000 will be awarded through shopping.

52. Before the start of any procurement, ADB and the government will review the public procurement laws of the central and state governments to ensure consistency with ADB's Procurement Guidelines.

¹⁵ Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

¹⁶ Available at: <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>

C. Procurement Plan

53. The procurement plan must include all procurement activities anticipated within the next 18 months and must be updated by NAC at least annually. For Tranche 3, procurement plan will be reviewed after 12 months. A procurement plan will be disclosed on ADB website and appropriate website of the government.

54. All financed contracts under Tranches 1 and 2 are in Tables 21 and 22.

Table 22: Contract Packages Awarded under Tranche 1

	Package			Procurement Method		Revised Cost Estimate/Actual Cost	Status	Remarks
	Goods							
1	Integrated	Landing	System	ICB	Single-Stage, Two Envelope	1.01	Completed	
2	Port Moresby Fire Tenders (x3)			ICB	Single-Stage, One Envelope	3.33	Completed	
	Works							
3	Port Moresby Domestic Terminal Apron Extension			ICB	Single-Stage, One Envelope	18.70	Completed	
4	Mt. Hagen Terminal			ICB	Single-Stage, One Envelope	15.76	Completed	
5	Hoskins Airport Upgrade			ICB	Single-Stage, One Envelope	20.88	Completed	
6	Kavieng Fencing			ICB	Single-Stage, One Envelope	3.14	Completed	
7	Security Fencing & Associated Works at Goroka, Wewak, Hoskins & Gurney Airports			ICB	Single-Stage, One Envelope	13.76	Completed	
	Consulting Services							
8	Design & Supervision			QCBS		6.70		
9	Survey & Geotechnical Investigations			QCBS		1.10		
10	CAA Operations Training and Program			QCBS		2.10		
11	Project Implementation Unit			ICS		1.10		
12	Accounting & External Audit			QCBS		0.30		

ICB = international Competitive Bidding; ICS = Individual Consultant Selection System; NCB = National Competitive Bidding; QCBS = Quality Cost-Based Selection.

Table 23: Contract Packages Awarded/To be Awarded under Tranche 2

	Package	Procurement Method	Revised Cost Estimate/ Actual Cost	Present Status	Remarks
Goods					
1	Supply of Fencing Materials (BUK, CHB, GIR, MOT, VNO)	NCB	1.96	Awarded in Nov 2015.	
2	Fire Tenders (NZB, HGN, TOK)	ICB	962	6 Fire Trucks commissioned in January 2016.	
3	Airport maintenance equipment	NCB	1.2	Ongoing procurement.	
4	T-Vasis Replacement (KVG, WWK)	ICB	1.10	To be removed and included in civil works in Project 3	
5	Standby Power Supply for Nadzab and Tokua	ICB	3.7	Bid document under preparation stage	
6	CNS/ATM	ICB	25.27	Awarded in Feb 2016	
7	Pavement Management System	ICB	2.70	Bid document preparation stage	
8	Airport Management System	ICB	1.9	Bid document preparation stage	
9	Pavement Maintenance	SH	0.90	Ongoing procurement	
10	Asset and Certification Maintenance	SH	2.10	Ongoing procurement (various contract packages within the shopping threshold)	
Works					
11	Vanimo Airport Pavement Upgrade and Associated Works	ICB	16.16	Construction stage- 60% complete.	
12	Girua Airport Pavement Upgrade and Associated Works	ICB	10.95	Construction stage – 75%	
13	Chimbu Airport Pavement Upgrade and Associated Works	ICB	7.30	Construction stage – 70%	
14	Goroka Airport Pavement Upgrade and Associated Works	ICB	26.18	Construction stage –30%	
15	Survey and Geotechnical Investigations	Shopping	1.10	Preparing to call for bids (various contract packages within the shopping threshold)	
16	Momote Airport Security Fencing and Associated Work	NCB	2.05	Contract awarded	
17	Buka Airport Security Fencing and Associated Works	NCB	2.70	No Objection given by ADB. Contract award in Aug 2016	
Consulting Services and Training					
18	Operation and Facility Enhancement (capacity development)		3.70	Ongoing	
19	Individual Design & Supervision Consultants	ICS	1.50	Consultant will be mobilised on 01 Aug 2016.	

ICB=International Competitive Bidding, ICS=Individual Consultant Selection System, NCB=National Competitive Bidding

55. The procurement plan covering the first 18-months of Tranches 1, 2 and 3, including the NCB annex for PNG is presented below.

CADIP Tranche 1 Procurement Plan^a
Basic Data

Project Name: Civil Aviation Development Investment Program, Tranche 1

Country: Papua New Guinea

Executing Agency: National Airport Corporation (formerly Civil Aviation Authority)

Total Cost of Investment Program: \$565 million

Loan Number: 2588/2589/2590

Multitranchise Financing Facility: \$480 million

Total Cost of Tranche 1: \$112 million

Date of First Procurement Plan:

Date of this Procurement Plan:

9 October 2009

3 April 2013

^a Procurement plan will be revised annually.

A. Process Thresholds, Review and 18-Month Procurement Plan

1. Project Procurement Thresholds

Except as ADB may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

Procurement of Goods and Works

Method	Threshold	
International Competitive Bidding (ICB) for Works	> \$3 million	
International Competitive Bidding for Goods	> \$500,000	
National Competitive Bidding (NCB) for Works	≤\$3 million	
National Competitive Bidding for Goods	≤\$500,000	
Shopping for Goods	Below \$100,000	
Review		DB Prior or Post

2.A

Except as ADB may otherwise agree, the following prior or post review requirements apply to the procurement and consultant recruitment methods used for the project.

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
NCB Works	Post	
NCB Goods	Post	
Shopping for Goods	Post	
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection	Prior	80:20
Recruitment of Individual Consultants		
Individual Consultants	Prior	

3. Goods and Works Contracts Estimated to Cost More Than \$1 Million

The following table lists goods and works contracts for which procurement activity is either completed or ongoing.

General Description	Contract Value	Procurement Method	Prequalification of Bidders	Advertisement Date	Comments
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	(\$ million)		(y/n)	(quarter/year)	
A. Goods					
Port Moresby Instrument Landing System	2.0	ICB	Y	Q1/2010	Procurement by PNG Air Services Limited
Port Moresby 3 Fire Tenders	3.6	ICB	Y	Q2/2010	Procurement by NAC
B. Works					
Port Moresby domestic apron extension	6.4	ICB	Y	Q4/2009	
Mount Hagen improvements for F100 and new terminal	33.5	ICB	Y	Q4/2010	
Hoskins improvements for F100	17.3	ICB	Y	Q3/2010	
Wewak improvements for F100	11.4	ICB	Y	Q4/2010	
Gurney improvements for F100	6.9	ICB	Y	Q3/2010	
Hoskins security fence	1.9	NCB	N	Q1/2010	
Wewak security fence	2.0	NCB	N	Q1/2010	
Kavieng security fence	2.0	NCB	N	Q1/2010	
Gurney security fence	1.9	NCB	N	Q1/2010	
Goroka security fence	1.8	NCB	N	Q1/2010	

ICB = international competitive bidding, NCB = national competitive bidding, NAC = National Airport Corporation.

4. Consulting Services Contracts Estimated to Cost More Than \$100,000

The following table lists consulting services contracts for which procurement activity is either completed or ongoing.

General Description	Contract Value (\$ million)	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
Design and Supervision	6.7	QCBS 80:20	Q3/2009	International	
Survey and Geotechnical Investigations	1.1	QCBS 80:20	Q4/2009	National	
CAA Operations Training Program	2.1	QCBS 80:20	Q2/2010	International	
Project Implementation Unit Consultants	6.7	Individual Consultant Selection	Q3/2009	International	
Accounting and External Audits	0.3	QCBS 80:20	Q1/2010	National	

QCBS = quality- and cost-based selection.

E. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000

The following table groups smaller-value goods, works and consulting services contracts for which procurement activity is either completed or ongoing.

General Description	Value of Contracts (cumulative)	Number of Contracts	Procurement / Recruitment Method	Comments
None				

F. Indicative List of Packages Required Under the Project

The following table provides an indicative list of all procurement (goods, works, and consulting services) over the life of the project. Contracts financed by the Recipient and others should also be indicated, with an appropriate notation in the comments section.

General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable	Comments
Goods	5.6	2	ICB	N	
Works	75.5	5	ICB	N	
Works	9.6	5	NCB		
Consulting Services	10.2	4	QCBS 80:20		
Individual Consultants	6.7		ICS		

ICB = international competitive bidding, NCB = national competitive bidding, QCBS = quality- and cost-based selection.

CADIP Tranche 2 Procurement Plan ^a Basic Data

Project Name: Civil Aviation Development Investment Program, Tranche 2

Country: Papua New Guinea

Executing Agency: National Airport Corporation

Total Cost of Investment Program: \$565 million

Loan Number: to be determined

Multi-tranche Financing Facility: \$480 million

Total Cost of Tranche 2: \$170 million

Date of First Procurement Plan:

Date of this Procurement Plan:

18 April 2013

28 April 2015

^a Procurement plan will be revised annually.

A. Process Thresholds, Review and 18-Month Procurement Plan

1. Project Procurement Thresholds

Except as ADB may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

Procurement of Goods and Works

Method	Threshold
International Competitive Bidding (ICB) for Works	> \$3 million
International Competitive Bidding for Goods	> \$500,000
National Competitive Bidding (NCB) for Works	≤ \$3 million
National Competitive Bidding for Goods	≤ \$500,000
Shopping for Works	Below \$100,000
Shopping for Goods	Below \$100,000

2. ADB Prior or Post Review

Except as ADB may otherwise agree, the following prior or post review requirements apply to the procurement and consultant recruitment methods used for the project.

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
NCB Works	Post	
NCB Goods	Post	
Shopping for Works	Post	
Shopping for Goods	Post	
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection	Prior	80:20
Recruitment of Individual Consultants		
Individual Consultants	Prior	

3. Goods and Works Contracts Estimated to Cost More Than \$1 Million

The following table lists goods and works contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

General Description	Contract Value (\$ million)	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
1. Civil Works					
Vanimo Airport Pavement Rehabilitation, Security Fencing, and Associated Works	16.2	ICB	N	Q4/2013	
Girua Airport Pavement Rehabilitation, Security Fencing, and Associated Works	11.0	ICB	N	Q4/2013	
Chimbu Airport Pavement Rehabilitation, Security Fencing, and Associated Works	7.3	ICB	N	Q4/2013	
Goroka Airport Pavement Rehabilitation, Runway Extension, and Associated Works	26.2	ICB	N	Q1/2015	
Momote Airport Security Fencing, and Associated Works	2.0	ICB	N	Q3/201	
Buka Airport Security Fencing, and Associated Works	2.7	NCB	N	Q1/2016	
2. Asset Maintenance					
Pavement Maintenance	2.7	Shopping	N	Q1/2014	
Asset and Certification Maintenance Program	2.1	Shopping	N	Q1/2014	
3. Goods					
CNS/ATM	25.3	ICB	N	Q1/2015	
3 Fire Tender	9.7	ICB	N	Q2/2014	HGN, NZB, TOK
Supply of Security Fencing Materials	2.0	ICB	N	Q3/2015	GIR, MOT, VNO, BUK, CHB

VASIS Replacement	1.1	ICB	N	Q1/2014	KVG, WWK WWK, NZB, MDG, TOK, MOT, BUK, KVG, GUR, POM
Standby Power Supply	3.7	NCB	N	Q4/2013	
Airport Maintenance Equipment	1.2	Shopping	N	Q1/2014	MOT, BUK, WWK, GIR, GUR, NZB, MDG, TOK, HGN
Pavement Management System	0.9	ICB	N	Q2/2014	
Airport Management System	1.9	ICB	N	Q1/2014	

CNS/ATM = communications, navigations, and surveillance/air traffic management, ICB = international competitive bidding, NCB = national competitive bidding, NAC = National Airport Corporation, VASIS = visual approach slope indicator system.

4. Consulting Services Contracts Estimated to Cost More Than \$100,000

The following table lists consulting services contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

General Description	Contract Value (\$ million)	Recruitment Method	Advertisement Date* (quarter/year)	International or National Assignment	Comments
PIU Consultants	4.1	QCBS	Q4/2013	International	FTP 80:20
Individual Consultants for PIU support and capacity Development	1.5	Individual	Q1/2014	International	8 contracts

FTP = full technical proposal, QCBS = quality- and cost-based selection.

* Advertisement will be conducted on ADB CSR/CMS as described in para. 56.

5. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000

The following table groups smaller-value goods, works and consulting services contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

General Description	Value of Contracts (cumulative) (\$ million)	Number of Contracts	Procurement / Recruitment Method	Comments
Survey & Geotechnical Investigations	1.1	18	Shopping	9 airports
Operation and Facility Enhancement	3.7	40	Shopping	Training for NAC, PNGASL, PNGCASA
Other Goods, works and services as Required	Values less than \$100,000			

6. Indicative List of Packages Required Under the Project

The following table provides an indicative list of all procurement (goods, works, and consulting services) over the life of the project. Contracts financed by the Recipient and others should also be indicated, with an appropriate notation in the comments section.

General Description				Estimated Value	Estimated	Procurement	Domestic	Comments
				(cumulative) (\$ million)	Number of Contracts	Method	Preference Applicable	
1.	Civil Works							
1.1	Vanimo Airport	Pavement Rehabilitation, Security Fencing and Associated Works		16.2	1	ICB	N	
1.2	Girua Airport	Pavement Rehabilitation, Security Fencing and Associated Works		11.0	1	ICB	N	
1.3	Chimbu Airport	Pavement Rehabilitation, Security Fencing and Associated Works		7.3	1	ICB	N	
General Description				Estimated Value (cumulative) (\$ million)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable	Comments
1.4	Goroka Airport	Pavement Rehabilitation, Runway Extension and Associated Works		26.2	1	ICB	N	
1.5	Momote Airport	Security Fencing and Associated Works		2.0	1	ICB	Y	
1.6	Buka Airport	Security Fencing and Associated Works		2.7	1	NCB	Y	
2.	Asset Maintenance							
2.1	Pavement Maintenance			2.7	30	Shopping	Y	More than 3 contracts per airport More than 3 contracts per airport
2.2	Asset and Certification Maintenance Program			2.1	30	Shopping	Y	
3.	Goods							
3.1	CNS/ATM			25.3	1	ICB	N	
3.2	3 Fire Tender			9.6	1	ICB	N	HGN, NZB, TOK GIR, MOT, VNO, BUK, CHB
3.3	Supply of Security Fencing Materials			2.0	1	ICB	Y	
3.4	VASIS Replacement			1.1	2	ICB	N	KVG, WWK WWK, NZB, MDG, TOK, MOT, BUK, KVG, GUR, POM
3.5	Standby Power Supply			3.7	9	NCB	Y	
3.6	Airport Equipment	Maintenance		1.2	15	Shopping	Y	3 contracts for each region
3.7	Pavement System	Management		0.9	1	ICB	N	
3.8	Airport Management System			1.9	1	ICB	N	
4.	Surveys							
4.1	Topographical Surveys			0.6	1	Shopping	Y	9 airports
4.2	Geotechnical Investigations			0.5	1	Shopping	Y	9 airports

5. Consulting Services						
5.1	PIU Consultants	4.1	1	International QCBS 80:20	N	FTP
5.2	Individual Consultants for PIU Support	1.5	8	Individual	N	
5.3	Operation and Facility Enhancement	3.7	40	Shopping	N	Training service contracts
Total		141.5				

M = air traffic management, CNS = communication, navigation and surveillance, ICB = international competitive bidding, FTP = full technical proposal, NCB = national competitive bidding, PIU = project implementation unit, QCBS = quality-and cost-based selection, VASIS = visual approach slope indicator system

CADIP Tranche 3 Procurement Plan ^a Basic Data

Project Name: Civil Aviation Development Investment Program, Tranche 3

Country: Papua New Guinea

Executing Agency: National Airport Corporation

Total Cost of Investment Program: \$557 million

Loan Number: to be determined

Multi-tranche Financing Facility: \$473 million

Total Cost of Tranche 3: \$275 million

Date of First Procurement Plan:

Date of this Procurement Plan:

01 April 2016

02 December 2016

^a Procurement plan will be revised annually.

A. Methods, Thresholds, Review and 12-Month Procurement Plan

1. Procurement and Consulting Methods Thresholds

Except as ADB may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

Procurement of Goods and Works

Method	Threshold	Comments
	\$5 million	Prior Review
International Competitive Bidding (ICB) for Works		
International Competitive Bidding for Goods	\$2 million	Prior Review
National Competitive Bidding (NCB) for Works	Below \$5 million	Post Review
National Competitive Bidding for Goods	Below \$2 million	Post Review
Shopping for Works	Below \$300,000	Post Review
Shopping for Goods	Below \$300,000	Post Review

Consulting Services

Method	Comments
Individual Consultants System (ICS)	Prior
Firm (Quality-and Cost-Based Selection 90:10)	Prior

2. Goods and Works Contracts Estimated to Cost More Than \$1 Million

The following table lists goods and works contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

Package No.	General Description	Estimated Value (\$ million)	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date	Comments
CADIP3-W001	Momote Airport Pavement Upgrade, New Terminal Building and Associated Works	36.42	ICB	Prior	1S1E	Q1/2016	No PQ/Large works. Advance contracting. Bids received on 06 May 2016. Evaluation completed. Contract Signing in Dec 2016. . Master Bidding Document approved
CADIP3-W002	Mt. Hagen Airport Pavement Strengthening, New ATC Tower and Associated Works	39.15	ICB	Prior	1S1E	Q2/2016	No PQ/Large works. Advance contracting. Bids advertised on 29 June. 2016 and under evaluation. Master Bidding Document approved
CADIP3-W003	Mendi Airport Pavement Strengthening, New Terminal Building and Associated Works	11.99	ICB	Prior	1S1E	Q1/2017	No PQ/Large works. Master Bidding Document approved
CADIP3-W004	Vanimo Airport Runway Extension and Associated Works	7.87	ICB	Prior	1S1E	Q1/2017	No PQ/Small works
CADIP3-W005	Madang Airport Pavement Strengthening, New Terminal Building and Associated Works	30.41	ICB	Prior	1S1E	Q1/2017	No PQ/Large works. Master Bidding Document approved
CADIP3-W006	Wewak Airport Pavement Strengthening, New Terminal Building and Associated	12.73	ICB	Prior	1S1E	Q1/2017	No PQ/Large works. Master Bidding Document approved

	Works						
CADIP3-W007	Gurney Airport Pavement Upgrading, Terminal Building Extension and Associated Works	13.43	ICB	Prior	1S1E	Q4/2016	No PQ/Large works. Master Bidding Document approved
CADIP3-W008	Security Fencing Package for Kerema, Kiunga and Tari Airports	7.75	ICB	Prior	1S1E	Q4/2016	No PQ/Small works. Bids advertised on 08 Nov 2016
CADIP3-W009	Kavieng Airport Pavement Upgrading, Terminal Building and Associated Works	21.45	ICB	Prior	1S1E	Q1/2017	No PQ/Large works. Master Bidding Document approved
CADIP3-W010	Buka Airport Pavement Upgrading, Terminal Building and Associated Works	10.74	ICB	Prior	1S1E	Q2/2017	No PQ/Large works. Master Bidding Document approved
CADIP3-G001	Airfield Lighting equipment	9.74	ICB	Prior	1S1E	Q3/2017	No PQ/Goods contract (7 airports)

^a All prices are inclusive of 10% GST

ICB = International Competitive Bidding; NCB = National Competitive Bidding; NAC = National Airport Corporation; PQ = Pre-Qualification; 1S1E = Single-Stage One Envelope.

3. Consulting Services Contracts Estimated to Cost More Than \$100,000

The following table lists consulting services contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value	Recruitment Method	Review (Prior/Post)	Advertisement Date	Type of Proposal	Comments
CS1	Individual for PIU support	1.35	ICS	Prior	Q3/2016	International	4 contracts
CS2	Design and supervision consultant	3.55	QCBS (90:10)	Prior	Q2/2016	International	1 contract
CS3	Accounting and audits	0.50	SSS	Prior	N/A	N/A	1 contract

ICS=Individual Consultant Selection System, QCBS=Quality-and Cost-Based Selection, SSS=Single-Source Selection.

4. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000

The following table groups smaller-value goods, works and consulting services contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

General Description	Estimated Value (USD m)	Number of Contracts	Procurement/ Recruitment Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
Pavement Maintenance	1.29	8	Shopping	Post	N/A	Q2 2017	8 airports (Kiunga, Kerema, Tari, Daru, Arupa, Wapenamada, Tokua, Nadzab)
Topographical Survey & Geotechnical	0.56	4	Shopping	Post	N/A	N/A	4 airports (Kavieng, Buka, Mendi, Tokua)
Airport maintenance equipment and certification ^a	2.43	Various	Shopping	Post	N/A	Q3/2017	To be carried out at NAC Airports

- a. Funds for maintenance of runways, taxiways and aprons of NAC airports. NAC = National Airport Corporation. NAC airports are Buka, Chimbu, Daru, Girua, Goroka, Gurney, Hoskins, Kavieng, Kerema, Kieta, Kiunga, Madang, Mendi, Momote, Mt. Hagen, Nadzab, Port Moresby, Tari, Tokua, Vanimo, Wapenamanda and Wewak.
- b. NAC = National Airports Corporation; ASL = Air Services Limited; CASA = Civil Aviation Safety Authority; AIC = Accidents Investigation Commission.

B. Indicative List of Packages Required Under the Project (Not Applicable)

The following table provides an indicative list of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period).

Goods and Works							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Review [Prior / Post/Post (Sample)]	Bidding Procedure	Comments
	NIL						

Consulting Services							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Review (Prior / Post)	Type of Proposal	Comments
	NIL						

C. List of Awarded and On-going, and Completed Contracts (Not Applicable)

The following tables list the awarded and on-going contracts, and completed contracts.

1. Awarded and On-going Contracts

Goods and Works

Package Number	General Description	Estimated Value	Awarded Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
	NIL						

Consulting Services							
Package Number	General Description	Estimated Value	Awarded Contract Value	Recruitment Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
	NIL						

2. Completed Contracts

Goods and Works								
Package Number	General Description	Estimated Value	Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Date of Completion	Comments
	NIL							

Consulting Services								
Package Number	General Description	Estimated Value	Contract Value	Recruitment Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Date of Completion	Comments
	NIL							

D. Non-ADB Financing

The following table lists goods, works and consulting services contracts over the life of the project, financed by Non-ADB sources.

Works				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Comments

Long term maintenance contracts	To be determined by NAC	01	ICB	5 regional airports. Advertisement Q2 2017
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B. National Competitive Bidding

1. General

55. National competitive bidding (NCB) shall conform to the provisions set in the Public Financial Management Act (PFMA) as issued in 1995 and amended in 2003, and the specific procedures prescribed in the Financial Instructions (FIs) issued in 2005, with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of ADB Procurement Guidelines.

2. Participation in Bidding

- (i) Government-owned enterprises in Papua New Guinea shall be eligible to bid only if they can establish that they are legally and financially autonomous, operate under commercial law, and are not a dependent agency of the Borrower/Executing Agency/Implementing Agency.
- (ii) Foreign bidders shall be eligible to participate in bidding under the same conditions as national bidders.
- (iii) Bidding shall not be restricted to preregistered firms and such registration shall not be stated in the bidding documents as a condition for the submission of bids. Where registration is required prior to award of contract, bidders: (i) shall be allowed a reasonable time to complete the registration process; and (ii) shall not be denied registration for reasons unrelated to their capability and resources to successfully perform the contract, which shall be verified through post-qualification.

3. Classification of Contractors; Qualification; Post-qualification

- (i) Post qualification shall be used unless prequalification is explicitly provided for in the loan agreement/procurement plan.
- (ii) Bidding shall not be restricted to any particular class of contractors, and non-classified contractors shall also be eligible to bid. Qualification criteria (in case prequalification was not carried out) shall be stated in the bidding documents, and before contract award, the bidder having submitted the lowest evaluated responsive bid shall be subject to post-qualification.

4. Conflict of Interest

Bidders may be considered to be in conflict of interest with one or more parties in this bidding process if, including but not limited to:

- (i) they have controlling shareholders in common, or
- (ii) they receive or have received any direct or indirect subsidy from any of them; or
- (iii) they have the same legal representative for purposes of this bid; or
- (iv) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid or another Bidder, or influence the decisions of the Employer regarding this

- bidding process; or
- (v) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the party is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or
- (vi) a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract is the subject of the Bid; or
- (vii) a Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the contract.

5. Preferences

Preference may be given for domestic bidders and for domestically manufactured goods as per ADB procurement guidelines.

6. Advertising, time for bid preparation

- (i) Invitations to bid shall be advertised in at least one newspaper of national circulation or freely accessible and well-known website, allowing a minimum of 4 weeks for the preparation and submission of bids, such 4 weeks' period to begin with the availability of the bid documents or the advertisement, whichever is later.
- (ii) Bidding of NCB contracts estimated at below \$2,000,000 for goods and related services, or below \$5,000,000 for civil works, shall be advertised on ADB's website via the posting of the Procurement Plan.

7. Standard Bidding Documents

Until national standard bidding documents approved by ADB are available, bidding documents acceptable to ADB should be used.

8. Bid Security

If required by the bidding documents, bid security shall be in the form of a bank guarantee from a reputable bank. A bidder's bid security shall apply only to a specific bid.

9. Bid Opening and Bid Evaluation

- (i) Bidders may deliver bids, at their option, either in person or by courier service or by mail.
- (ii) Bidders shall not be allowed to amend their tenders after the closing date and time for submission of bids.
- (iii) Bids shall be opened in public, immediately after the deadline for submission of bids. No bid shall be rejected during bid opening. The name of the bidder, the total amount of each bid, and any discounts shall be read aloud and recorded in the minutes of the public bid opening.
- (iv) Evaluation of bids shall be made in strict adherence to the Qualifications and Evaluation Criteria stipulated in the bidding documents
- (v) No bidder shall be rejected merely on the basis of a comparison with the employer's estimate and budget ceiling without ADB's prior concurrence.
- (vi) The Contract shall be awarded to the technically responsive bidder that offers the lowest evaluated price, and meets the qualifying criteria. In determining the lowest evaluated price, the following are to be considered: (i) bid price, as offered, (ii)

arithmetical corrections on the bid price, if any, and (iii) monetary value of the evaluation criteria that are stated in the bidding document.

10. Rejection of Bids

Bids shall not be rejected and new bids solicited without ADB's prior concurrence.

11. Extension of the Validity of Bids

In exceptional circumstances and with prior ADB approval, the procuring entity may, before the expiration of bid validity, request all bidders in writing to extend the validity of their bids. In such a case, bidders shall not be requested nor permitted to amend the price or any other condition of their bid. Bidders shall have the right to refuse to grant such an extension without forfeiting their bid security, but bidders granting such an extension shall be required to provide a corresponding extension of their bid security.

12. Disclosure on Contract Awards

At the same time that notification on award of contract is given, the Borrower /Executing Agency/Implementing Agency shall publish the following information on contract award on a free and open access website or other means of publication acceptable to ADB: (i) name of each bidder who submitted a bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated price of each bid that was evaluated; (iv) names of bidders whose bids were rejected and the reasons for the rejection; and (v) name of the winning bidder, price it offered as well as the duration and summary scope of the contract awarded. The Executing/Implementing Agency shall respond in writing to unsuccessful bidders who seek explanations on the grounds on which their bids are not selected.

13. No Negotiations

There shall be no negotiations, even with the lowest evaluated bidder, without ADB's prior concurrence. A bidder shall not be required, as a condition of award, to undertake obligations not specified in the bidding documents, or otherwise, to modify the bid as originally submitted.

14. Inspection and Auditing

Each contract financed from the proceeds of a Loan/Grant shall provide that the contractor/supplier shall permit ADB, at its request, to inspect their accounts and records relating to the performance of the contract and to have said accounts and records audited by auditors appointed by ADB.

15. Member Country Restriction

Bidders must be nationals of member countries of ADB, and offered goods must be produced in and supplied from member countries of ADB.

C. Consultant's Terms of Reference for Tranche 3 – Individual Consultants and Firm

56. A total of 132 person-months of international consultant's services will be required for the

project; 48 person-months for individual consultants and 84 person-months for a consulting firm for Design, supervision, and project management of civil works. A total of 70 person-months for institutional strengthening and capacity building of NAC, PNGASL, CASAPNG and PNG AIC will also be required. These individual consultants will assist the CADIP PIU and NAC facilitate project design, management, and implementation of Tranche 3 projects. GoPNG has also requested ADB for a new loan (CADIP Phase 2) to upgrade the regional airports for larger aircrafts and rural airstrips to include in currently under review COBP 2017-2019. These consultants will also design the subprojects of new loan, if approved by ADB management. All international positions will have national counterparts (i.e., NAC staff). The PIU will follow national labour regulations, and will offer equal opportunities to women. All consulting packages will be engaged in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).

Table 24: Summary of Consulting Services' Inputs

		Person-months
A. Individual Consultants		
1	Contract Management Specialist	18
2	Financial Management Specialist	18
3	Aviation Economist/Institutional Specialist	6
4.	Procurement Specialist	6
	Subtotal	48
B. Consulting Firm		
1	Design & Documentation Engineer	6
2	Pavement/Geotechnical Specialist	10
3	CAD Operator	6
4	Civil/Construction Supervisor (x2)	36
5	Building / Construction Supervisor	18
6	Social Safeguards Specialist	8
	Subtotal	84
TOTAL CONSULTANT PERSON MONTHS		132

a. Indicative Terms of Reference (Individual Consultants)

1. Contract Management Specialist (international, 18 person-months, full time). The specialist will be an engineer or have at least a university degree and over 15 years of relevant experience in contract management, project management or equivalent in the related field. S/he will be responsible for the following tasks:

- (i) Management of all construction contracts under the CADIP program;
- (ii) Ensuring that the designs, bid documents, calls for bids, bid evaluations, construction supervision and individual project completion are executed to the in accordance with the approved Batch 3 implementation schedule;
- (iii) Be a member of and provide assistance to the Bid Evaluation Committee responsible for bid evaluation for works, equipment and services procured under CADIP;
- (iv) Liaising with CADIP project engineers in reviewing the bid evaluation reports and preparing conformed contracts;
- (v) Supervise the day-to-day operations of the projects, guided by the contract

- documents, attend site meetings, and provide any necessary amendments to ensure smooth performance;
- (vi) Assure that all contractual obligations are adhered to and make the necessary contracts and efforts to ensure implementation meet project targets;
 - (vii) Assisting the Program Director (CADIP) with contract negotiations and dispute resolutions;
 - (viii) Review and certify monthly progress claims from contractors;
 - (ix) Manage the international consultant's contracts and monitor their performances to ensure that the international consultants timing of inputs and outputs are in harmony with the CADIP program schedule;
 - (x) Ensure that the international consultants deliver in accordance with their respective contracts;
 - (xi) Ensuring that the international consultants work closely with the CADIP PIU/NAC in delivering the projects;
 - (xii) Mentor national staff of the project implementation unit;
 - (xiii) Develop effective counterpart and collaborative relationships with personnel in National Airports Corporation, PNG Air Services Ltd, Civil Aviation Safety Authority of PNG, Air Niugini and other related organisations;
 - (xiv) Liaise, coordinate and supervise team of individual consultants to ensure timely, cost effective and quality delivery of the individual projects;
 - (xv) Act as Deputy Program Director (CADIP) as required and reporting directly to program director;
 - (xvi) Undertake other tasks and duties as instructed by the Program Director (CADIP) from time to time; and
 - (xvii) Collect information and prepare quarterly progress reports of project for ADB submission.
 - (xviii) Coordinate and responsible for all the activities of CADIP phase 2 design readiness and report to MD NAC and CADIP program director for any issues arising on time and take guidance.

2. Financial Management Specialist (international, 18 person-months, intermittent). The specialist will have at least a university degree in financial management or equivalent and over 10 years of relevant experience in the related field. S/he will be responsible for the following tasks:

- (i) Review and improve on existing financial accounting system for CADIP that is independent of the NAC financial accounting system and that the system includes reporting formats, forms and filing system for the CADIP, in accordance with the applicable ADB and the government guidelines and approved procedures
- (ii) Ensure the financial accounting system has inbuilt capacity to generate specific reports and handles subsequent Tranches of projects as successive tranches are drawn down;
- (iii) Establish financial rules and procedures, and develop a project management and cost burden tool for capital works management in consultation with Program Director and Financial Management Accountant;
- (iv) Develop and implement disbursement/cash management process documentation and procedures with appropriate internal controls and reporting for specific sources of funding;
- (v) Support the Financial Management Accountant to prepare regular project cost, commitment reports and cash flow projections in accordance with the government

- and ADB requirements;
- (vi) Support the Financial Management Accountant to prepare management reports for projects in compliance with the government and ADB reporting requirements;
- (vii) Support and build capacity of the national staff to prepare financial project accounts as required for auditing and reporting requirements and attending to audit queries;
- (viii) In consultation with other CADIP officers including engineering staff, assist in the finalization of projections for yearly contract awards and disbursements;
- (ix) Build capacity within CADIP PIU to document process mapping to prepare ADB loan withdrawal applications ensuring expenditures are properly documented and supported with proper documentation prior to submission to Department of Treasury and ADB PNG Resident Mission;
- (x) Provide on the job training to PIU national staff in advanced financial management skills, cost estimation, budgeting, the government's Financial Management Act, managing accounts and cost accounting, including in-house training presentations to CADIP staff;
- (xi) Prepare counterpart(s) to take over and run the financial accounting system before completion of CADIP Tranche 3;
- (xii) Assist and advise NAC with financial analysis of subsequent tranches;
- (xiii) Assess the likely future revenue impact for NAC and CASAPNG;
- (xiv) Establish a monitoring and evaluation framework for project accounting;
- (xv) Identify and recommend to Program Director improvements in project accounting related to expenditures; and
- (xvi) Provide advice and training to counterpart staff to improve their project accounting practices and performance;
- (xvii) Develop documented action plan for CADIP PIU in consultation with NAC Finance to transfer CADIP assets to NAC.

3. Aviation Economist / Institutional Specialist (international, 6 person-months, intermittent). The specialist will have at least a university degree and over 10 years of relevant experience in the related field in aviation industry. S/he will be responsible for the following tasks:

- (i) Consult and collaborate with aviation stakeholders and put in place a systemic approach for stakeholders to submit monthly returns to NAC for airport management purposes as a condition of use of airport facilities and services requirement;
- (ii) Conduct institutional capacity strengthening focusing on non-compliance with CASAPNG and ICAO safety and security requirements;
- (iii) Develop mechanisms for public private partnership (PPP) in the sector including for Jackson's Airport operations;
- (iv) Work with Civil Aviation Section, Department of Transport (CADOT) to facilitate the timely provision by operating airlines and air service operators of regular monthly aircraft operating data, including passengers carried, freight and mail as required by CADOT under the current legislation requirements;
- (v) Work with CASAPNG to facilitate the timely provision by operating airlines and air service operators of regular monthly aircraft operating data as required by CASAPNG under the current legislation requirements;
- (vi) Work with NAC to facilitate an airlines revenue payments audit comparing the CADOT aircraft operational data with revenue data supplied by the airlines and air service operators to NAC, using the CASAPNG aircraft operational data as a cross-check;
- (vii) Work with NAC and PNGASL to harmonize the aircraft movement data provided by

- PNGASL to NAC for aircraft revenue charging under the new NAC tariff regime;
- (viii) Provide advice to NAC on potential PPP funding with airport infrastructure or operational projects;
- (ix) Undertake baseline studies and financial and economic analysis of PNG airport projects and rural airstrips under CADIP phase 2;
- (x) Undertake study of air transport growth, trends, demand in relations to PNG passenger, freight movement;
- (xi) Based on study, provide justification for roll out of CADIP Tranche3 and subsequent project tranches;
- (xii) Provide training to counterpart project economist under a structured work plan. This should include the development of individual NAC airport profiles designed to provide basic airport planning data for future airport works;
- (xiii) Carry out Traffic study; and
- (xiv) Review business strategy for NAC and CASA PNG

4. Procurement Specialist (international, 6 person-months, intermittent)

- (i) Study and review existing or any procurement practices in NAC, consult and engage with the various business units of NAC to develop and document NAC's Procurement Manual.
- (ii) Supervise and responsible for procurement activities starting from preparation of the bid documents to award of contract as per ADB procurement policies and guidelines.
- (iii) Responsible for all ADB approvals and No Objections during procurement process in consultation with Program Director
- (iv) Liaison with PIU technical team and other project staff during preparation of bidding documents.
- (v) Participate in technical meetings and provide recommendation to improve project implementation in terms of procurement based on capacity development needs
- (vi) Support the PIU by closely engaging with NAC, CASAPNG, AIC and PNGASL for the implementation of their respective Capacity Building Plan, review and report on the outcomes every quarter and revise the Capacity Development Plan with these entities when needed to reflect changing needs;
- (vii) Manage the procurement process in order to ensure strict compliance with the ADB procurement guidelines, rules and procedures as well as the relevant regulations anti-corruption policy.
- (viii) Coordinate all procurement activities, updating of procurement plans, bidding process, and contract negotiations.
- (ix) Any other assignments related to the project that may be requested by the Project Director.
- (x) Conduct procurement capacity assessment of NAC/PIU and conduct relevant due diligence for CADIP phase 2 subprojects
- (xi) Prepare the procurement plan and bidding documents for CADIP phase 2 based on technical feedback from team.
- (xii) Report to contract management specialist for all procurement related matters

(b) Indicative Terms of References (Firm)

- 1. Design and Documentation Engineer** (international, 6 person-months, fulltime). The specialist will be a civil engineer or have at least a university degree and over 10 years of

relevant experience in the related field. S/he will be responsible for the following tasks:

- (i) Carry out initial investigation of projects and development of the scope of investigation and design, and documentation works as precursor to developing investigation, survey and design and documentation of terms of reference for in-house designers or sub-consultants;
- (ii) Supervise the day-to-day operations of the projects, guided by the contract documents, attend site meetings, and provide any necessary amendments to ensure smooth performance;
- (iii) Assist the PIU and NAC in preparing and updating indicators for monitoring and evaluating project performance, in accordance with the design and monitoring framework and guidelines for project performance monitoring indicators;
- (iv) Assist NAC and a Procurement Specialist in preparing invitations for expressions of interest, evaluation of submissions, tender documents and conducting the tender process for all contracts and consulting services;
- (v) Assure that all contractual obligations are adhered to and make the necessary contracts and efforts to ensure implementation meet project targets in accordance with the government and ADB procedures;
- (vi) Be a member of and provide assistance to the Technical Evaluation Committee responsible for bid evaluation for works, equipment and services procured under CADIP;
- (vii) Assist the CADIP Program Director with contract negotiations and dispute resolutions;
- (viii) Assist the Program Director in managing all construction contracts under CADIP to achieve timely and quality deliverables;
- (ix) Assist NAC to ensure that the notice to commence the works has been issued; the contractor has arranged proper insurance cover; the contractor has provided a performance bond; a certification of advance payments has been made in accordance with contracts;
- (x) Review and certify monthly progress claims from contractors;
- (xi) Ensure timely submission of periodic reports where due;
- (xii) Liaise with the CADIP Project Steering Committee as and when required.
- (xiii) Ensure that the design and procurement works closely realign with the PIU and NAC in delivering the projects;
- (xiv) Ensure that the consultant team's timing of inputs and outputs are in harmony with the project's schedule;
- (xv) Supervise the development and recommendation of civil works design to be submitted by other specialists as part of subsequent tranches and report to the CADIP Program Director;
- (xvi) Provide support/assist that the works are executed in accordance with all the provisions of the contract, including those concerning standards of workmanship, ordinance clearance, and other safety provisions and protections of the environment;
- (xvii) Assist in measuring the works, agreeing and certifying to interim and final payment certificates for submission to the employer, and assisting the employer in preparing loan withdrawal documentation for submission to ADB;
- (xviii) Administer, assess and, where appropriate, make recommendations on applications for extension of time, claims for additional payment, and contractual disputes;
- (xix) Provide support in issuing site instructions, variation orders, provisional sum orders, and day works orders as appropriate;

- (xx) Ensure deliverables comply with relevant NAC technical requirements and ADB requirements;
- (xxi) Develop and recommend civil works to be carried out as part of CADIP phase 2 airports and rural airstrips
- (xxii) Develop effective counterpart and collaborative relationships with personnel in NAC, PNGASL, CASAPNG, and other related organizations;
- (xxiii) Prepare a final report, which will be a compilation and condensation of data presented in regular monthly progress reports, together with copies of as-built drawings within two months of the issue of the Defects Liability Certificate;
- (xxiv) Provide on-the-job training for NAC staff in carrying out construction supervision including contract administration, quality control, construction and environmental monitoring and evaluation, and other relevant activities; and
- (xxv) Mentor and provide on-the-job training to NAC staff and national civil engineers.

2. Pavement Geotechnical Specialist (international, 10 person-months, intermittent). The specialist will be a civil engineer or have at least a university degree and over 10 years of relevant experience in the related field. S/he will be responsible for the following tasks:

- (i) Review existing studies and reports on the condition of pavements at airports which are included in Tranches 1 and 2;
- (ii) In collaboration with the PIU Program Director, develop and implement a program of pavement investigation including availability and quality of materials;
- (iii) Recommend pavement works to be carried out as part of Tranche 3 and the anticipated CADIP phase 2 airports and rural airstrips;
- (iv) Inspect and report on construction of pavements by the civil works contractor(s) at critical stages during construction and upon completion;
- (v) Supervise the geotechnical survey work and provide appropriate guidance;
- (vi) Given specific engineering recommendations for pavement from the survey and existing studies and reports, review the design of runway pavements for Tranche 3 and amend if necessary;
- (vii) Review and provide expert assistance in the design of runway pavements for subsequent tranches; and
- (viii) In collaboration with the engineers, especially the Asset Management Specialist, develop and implement a pavement condition survey work plan to identify required resources, engineering parameters for maintenance and improvement, and timing of works

3. CAD Operator (International, 6 person-months, fulltime). The specialist will have at least a university degree and over 5 years of relevant experience in the related field. S/he will be responsible for the following tasks:

- (i) Assist the international and national Civil Engineers in preparation of tender level drawings for incorporation into bid documents utilizing AutoCAD or similar software for Tranche 3 and CADIP phase 2 airports and rural airstrips;
- (ii) Assist with geometric design using software tools such as 12D, and prepare design drawings, including long sections and cross-sections as appropriate;
- (iii) Assist the Civil and Building Engineers Pavement Geotechnical Specialist, and Procurement Specialist in quantifying civil works utilizing AutoCAD or similar software; and
- (iv) Provide capacity development through on-the-job training to the NAC CAD Operators.

4. Civil Construction Supervisor (international, 18 person-months x 2, fulltime). The specialist will be a civil engineer or have at least a university degree and over 5 years of relevant experience in the related field. S/he will be responsible for the following tasks:

- (i) Provide comprehensive day-to-day field civil construction supervision and administration services at the site;
- (ii) Assist the Airport Engineers to ensure that the notice to commence the works has been issued; ensure that the contractor has arranged proper insurance cover;
- (iii) Ensure that the contractor has provided a performance bond;
- (iv) Certify advance payments in accordance with the contracts;
- (v) Receive and assess the contractor's implementation program;
- (vi) Ensure that the civil works are constructed in accordance with the technical specifications, drawings and the Method of Works Plan;
- (vii) Ensure that proper construction methods are followed;
- (viii) Provide the contractor with all necessary survey data and reference for setting out the works;
- (ix) Ensure that existing service lines are identified and relocated where necessary;
- (x) Liaise with the appropriate authorities to ensure that all the affected utility services are promptly relocated;
- (xi) Provide direct day-to-day control of the site materials testing laboratory and its activities;
- (xii) Maintain full and detailed permanent site records, which will include site correspondence, survey data, quality acceptance data, site diaries, measurement and certification, minutes of meetings, and records of all other contractually relevant matters;
- (xiii) Liaise daily with the Airport Engineers to ensure that the contractors personnel and equipment do not enter restricted areas without prior approval;
- (xiv) Report to the Airport Engineers on progress of works;
- (xv) Liaise with the Project Management and Administration Specialist regarding contractual issues and claims;
- (xvi) Maintain regular estimates of the cost to completion and time to completion for each contract;
- (xvii) Develop and recommend civil works to be carried out as a part of subsequent tranches;
- (xviii) Review the adequacy of the deliverables considering their use in airport maintenance contracts;
- (xix) Certify monthly claims from contractors;
- (xx) Assist the Airport Engineers as and when required; and
- (xxi) Undertake other tasks and duties as instructed by the Team Leader from time to time.

5. Building Construction Supervisor (international, 18 person-months, fulltime). The specialist will have at least a diploma/university degree and over 5 years of relevant experience in the related field. S/he will be responsible for the following tasks:

- (i) Provide comprehensive day-to-day field building construction supervision and administration services at the site;
- (ii) Assist the Airport Engineers to ensure that the notice to commence the works has been issued;
- (iii) Ensure that the contractor has arranged proper insurance cover;

- (iv) Ensure that the contractor has provided a performance bond;
- (v) Certify advance payments in accordance with the contracts;
- (vi) Receive and assess the contractor's implementation program;
- (vii) Ensure that the buildings works are constructed in accordance with the technical specifications, drawings and the Method of Works Plan if applicable;
- (viii) Ensure that proper construction methods are followed;
- (ix) Provide the contractor with all necessary survey data and reference for setting out the works;
- (x) Ensure that existing service lines are identified and relocated where necessary,
- (xi) Monitor the construction of buildings and ensure that works do not affect the operations of the airport;
- (xii) Liaise with the appropriate authorities to ensure that all the affected utility services are promptly relocated;
- (xiii) Provide direct day-to-day control of the site materials testing laboratory and its activities;
- (xiv) Maintain full and detailed permanent site records, which will include site correspondence, survey data, quality acceptance data, site diaries, measurement and certification, minutes of meetings, and records of all other contractually relevant matters;
- (xv) Liaise daily with the Airport Engineers to ensure that the contractors personnel and equipment do not enter restricted areas without prior approval,
- (xvi) Report to the Airport Engineers on progress of works;
- (xvii) Liaise with the Project Management and Administration Specialist regarding contractual issues and claims;
- (xviii) Certify monthly claims from contractors;
- (xix) Assist the Airport Engineers as and when required;
- (xx) Provide on-the-job training for NAC staff in carrying out building construction supervision including contract administration, quality control, construction and environmental monitoring and evaluation, and other relevant activities;
- (xxi) Develop and recommend building works to be carried out as part of CADIP phase 2 airports; and
- (xxii) Work as a Team Leader for DSC firm and coordinate all activities and deliverable under firm's responsibility.

6. Social Safeguards Specialist (international, 8 person-months, intermittent). The specialist will have at least a university degree and over 10 years of relevant experience in the related field. S/he will be responsible for the following tasks:

- (i) Update due diligence reports or Resettlement Plans, if required, ensuring that all project activities are undertaken within NAC or state land as much as possible and those involving land acquisition/ involuntary resettlement will be properly compensated as per approved Resettlement Plans. In case of any unanticipated resettlement impacts, prepare a Resettlement Plan following the RF and ADB's SPS (2009) and pertinent government laws;
- (ii) Resolve any project related grievances or issues on land or social aspect that might arise during construction;
- (iii) Produce relevant instruction and awareness materials for raising understanding and awareness on gender and safety among target communities, especially women and girls, and civil works contractors;
- (iv) Implementation of a consultation and participation plan (CPP) and stakeholder communication strategy (CSS), including identification of key issues affecting

- implementation;
- (v) Prepare the semi-annual safeguards monitoring report, compensation completion report and other safeguards reporting documents as required;
- (vi) Establish sex-disaggregated baseline data in project/project areas to develop socioeconomic monitoring indicators according to project design and implementation plans (including training and improvement activities) and assist in collecting data reflecting progress on GAP targets and indicators and prepare progress report;
- (vii) Implementation of the GAP and monitoring of proposed gender activities including updating relevant gender indicators;
- (viii) Prepare and implement capacity building plan to improve the capacity within NAC to undertake safeguards due diligence, implement and monitor the implementation of Resettlement Plans and other social and gender activities;
- (ix) Mitigate adverse social impacts on projects, if any, and recommend measures to address these issues including involvement of nongovernment organizations, civil society groups and disabilities, if appropriate;
- (x) Perform other tasks to ensure the project's compliance on social safeguard aspect in line with ADB policies and the program frameworks.

a. Outputs and Reporting

57. The consulting firm will prepare reporting requirements, including:

- (i) Inception report by each of the consultants for their respective Terms of Reference, within 2 weeks of their engagements;
- (ii) Quarterly progress reports in a format agreed upon with NAC and ADB, submitted within 1 month of the end of the quarter;
- (iii) Mid-term progress report;
- (iv) Draft final report and draft project completion report in agreed format; and
- (v) Final report and final project completion report 1 month after receiving the comments on the final draft report from the government and ADB.

VI. SAFEGUARDS

58. The government will ensure that all the requirements prescribed in the Framework Financing Agreement, and the following safeguards documents that have been prepared are complied with during the implementation of Tranche 3 project:

- (i) Initial Environmental Examination (IEE); and
- (ii) Resettlement Plan (RP).

A. Environment

59. NAC will ensure that the design, construction, and operation and maintenance of the facilities under the investment program are carried out in accordance with SPS, applicable laws and regulations in PNG, the program's EARF, and the IEEs prepared for each tranche. NAC will ensure that potential adverse environmental impacts arising from the investment program are minimized by implementing all mitigation and monitoring measures as presented in the environment management plan (EMP) included in the IEEs.

60. The components included in Tranche 3 have been categorized as safeguards category B for environment. NAC will ensure that:

- (i) Detailed engineering designs, civil works and other contracts for tranche 3 facilities incorporate applicable environmental measures identified in the IEEs and EMPs. EMPs are updated based on detailed design and incorporated into bid and contract documents for each sub-project.
- (ii) Civil works contractors are provided induction training on EMP and associated matters prior to preparation of their construction EMP (CEMP), supervised to ensure compliance with the requirements of the IEEs or EIAs and cleared CEMPs.
- (iii) The PIU has sufficient resources to review and clear (or otherwise) the CEMP submitted for each sub-project, implement environmental safeguards, monitor and report on compliance of the contractor with the CEMP and prepare all such reports identified in the EARF, and the IEEs, EMPs and any other project documents including semi-annual safeguards monitoring reports.
- (iv) Starting from the commencement of Tranche 3, the PIU unit will submit quarterly progress reports (QPR) to the EA and ADB. The QPR will cover the CADIP overall and provide details as required on each sub-project being implemented. The reports will be submitted within each quarter during implementation. The QPR will include, among other things, status of safeguard activities, capacity building and training provided, a review of progress made on environmental measures detailed in the IEEs and EMPs, contractor compliance with the CEMP for each project and monitoring thereof; and problems encountered and remedial measures taken.

61. **Table 24** outlines the major actions associated with preparation, submission and approval of environment documents within the government and to ADB.

Table 25: Major Actions Required for Preparation of Environment Documents

Environmental Management Requirements	Environmental Management Actions	Conditions Required to Complete Actions
<p>Pre-construction Stage</p> <p>Establish environmental management system</p> <p>Conduct surveys including environmental studies</p> <p>EO and ES, AE and/or procurement specialists extract installation requirements from EMP and include in tender documents. EO and ES review tender documents and confirm that environmental management provisions are sufficient</p> <p>EO and ES provide support to evaluation team and reviews environmental conditions of bids and rank contractors on this ability</p> <p>EO and ES provides induction training to contractor. EO and ES reviews Construction EMP (CEMP) prepared by contractors. IA/PIU approves CEMP after receiving comments from EO/ES. PIU verifies compliance of Contractor with CEMP at site meeting</p>	<pre> graph TD A[Project becomes effective] --> B[Environmental Officer (EO) and Airport Engineers (AEs) included in NAC's PIU (through secondment from NAC) and Environmental Specialist (international) (ES) in PIU via PIU consultant team if applicable] B --> C[PIU to update existing IEE and prepare additional IEEs as required] C --> D[Tender documents prepared] D --> E[Tenders evaluated and Contractor appointed] E --> F[Contractor prepares CEMP. Environmental permits obtained] F --> G[Contractor approved to start work] </pre>	<p>Conditions of covenants and safeguard requirements in agreement/loan documents Budget, facilities and staff for environmental management been provided according to Loan Agreement, EARF and IEE.</p> <p>Consultants/qualified experts recruited, IEEs and EMPs approved by ADB and government as per EARF.</p> <p>EA has necessary technical capacity and experience to integrate EMP requirements into project.</p> <p>Environmental conditions have been prepared which are integrated into tender documents EO or ES to be a member of the Bid Evaluation Panel</p> <p>NAC or contractor obtains environmental permits. Contractor appoints environmental staff. After award of contract, Contractor prepares site/installation type specific CEMPs Contractor cannot take possession of construction site until (i) CEMP has been approved and (ii) induction is completed satisfactorily.</p>

<p>Construction Stage EO and ES monitor contractor's CEMP compliance activities, coordinate consultation events, and liaise with CE and PIU as required. PIU audits construction activities ES evaluates monitoring program ES assist ADB on supervision missions according to the Loan Agreement If noncompliance is identified, PIU (ES) support EA to instruct contractors to prepare and implement corrective action plan (CAP) Construction completed</p>	<div>Contractor begins work</div> <div>Environmental monitoring undertaken and reports prepared. (i) By Contractor: periodical environmental report sent to IA; (ii) By NAC environmental monitoring incorporated into Quarterly Progress Reports (QPR) submitted to ADB according to the Loan Agreement. NAC submit CAP (if any), to ADB for review</div> <div>Construction completed and project commissioned</div>	<p>Contractor complies with CEMP requirements for implementing and monitoring work on-site</p> <p>ES verify monitoring reports. EA reviews and signs-off on completed work NAC (with PIU assistance) submit monitoring report (including CAP, if any) to ADB for review according to the Loan Agreement and to environmental authorities according to host country regulations</p> <p>Project works completed in accordance with the CEMP and all sites satisfactorily rehabilitated and restored. Payments may be withheld if sites not cleared and closed to meet CEMP specifications.</p>
<p>Operation Stage NAC (or contractor) undertakes O&M and undertakes repair and maintenance activities as required</p>	<p>Operations activities to follow requirements of EMP;</p> <p>Submission of monitoring reports to ADB according to Loan Agreement;</p> <p>PIU consultant prepares project completion report at close of project (covers environmental management and capacity building)</p>	<p>NAC submits monitoring reports to ADB according to Loan Agreement.</p>

B. Land Acquisition and Resettlement

62. Tranche 3 has been classified as B for involuntary resettlement in accordance with ADB's SPS (2009). It is not expected to involve significant resettlement impacts, as all project works will be undertaken within NAC or state owned land except for minimal customary-owned land required for Kavieng and Buka airports.

63. The Resettlement Plans prepared for this project cover specific information and requirements in accordance with ADB's SPS (2009) and comply with the requisite laws of PNG. It includes assessment of impacts through socio-economic survey and inclusion of mitigation measures to avoid and if not possible minimize and compensate for any safeguards impacts; consultation, disclosure and grievance redress; identification of entitlement and compensation policies; preparation of institutional arrangements (including budget) and capacity building and support; and implementation and monitoring of the RPs. The RPs will be updated following detailed measurement survey for Buka airport and to confirm the compensation rate based on existing market prices at the time of payment for the other concerned sites. Due Diligence Reports were also prepared for the other sites to confirm that land acquisition and resettlement impacts are not applicable.

64. NAC as the EA will have overall responsibility for the project's compliance with safeguard requirements. NAC will also coordinate with relevant government agencies, including DEC, and Department of Lands and Physical Planning as needed during project implementation.

65. The CADIP PIU will be responsible for following the government's safeguards assessment procedure and ADB's SPS (2009) and obtaining safeguard clearance from ADB and the government prior to the start of civil works. They will carry out monitoring and evaluation of the implementation of RPs to ensure and assess the status of compliance. In case any unanticipated impacts are identified during construction, an RP will be prepared according to the resettlement framework.

66. The government is required to submit safeguard monitoring reports on a semi-annual basis covering all the aspects and issues related to the environment, land acquisition and resettlement and indigenous people. All safeguards documents for Tranche 3 have been disclosed and available publicly. Disclosure of relevant information to key stakeholders including affected persons will continue throughout implementation of Tranche 3.

C. Indigenous People

67. Tranche 3 is classified as category C on indigenous peoples in accordance with ADB's SPS (2009). NAC shall ensure that projects financed under the Tranche 3 do not have any adverse impacts on or target any distinct or vulnerable ethnic or tribal group. All projects will be implemented in a culturally appropriate and participatory manner. In the event that project(s) do have any such impacts, NAC shall take all steps required to ensure that the project complies with the applicable laws and regulations of Papua New Guinea and the ADB's SPS (2009).

68. NAC will maintain a social safeguards officer and engage a social safeguards specialist (international consultant, 8 person months) to assist NAC to manage social safeguard aspects. They will (i) update safeguards documents where required ensuring that the project does not involve social issues during construction, (ii) prepare resettlement plans, if any unanticipated impacts identified; (iii) implement consultation, participation and communication plan or strategies; (iv) assist in setting up and managing grievance redress mechanism; (v) identify,

assess and mitigate any adverse social impacts during implementation; and (vi) prepare monitoring reports and assist in disclosure of relevant documents in line with ADB requirements. The roles are further specified in their respective TOR (above).

69. Pursuant to ADB's Safeguard Policy Statement (2009) (SPS),¹⁷ ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS. All financial institutions will ensure that their investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list (Appendix 5) to projects financed by ADB.

VII. GENDER AND SOCIAL DIMENSIONS

70. NAC will incorporate provisions in civil work contracts that contractors shall (i) comply with PNG's applicable labour laws and related international treaty obligations and not employ child labour, (ii) provide safe work conditions and separate sanitation facilities for male and female workers, (iii) provide equal wage to male and female workers for work of equal value, (iv) provide employment opportunities for women, and (v) carry out programs of HIV/AIDS awareness and prevention.

71. At the project implementation, NAC will ensure public consultation and participation with the primary stakeholders it has identified, consisting of provincial governments, local level government, surrounding villages, and local industries. Secondary stakeholders including women groups, youth groups, and NGOs will also be consulted.

72. A GAP has been prepared for Tranche 3 to ensure gender mainstreaming activities in the project outputs. The GAP as shown in Table 25 highlights the outputs, proposed activities and targets and the responsible entities/personnel. Based on the lessons learned from Tranche 1 and 2, participation of women's groups, in addition to individual women's representation, will be ensured to overcome cultural barriers associated with women's visibility and representation. Contractors will be closely supervised by the PIU to comply with their contractual obligation to involve women.

¹⁷ Available at: <http://www.adb.org/Documents/Policies/Safeguards/Safeguard-Policy-Statement-June-2009>.

Table 26: Gender Action Plan

GENDER ACTION PLAN		
Outputs	Proposed activities and targets	Responsibilities
Output 1. Reformed institutions		
Sustainable and focused operational units for airports, air traffic services, property development, and regulatory oversight established	<ul style="list-style-type: none"> At least 30% local women will be represented in community consultation, discussion and awareness activities. Women will be given equal opportunity in decision making process involving regulatory aspects of airport oversight such as passenger facilities charging, safety and security and associated fees to be borne by airport facility users. At least 30% women representation in discussion, if possible. Women groups will also be invited. Provide gender awareness to the staff of the airports operational units. 	<p>NAC; PIU</p> <p>NAC; PIU</p> <p>NAC; PIU</p>
Output 2. Improved infrastructure		
Airside infrastructure safety and security certification requirements met	<ul style="list-style-type: none"> Airport Safety and Security awareness materials will be disseminated to women and men in nearby communities through pamphlets, brochures and posters for AOSPA. Ensure easy access to safety information for airports operations to communities (including women and children) by making use of bulletins in government offices, markets and other strategic public locations. Capacity of staff (at least 30% of which are women) in PIU, CASA, PNGASL and NAC will be provided relevant trainings on airport maintenance and operations, air traffic safety and security. Develop AOSPA training and women empowerment in consultation with NAC Women's Association (NACWA). 	<p>NAC; PIU; OLS Surveyor</p> <p>PIU; CASAPNG; local Media/Communication group</p> <p>NAC; PIU</p> <p>NAC; PIU</p>
Output 3. Improved operations		
3.1. Airport maintenance practices improved	<ul style="list-style-type: none"> Ensure about 30% of the total workforce in all Tranche 3 airport construction are women. 	<p>PIU</p> <p>PIU; Contractor</p>

<p>3.2. Runway lights for safe night landing operations introduced to meet airline safety requirements</p>	<ul style="list-style-type: none"> • Encourage recruitment of women in male dominated profession such as Engineers, Mechanic or Project Accounting. • Contractors as part of their contract will facilitate HIV/AIDS Awareness Training, Work Safety Training, Community Empowerment and Gender Equality and Prevention of Violence against Women for construction workers, nearby community members in targeted sites for both male and female. • Market stalls developed for women in at least 5 national airports premises. • Improve airport toilets facilities and have separate sections for men and women to use. • Encourage women participation in Grievance Redress Mechanism (GRM) committee. • Ensure local men and women are trained and aware of health, nutrition and hygiene, importance of girls/women education, HIV/AIDS and TB treatment and prevention. • As part of utilizing market facilities, local men and women will be trained and educated on livelihood improvement skills such as baking, cooking, catering and sewing/tailoring; producing quality coffee beans or cash crops 	<p>PIU; Contractor; Local Health Dept.</p> <p>PIU; Contractor</p> <p>PIU; Contractor</p> <p>PIU; Provincial Administración</p> <p>PIU; Contractor; CARE int'l; World Vision Int'l; Local Faith Based Organisation</p> <p>PIU; Contractor; Local Faith Based Organisation, Health Department; CIC; Provincial Agriculture Dept.</p>
Implementation Arrangements		

The Gender Action Plan (GAP) will be implemented by the National Safeguards Officer (SO) of the PIU in NAC. The SO with a gender or community development expertise will be assisted on an intermittent basis by an International Social Safeguard Specialist as and when required. The SO will be responsible for community engagement, safety education, and gender aspects of the project. The SO will be responsible for incorporating the GAP into project planning and implementation, including conducting awareness workshops, involving Non-Government Organizations (NGOs) and establishing indicators for project performance and monitoring. NAC's social safeguards implementation will continue the existing cooperation with local NGOs and other social groups. The PIU will ensure close monitoring of contractors to involve women in employment and continue consultation during implementation. The SO will monitor the GAP and provide progressive biannual reports on GAP activities to ADB and the Government.

ADB = Asian Development Bank, CSO = Civil Service Organization, GRM = Grievance Redress Mechanism, ISS = International Safeguard Specialist, DCDR = Department of Community Development and Religion, DLPP = Department of Land and Physical Planning, GAP = Gender Action Plan, HRD = Human Resource Division of NAC, NAC = National Airports Corporation, PIU = Project Implementation Unit. NACWA = National Airports Corporation Women's Association.

^a PNG Business Coalition Against HIV and AIDS (BAHA) provides free training to PNG businesses and statutory bodies.

VIII. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

Design and Monitoring Framework (Investment Program)

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Economic growth and poverty reduction in project areas	By 2020 5% average annual economic growth in project areas ^a 20% decrease in the number of people below the poverty line in project areas ^b 20% increase in the income of formal and non-formal vendors from visitors in project areas	Development partners' country reports Government socioeconomic monitoring reports Baseline survey and monitoring surveys at inception, midterm, and completion	Assumptions Continued political stability Sufficient incentives for investment and growth in production Risk Deterioration in domestic and external economic and financial conditions, constraining growth and development
Outcome Safer, more efficient, and more accessible all-weather air transport services in the project area	By 2018 (end of MFF) All national airports certified to meet ICAO safety and security standards Seven national airports suitable for larger jet aircraft Growth in passenger demand increased from 3% to 7% annually and in freight demand increased from 3% to 6% annually Airport incidents (delays, diversions, and closures) due to safety or security decreased from an average of 4 per month to 1 per month	ICAO safety and security audit reports CASAPNG safety and security audit reports NAC and CASAPNG technical and annual reports NAC and PNGASL, annual reports Air Operators monthly reports	Assumptions Government and CAA counterpart funding provided as planned Sustainable financing and execution of maintenance Risk Delay in airline expansion and fleet modernization
Outputs			
A. Reformed Institutions Sustainable and focused operational units established for airports, air traffic services, property development, and regulatory oversight	By 2018 CAA restructure completed PNGAL, PNGASL, ADL revenues increase from 50% to 75% of operating costs	PNGAL, PNGASL, and ADL annual reports	Assumptions Government support for institutional reforms Proper functioning of the investment program steering committee and project implementation unit

	<p>CAA strategy updated at least every 3 years</p> <p>PNGAL, PNGASL, ADL prepare and implement own projects on schedule and at estimated cost</p> <p>Reduced ICAO audit findings of safety and security noncompliance</p> <p>Airport landing fees, terminal facility charges, and air navigation fees revised and implemented</p>		<p>Availability of CAA counterpart staff qualified for program management</p> <p>Adequate counterpart funds and parallel external assistance made available on time</p> <p>Airlines positive response to the civil aviation development program</p> <p>Risks</p> <p>Delayed or incomplete institutional restructuring</p> <p>Delayed passage of the appropriate legislation</p> <p>Limited capacity of CAA for program management</p> <p>Limited availability of capable contractors to complete projects on schedule</p> <p>Delays in preparation and implementation of subsequent projects</p>
<p>B. Improved Infrastructure</p> <p>1. Airside infrastructure meets safety and security certification requirements</p> <p>2. Airside infrastructure and land-side facilities meet future operational and capacity requirements</p> <p>3. Airport maintenance practices improved</p>	<p>By 2018</p> <p>Runways, taxiways, and aprons certified at national 14 national airports</p> <p>Safety and security improvements meet ICAO standards at 14 national airports</p> <p>Runways, taxiways, and aprons at 7 national airports meet airline fleet requirements</p> <p>New airport terminal at Mount Hagen with sufficient facilities for international processing</p> <p>Flight times reduced by an average of 10%</p> <p>Long-term performance-based maintenance</p>	<p>Quarterly program reports</p> <p>National statistics</p> <p>PNGAL annual reports</p> <p>ICAO audit reports</p> <p>Quarterly program reports</p> <p>National statistics</p> <p>PNGAL annual reports</p>	

	contracts awarded for 21 national airports		
C. Improved Operations 1. Equipment for communications navigation and surveillance equipment modernized to meet air traffic management requirements 2. Fire safety and rescue equipment meets operational requirements	Communications, navigation, and surveillance equipment in 4 national airports certified by ICAO Air traffic management system commissioned at Port Moresby Ten rescue or fire tenders commissioned	Quarterly program reports PNGASL annual reports Quarterly program reports PNGASL annual reports	
Activities with Milestones 1. Institutional and sector reform 1.1 Formation of PNGAL, PNGASL, ADL project management units (2009) 1.2 Creation of CAA policy and strategy advisory unit (2010) 1.3 Recruitment of consultants (2010-2013) 1.4 Completion of national airports strategic management plan (2010) 1.5 Completion of CSO policy and review of tariffs (2012) 1.5 Completion of restructuring of independent safety regulator (2011) 1.6 Implementation of institutional and sector reforms (2009-2013) 2. Rehabilitation and improvement of remaining 14 national airports (2012-2017) 2.1 Conduct of condition surveys (2009-2014) 2.2 Bid document preparation, tendering and award of civil works contracts (2009-2015) 2.3 Implementation of civil works contracts (2011–2018) 3. Procurement of Equipment for Navigation, Communication and Surveillance 3.1 Preparation of design and bid documents (2010) 3.2 Tendering and award of equipment contracts (2010) 3.3 Implementation and commissioning of equipment contracts (2011–2014) 4. Consulting Services (design, construction supervision, maintenance, planning and capacity building) 4.1 Shortlisting of consultants and finalization of requests for proposals (2010-2013) 4.2 Evaluation and award of contract (2011-2014)			Inputs ADB: \$480 million Government/CAA: \$85 million Private Sector Participation: \$75 million

ADB = Asian Development Bank, ADL = Airport City Development Ltd., CAA = Civil Aviation Authority, CSO = community service obligation, ICAO = International Civil Aviation Organization, MFF = multitranchise financing facility, PNGAL = Papua New Guinea Airports Ltd., PNGASL = Papua New Guinea Air Services Ltd.

Source: Asian Development Bank.

^a In accordance with the Government's Medium Term Development Strategy (Government of Papua New Guinea. 2004. Medium Term Development Strategy 2005–2010. Port Moresby)

^b In accordance with the national target for Millennium Development Goals monitoring using the 1996 national average figure of 30% below the lower poverty line as the benchmark figure.

^c Benchmark figures to be determined following ICAO Universal Safety Oversight Audit Program report (December 2009).

Design and Monitoring Framework (Tranche 1)

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Economic growth and poverty reduction in project areas	By 2015 5% average annual economic growth in project areas ^a 10% decrease in the number of people below the poverty line in project areas ^b Increased income of formal and non-formal vendors derived from visitors in project areas by 10%	Development partners' country reports Government socioeconomic monitoring reports Baseline survey and monitoring surveys at inception, midterm, and completion	Assumptions Continued political stability Sufficient incentives for investment and growth in production Risk Deterioration in domestic and external economic and financial conditions, constraining growth and development
Outcome Safer, more efficient, and more accessible all-weather air transport services in the project area	By 2013 Five national airports certified to meet CASAPNG and ICAO safety and security standards Growth in passenger demand increased from 3% to 5% annually and in freight demand increased from 1% to 3% annually Airport incidents (delays, diversions, and closures) due to safety or security decreased from an average of 4 per month to 2 per month	ICAO safety and security audit reports CAA technical and annual reports PNGAL, PNGASL, ADL annual reports	Assumptions Government and CAA counterpart funding provided as planned Sustainable financing and execution of maintenance Risk Delay in airline expansion and fleet modernization
Outputs A. Reformed Institutions Sustainable and focused operational units established for airports, air traffic services, property development, and regulatory oversight	By 2013 CAA restructure completed CAA strategy updated Reduced ICAO audit findings of safety and security noncompliance ^c	PNGAL, PNGASL, ADL annual reports	Assumptions Government support for institutional reforms Proper functioning of the investment program steering committee and project implementation unit Availability of CAA counterpart staff

			<p>qualified for program management</p> <p>Adequate counterpart funds and parallel external assistance made available on time</p> <p>Airlines positive response to the civil aviation development program</p> <p>Risks Delayed or incomplete institutional restructuring</p> <p>Delayed passage of the appropriate legislation</p> <p>Limited capacity of CAA for program management</p> <p>Limited availability of capable contractors to complete projects on schedule</p> <p>Delays in preparation and implementation of subsequent projects</p>
<p>B. Improved Infrastructure</p> <p>1. Airside infrastructure meets safety and security certification requirements</p> <p>2. Airside infrastructure and land-side facilities meet future operational and capacity requirements</p> <p>3. Airport maintenance practices improved</p>	<p>By 2013</p> <p>Runways, taxiways, and aprons certified at 5 national airports</p> <p>Safety and security improvements meet ICAO standards at 4 national airports</p> <p>New airport terminal at Mount Hagen with sufficient facilities for international processing</p> <p>Flight times reduced by an average of 10%</p> <p>Long-term performance-based maintenance</p>	<p>Quarterly program reports National statistics PNGAL annual reports ICAO audit reports</p> <p>Quarterly program reports National statistics PNGAL annual reports</p> <p>Quarterly program reports</p>	

	contracts awarded for 5 national airports		
C. Improved Operations			
1. Equipment for communications navigation and surveillance equipment modernized to meet air traffic managements	By 2013 Instrument landing system purchased and commissioned at Port Moresby airport	Quarterly program reports PNGASL annual reports	
2. Fire safety and rescue equipment meets operational requirements	By 2012 Three rescue or fire tenders commissioned at Port Moresby airport	Quarterly program reports PNGASL annual reports	
Activities with Milestones			Inputs
All target performance dates are from loan effectiveness			Loan
1. Institutional and sector reform			ADB: \$95 million
1.1 Formation of PNGAL, PNGASL, ADL project management units (2009)			(OCR: \$25 million and
1.2 Creation of CAA policy and strategy advisory unit (2010)			ADF: \$70 million)
1.3 Recruitment of consultants (2010-2013)			Government: \$17 million
1.4 Completion of national airports strategic management plan (2010)			
1.5 Completion of restructuring of independent safety regulator (2011)			
1.6 Implementation of institutional and sector reforms (2009-2013)			
2. Rehabilitation and improvement of 10 national airports			
2.1 Preparation of design and bid documents (2010)			
2.2 Tendering and award of civil works contracts (2010)			
2.3 Implementation of civil works contracts (2011–2013)			
3. Procurement of Equipment for Navigation, Communication and Surveillance			
3.1 Preparation of design and bid documents (2010)			
3.2 Tendering and award of equipment contracts (2010)			
3.3 Implementation and commissioning of equipment contracts (2011–2013)			
4. Consulting Services (design, construction supervision, maintenance, planning and capacity building)			
4.1 Shortlist consultants and finalize request for proposals (2010)			
4.2 Evaluation and award of contract (2010)			

ADB = Asian Development Bank, ADF = Asian Development Fund, ADL = Airport City Development Ltd., CAA = Civil Aviation Authority, ICAO = International Civil Aviation Organization, OCR = ordinary capita resources, PNGAL = PNG Air Services Ltd.

^a In accordance with the Government's Medium Term Development Strategy (Government of Papua New Guinea. 2004. Medium Term Development Strategy 2005–2010. Port Moresby)

^b In accordance with the national target for Millennium Development Goals monitoring using the 1996 national average figure of 30% below the lower poverty line as the benchmark figure.

^c Benchmark figures to be determined following ICAO Universal Safety Oversight Audit Program report (December 2009).

DESIGN AND MONITORING FRAMEWORK (Tranche 2)

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Economic growth and poverty reduction in project areas	By 2018 5% average annual economic growth in project areas 10% decrease in the number of people below the poverty line in project areas Increased income of formal and non-formal vendors derived from visitors in project areas by 10%	Development partners' country reports Government socioeconomic monitoring reports Baseline survey and monitoring surveys at inception, midterm, and completion	Assumptions Continued political stability Sufficient incentives for investment and growth in production Risk Deterioration in domestic and external economic and financial conditions, constraining growth and development
Outcome Safer, more efficient, and more accessible all-weather air transport services in the project area	By 2016 Six national airports certified to meet ICAO safety and security standards Growth in passenger demand increased from 3% to 5% annually and in freight demand increased from 1% to 3% annually Airport incidents (delays, diversions, and closures) due to safety or security decreased from an average of 4 per month to 2 per month	ICAO safety and security audit reports NAC and CASAPNG technical and annual reports NAC and PNGASL annual reports	Assumptions Government and counterpart funding provided as planned Sustainable financing and execution of maintenance Risk Delay in airline expansion and fleet modernization
Outputs 1. Reformed Institutions Sustainable and focused operational units established for airports, air traffic services, property development, and regulatory oversight	By 2016 NAC, PNGASL and CASAPNG strategy updated NAC, PNGASL and CASAPNG prepare and implement own projects on schedule and at estimated cost ICAO audit findings of safety and security noncompliance reduced	NAC, PNGASL and CASAPNG annual reports	Assumptions Proper functioning of the investment program steering committee and project implementation unit Availability of CAA counterpart staff qualified for program management Adequate counterpart funds and parallel

	<p>by 10%</p> <p>Capacity development plan developed and implemented in NAC, PNGASL and CASAPNG</p> <p>All female NAC staff receive relevant institutional strengthening training programs</p>		<p>external assistance made available on time</p> <p>Airlines positive response to the civil aviation development program</p> <p>Risks Limited capacity of counterpart for program management</p>
<p>2. Improved Infrastructure</p> <p>1. Airside infrastructure meets safety and security certification requirements</p> <p>2. Airside infrastructure and land-side facilities meet future operational and capacity requirements</p> <p>3. Airport maintenance practices improved</p>	<p>By 2016</p> <p>Runways, taxiways and apron certified at 4 national airports</p> <p>Safety and security improvements meet ICAO standards at 6 national airports</p> <p>All safety awareness materials address gender aspects</p> <p>Runways, taxiways and apron certified at 4 national airports meet airline fleet requirements</p> <p>Flight time reduced by an average of 10%</p> <p>A market shed for women built at 6 national airports</p> <p>Performance-based maintenance contracts awarded for at least 3 national airports</p> <p>Asset management plan developed and carried out by the maintenance contracts</p>	<p>Quarterly program reports</p> <p>National statistics</p> <p>NAC annual reports</p> <p>ICAO audit reports</p>	<p>Limited availability of capable contractors to complete projects on schedule</p> <p>Delays in preparation and implementation of subsequent projects</p>
<p>3. Improved Operations</p> <p>1. Equipment for communications navigation and surveillance equipment modernized to meet air traffic managements</p>	<p>By 2016</p> <p>CNS and ATM system implemented in Port Moresby</p> <p>All female PNGASL staff will receive training</p>	<p>Quarterly program reports</p> <p>NAC annual reports</p>	

2. Fire safety and rescue equipment meets operational requirements	<p>program for equipment maintenance</p> <p>New rescue and fire tenders commissioned at 3 national airports</p>		
Activities with Milestones			Inputs
<p>All target performance dates are from loan effectiveness.</p> <p>1. Institutional and Sector Reform</p> <p>1.1 Mobilize individual consultants (2014-2016)</p> <p>1.2 Develop and implement capacity development plan (2014-2016)</p> <p>1.3 Update NAC, PNGASL and CASAPNG strategic management plan (2015)</p> <p>2. Rehabilitation and Improvement of National Airports</p> <p>2.1 Shortlist consultants and finalize request for proposals (2013)</p> <p>2.2 Evaluate proposals and award consulting service contract (2013)</p> <p>2.3 Mobilize consultants (2014)</p> <p>2.4 Prepare design and bid documents (2013-2014)</p> <p>2.5 Tender and award civil works contracts (2013-2014)</p> <p>2.6 Develop airport maintenance program (2014)</p> <p>2.7 Procure fire safety and rescue equipment (2014)</p> <p>2.8 Tender and award long-term performance-based maintenance contracts (2014-2015)</p> <p>2.9 Implement civil works contracts (2014-2015)</p> <p>2.10 Implement maintenance contracts (2015-2016)</p> <p>2.11 Carry out safety awareness activities (2015-2016)</p> <p>3. Procurement of Equipment for CNS and ATM</p> <p>3.1 Mobilize consultants (2014)</p> <p>3.2 Prepare design and bid documents for CNS and ATM (2013-2014)</p> <p>3.3 Tender and award equipment contracts (2014)</p> <p>3.4 Implement and commission equipment contracts (2014-2016)</p>			<p>Loan</p> <p>ADB: \$130 million</p> <p>(OCR: \$115 million and ADF: \$15 million)</p> <p>Government: \$40 million</p>

ADB = Asian Development Bank, ADF = Asian Development Fund, ATM = air traffic management, PNGASL = Papua New Guinea Air Services Limited, CASAPNG = Civil Aviation Safety Authority of Papua New Guinea, CNS = communication, navigation, and surveillance, ICAO = International Civil Aviation Organization, NAC = National Airports Corporation, OCR = ordinary capital resources.

DESIGN AND MONITORING FRAMEWORK
CIVIL AVIATION DEVELOPMENT INVESTMENT PROGRAM TRANCHE 3¹⁸

Impacts the Project is aligned with: Economic growth and poverty reduction in project areas achieved ¹⁹			
Project Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
Outcome Safer, more efficient, and more accessible all-weather air transport services in the project areas	By 2018 (December) a. At least 9 national airports certified to meet CASAPNG safety and security standards. (Baseline: 0) b. Growth in passenger demand increased from 3% to 7% and in freight demand increased from 3% to 6% (Baseline 2009) c. Airport incidents (delays, diversions, and closures) due to safety or security decreased from an average of 4 per month in 2009 to 2 per month	a. ICAO safety and security audit reports b. CASAPNG safety and security audit reports c. NAC and CASAPNG technical and annual reports d. NAC and PNGASL annual reports e. Air operators monthly reports	Delay in airline expansion and fleet modernization Government counterpart funding for the project not sustained Political instability and interference
Outputs 1. Reformed Institutions Sustainable and focused operational units	By 2018 (December) 1a. NAC, CASAPNG, and PNGASL business strategy updated	NAC, CASAPNG, and PNGASL annual reports	Limited availability of capable contractors to complete projects on

¹⁸ Sex-disaggregated data will be collected where it is relevant.

¹⁹ Papua New Guinea Vision 2050

for airports, air traffic services, and regulatory oversight established	<p>(Baseline NA)</p> <p>1b. ICAO and audit findings of safety and security noncompliance reduced to 10%</p> <p>1c. A new set of tariff and service charges structure for NAC</p> <p>(Baseline NA)</p> <p>1d. 1 new CASAPNG business process developed</p> <p>(Baseline NA)</p>		<p>schedule</p> <p>Cost overruns in project</p>
<p>2.—Improved Infrastructure</p> <p>Airside infrastructure safety and security certification requirements met</p>	<p>2a. Runways length of 5 airports extended to min 1900 meter to meet airlines fleet requirement for jet air crafts</p> <p>(Baseline 0)</p> <p>2b. 6 domestic airport's new terminal buildings constructed</p> <p>(Baseline 0)</p> <p>2c. 9 national airports runways, taxiways and aprons certified to meet ICAO/CASAPNG requirements</p> <p>(Baseline 1)</p> <p>2d. Long term maintenance contracts implemented for at least 5</p>	<p>CADIP quarterly and annual reports</p> <p>National statistics</p> <p>NAC annual reports</p> <p>ICAO audit reports</p> <p>CASAPNG certification</p> <p>Air operators annual reports covering airport infrastructure</p>	

	<p>national airports</p> <p>(Baseline 0)</p> <p>2e. Capacity of staff (at least 30% of which are women) in PIU, CASA, PNGASL and NAC will be provided relevant trainings on airport maintenance and operations, air traffic safety and security.</p> <p>Baseline (10%)</p>		
<p>3 Improved operations</p> <p>3.1 Airport maintenance practices improved</p> <p>3.2 Runway lights for safe night landing operations introduced to meet airline safety requirements</p>	<p>3a. Asset management system implemented and fully operational</p> <p>(Baseline NA)</p> <p>3b. Runway lights for night operations at 7 national airports commissioned for safe night operations</p> <p>(Baseline NA)</p> <p>3c. Market stalls developed for women in at least 5 national airports premises</p> <p>(Baseline 0)</p>	<p>NAC asset registers and asset management systems</p> <p>CADIP quarterly and annual reports</p> <p>PNGASL and CASA PNG annual reports</p> <p>NAC annual reports</p>	

Key Activities with Milestones**1. Sustainable and focused operational units for airports, air traffic services and regulatory oversight established**

- 1.1 Update NAC, CASAPNG, and PNGASL strategic management plan (2018)
- 1.2 Revise and implement airport and air navigation charges (2018)

2. Airside infrastructure met safety and security certification requirements

- 2.1 Prepare design and bid documents (2016)
- 2.2 Tender and award civil works contracts (2016-2017)
- 2.3 Procure asset management system and develop airport maintenance program (2017)
- 2.4 Capacity development on airports safety and audit (2016-2018)
- 2.5 Implement civil works contracts (2016-2018)
- 2.6 Implement maintenance contracts (Dec 2018)

3. Airside infrastructure and landside facilities met future operational and capacity requirements

- 3.1 Prepare design and bid documents 2016-
- 3.2 Tender and award civil works contracts (2016-2017)
- 3.3 Implement civil works contracts (2016-2018)
- 3.4 Implement maintenance contracts (2018)

4. Airport maintenance practices improved

- 4.1 Prepare design and bid documents (2016)
- 4.2 Tender and award equipment contracts (2016-2017)
- 4.3 Implement and commission equipment contracts (2017)

Project Management Activities

- Shortlist consultants and finalize request for proposals (2016)
- Evaluate proposals and award contract (2016)

Inputs

ADB: \$248 million
Government: \$27 million

Assumptions for Partner Financing

Not applicable

ADB = Asian Development Bank, CADIP = Civil Aviation Development Investment Program, CASAPNG = Civil Aviation Safety Authority of Papua New Guinea, ICAO = International Civil Aviation Organization, NAC = National Airports Corporation, PNG = Papua New Guinea, PNGASL = Papua New Guinea Air Services Limited.

Source: Asian Development Bank.

B. Monitoring

73. Project performance monitoring. Within three months of the loan effectiveness, NAC through the PIU will establish a project performance and monitoring system. ADB and the government will agree on a set of indicators for monitoring and evaluating how well the project achieves its goals and purposes. These indicators will be refined and monitored during project implementation. The indicators will include data for monitoring aviation safety improvements, transport sector performance, socioeconomic development, environmental impact, and institutional development. Monitoring and evaluation will be based on gender-disaggregated

data for social and poverty impact indicators. The PIU consultants will provide hands-on training to NAC staff in data collection, monitoring, and evaluation. NAC through the PIU shall monitor and evaluate the indicators according to the agreed framework on a quarterly basis to determine the efficiency and effectiveness of the project. Disaggregated baseline data for output and outcome indicators gathered during project processing will be updated and reported quarterly through the NAC quarterly progress reports and after each ADB review mission. These quarterly reports will provide information necessary to update ADB's project performance reporting system.²⁰ In addition, a project steering committee will oversee and monitor the overall implementation of the project.

74. **Procurement performance review.** PIU's procurement performance and implementation effectiveness will be reviewed by ADB during project mid-term review. If the review finds issues, PIU will develop a mitigation plan and address the issues by implementing the plan with support from a ADB's Procurement Specialist (OSFMD)

75. **Compliance monitoring:** This will be monitored through regular quarterly progress reports and during regular ADB review missions. The PIU is required to monitor contractor compliance with approved CEMPs (see Table 13).

76. **Safeguards monitoring:** NAC will be responsible for monitoring safeguard activities through the PIU. NAC will submit semi-annual safeguards monitoring report to ADB, and the findings of the CEMP and social safeguards compliance monitoring will be incorporated into the progress reporting of the PIU. Safeguard monitoring is included as a requirement of the IEE and RPs.²¹ Before commencing work the contractor will prepare a CEMP which will establish how the contractor will comply with the safeguard requirements, the CEMP will be reviewed and approved by the PIU. Monitoring of the contractor's work will be undertaken by the Environment Officer. Monitoring will also be carried out independently by DEC.

77. NAC will also submit a CADIP land acquisition completion report subject to ADB clearance before any displacement takes place and award of civil works contracts for projects involving land acquisition and resettlement. ADB review missions will also check the progress on implementation of safeguard requirements. If Tranche 3 will involve unanticipated significant safeguard issues, a Resettlement Plan will be prepared based on an impact assessment and if there will be non-compliance then a corrective action plan will be prepared. NAC will recruit qualified and experienced external experts or qualified civil society organizations to verify the PIU's monitoring information on an annual basis if demanded by affected persons and if significant monitoring issues arise. The PIU will recruit such experts or organization in consultation with ADB and submit external monitoring reports to ADB.

78. The checklists for safeguard monitoring and outlines of safeguard monitoring report for ADB missions and NAC, respectively, are provided below. The safeguard officers and consultants at PIU will assist NAC in monitoring of safeguard activities and preparation, review and disclosure of safeguard monitoring reports.

²⁰ ADB's project performance reporting system is available at: <http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool>.

²¹ Safeguards Reports (accessible from the list of linked documents in Appendixes).

Annex 1 – Safeguard Monitoring Checklists (IR, and Environment)

PARD Checklist for Safeguard Supervision: Involuntary Resettlement

PROJECT INFORMATION									
Loan/Grant No.:		Project Name:							
Approval Date:			Closing Date:			Cumulative Progress (%):			
Project Team Leader(s):									
1) Resettlement Categorization (Original) A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> (additional financing, if any) A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/>									
<i>(Please complete the following sections if the project has been categorized as A, B or FI involving land acquisition/resettlement issues)</i>									
2) Resettlement Planning Resettlement Planning Documents: RF <input type="checkbox"/> RP <input type="checkbox"/> Number of RPs _____ of _____ ESM S <input type="checkbox"/> RP Finalized or Updated after Detailed Design: Yes <input type="checkbox"/> No <input type="checkbox"/> If no, actions? _____ (Attach a list of projects and status if necessary.) Final/Updated RP Disclosed and Posted on ADB Website: Yes <input type="checkbox"/> No <input type="checkbox"/> If no, actions? _____ Compensation Rates Approved by the Government: Yes <input type="checkbox"/> No <input type="checkbox"/> If no, actions? _____									
3) Institutional Setup for Resettlement PIU/PMU Resettlement Staff Assigned: Yes <input type="checkbox"/> No <input type="checkbox"/> If no, actions? _____ If yes, Name: _____ Since: _____ / _____ (month) (year) Resettlement Specialist Consultant Mobilized: Yes <input type="checkbox"/> No <input type="checkbox"/> If no, actions? _____ If yes, Name: _____ Since: _____ / _____ (month) (year) Grievance Redress Mechanism Established: Yes <input type="checkbox"/> No <input type="checkbox"/> If no, why? _____ Allocation of Yes <input type="checkbox"/> No <input type="checkbox"/> If no,									

Internal Monitoring System Established:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?												
External Monitor Engaged (if needed):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?												
If yes, Name:			Since:	/ (year)											
			(month)												
Monitoring Submitted to ADB: Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?												
If Yes, provide information below															

	Baseline Report	Information below			
		Report 1	Report 2	Report 3	Report 4
Submission Date (m/yr)					
ADB Review Date (m/yr)					
Web-posting Date (m/yr)					
Name of ADB Reviewer					

5) Resettlement Field Review with Participation of Safeguard Specialist/Officer/Staff Consultant		Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?
		If Yes, provide information below		

Mission		Date	Information sought					
(m/yr)								
Type	of							
mission								
Name	of	safeguard						
specialist/officer/staff consultants								

6) Compliance with Loan Covenants

List of key covenants in loan and project agreement

[illegible]

Overall safeguard rating (e-Operation):

S = Satisfactory; PS = Partly Satisfactory; US = Unsatisfactory

7) Status of Implementation of Resettlement Activities (Please provide a cross reference if it is already covered under Section 6 above)

	Items	Yes/ No	Describe Implementation Status
1	Satisfactory Consultation: clear responsibility; identification of stakeholders; consultations undertaken; and documentation		
2	Information of APs: database/inventory; ID cards		
3	Land Acquisition: Notification, survey, approvals		
4	Payment of compensation and allowances		
5	Relocation of affected assets and structures		
6	Rehabilitation income generation, employment		
7			

8) Major Resettlement Issues or Complaints (Cumulative)	
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Complaints (Cumulative)		Description
Item		
1	Issue	
	Proposed Action(s)	
	Follow-up Issues/Actions	

[illegible]

ESMS = environmental and social management system; FI = financial intermediary; MTR = mid-term review; PCR = project completion review; PAU = Project Administration Unit; PIU/PMU = project implementation/management unit; TL = team leader; RP = resettlement plan; RF = resettlement framework; SS = safeguard specialist

PARD Checklist for Safeguard Supervision: Indigenous Peoples (IP)									
PROJECT INFORMATION									
Loan/Grant No.:		Project Name:							
Approval Date:		Closing Date:				Cumulative Progress (%):			
Project Team Leader(s):									
1) IP Categorization									
(Original)		A		B		C		FI	
(additional financing, if any)		A		B		C		FI	
<i>(Please complete the following sections if the project has been categorized as A, B or FI involving IP issues)</i>									
2) IP Planning									
IP Documents:		IPF		IP P		Number of IPP _____		ESMS	
IPP Finalized or Updated after Detailed Design:		Yes		No		If no, actions?			
(Attach a list of projects and status if necessary.)									
Final/Updated IPP Disclosed and Posted on ADB Website:		Yes		No		If no, actions?			
3) Institutional Setup for IP									
PIU/PMU Social Staff Assigned:		Yes		No		If no, actions?			
If yes, Name:						Since:		/	
						(month)		(year)	
Social Specialist Consultant Mobilized:		Yes		No		If no, actions?			
If yes, Name:						Since:		/	
						(month)		(year)	
Grievance Redress Mechanism Established:		Yes		No		If no, why?			
Allocation of Government Budget:		Yes		No		If no, actions?			
If yes, amount\$:									

4) IP Monitoring and Reports

Internal Monitoring System Established:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?				
External Monitor Engaged (if needed):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?				
	If yes, Name:			Since			
				:	/		
				(month)	(year)		
Monitoring Report Submitted to ADB:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?				
	If Yes, provide information below						
	Baseline Report	Report 1	Report 2	Report 3	Report 4		
Submission Date (m/yr)							
ADB Review Date (m/yr)							
Web-posting Date (m/yr)							
Name of ADB Reviewer							

5) IP Field Review with Participation of Safeguard Specialist/Officer/Staff Consultant

	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?				
	If Yes, provide information below						
Mission Date (m/yr)							
Type of mission							
Name of safeguard specialist/officer/staff consultants							

6) Compliance with Loan Covenants

List of key covenants in loan and project agreement

[illegible]

*Note: Yes ; No; Not yet due

Overall safeguard rating (e-Operation):

S = Satisfactory; PS = Partly Satisfactory; US = Unsatisfactory

7) Status of Implementation of IPP Activities (Please provide a cross reference if it is already covered under Section 6 above)

[illegible]

8) Major IP Issues or Complaints (Cumulative)

Item		Description
1	Issue	
	Proposed Action(s)	
	Follow-up Issues/Actions	
	Final Resolution of Issue	
2	Issue	
	Proposed Action(s)	
	Follow-up Issues/Actions	
	Final Resolution of Issue	

*Add rows as needed.

ESMS = environmental and social management system; FI = financial intermediary; MTR = mid-term review; PCR = project completion review; PAU = Project

PARD Safeguards Implementation Checklist: Environment														
Date: _____														
PROJECT INFORMATION														
Loan/Grant No.:			Project Name:											
Approval Date:					Closing Date:					Cumulative Progress (%):				
Project Team Leader(s):										Implementing Agency				
1) Categorization														
(Original)			A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	FI	<input type="checkbox"/>				
(additional financing, if any)			A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	FI	<input type="checkbox"/>				
<i>(Please complete the following sections if the project has been categorized as A, B or FI)</i>														
2) Planning														
Documents:			EAR F	<input type="checkbox"/>	IEE/EIA	<input type="checkbox"/>	No. of IEE/EIA				EMP	<input type="checkbox"/>		
IEE/EIA Disclosed and Posted on ADB Website:			Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	If no, actions?							
EMP Finalized or Updated after Detailed Design			Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	If no, actions?							
CEMP submitted, reviewed and approved: (Attach a list of projects and status if necessary.)			Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	If no, actions?							
3) Institutional Setup														
PIU/PMU Environment Staff Assigned:			Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	If no, actions?							
If yes, Name:						Since:				/				
										(month)	(year)			
Environmental Specialist/Consultant Mobilized:			Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	If no, actions?							
If yes, National Specialist's Name:						Since:				/				
										(month)	(year)			
If yes, International						Since:				/				

Specialist's Name:					
Participation of Gov. Environment Agency/Division:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?		
	If yes, Name:		Since	/	
				(month)	(year)
Grievance Redress Mechanism Established:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, why?		
Allocation of Government Budget:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?		
	If yes, amount\$:				

4) Monitoring and Reports

Internal Monitoring System Established:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?		
Compliance monitoring incorp. into Q Progress Reports:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?		
External Monitor Engaged (if needed):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?		
	If yes, Name:		Since	/	
				(month)	(year)
Monitoring Report Submitted to ADB:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?		
	If Yes, provide information below				

	Baseline Report	Report 1	Report 2	Report 3	Report 4
Submission Date (m/yr)					
ADB Review Date (m/yr)					
Web-posting Date (m/yr)					
Name of ADB Reviewer					

5) Field Review with Participation of Safeguard Specialist/Officer/Staff Consultant

	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If no, actions?		
	If Yes, provide information below				
Mission Date (m/yr)					
Type of mission:					
Participants (safeguard specialist/officer/staff consultants)					

6) Compliance with Loan Covenants

List of key covenants in loan and project agreement

Item #	Covenant	Compliance rating*	Describe status of compliance

*Note: Yes ; No; Not yet due

Overall safeguard rating (e-Operation):

S = Satisfactory; PS = Partly Satisfactory; US = Unsatisfactory

7) Status of Implementation of EMP Activities (Please provide a cross reference if it is already covered under Section 6 above)

	Items	Yes/No	Describe Implementation Status

8) Major Issues or Complaints (Cumulative)

	Item	Description
1	Issue	
	Proposed Action(s)	
	Follow-up Issues/Actions	
	Final Resolution of Issue	
2	Issue	
	Proposed Action(s)	
	Follow-up Issues/Actions	

[illegible]

IEE = initial environmental examination; EIA = environmental impact assessment; EMP = environmental management plan; FI = financial intermediary; MTR = mid-term review; PCR = project completion review; PIU/PMU = project implementation/management unit; TL = team leader; EARF = environmental assessment and review framework; SS = safeguard specialist

Annex 2 – Suggested Contents of Resettlement/Social Monitoring Report

Heading/Section	Contents
Introduction	<p>Brief background on the CADIP including each of the projects and the project progress status</p> <p>The project's/project's category and planning documents (original, updated or new plans) on resettlement/IP impacts</p> <p>Institutional arrangements and budget allocation for resettlement/social management;</p> <p>Arrangement for the monitoring (internal monitoring, external monitoring etc.)</p>
Monitoring Activities	<p>Methodology for monitoring (whether checklists prepared etc.);</p> <p>What period the monitoring covers</p> <p>Main activities – site visits, consultations, survey etc.</p>
Monitoring Results and Actions Required	<p>Progress and performance in implementation of RP/IPP and other programs (how they were implemented, what are the outputs, etc.)</p> <p>Results on consultations, disclosure and grievance redress (whether they have been effective)</p> <p>Whether the implementation comply with the approved RP/IPP (e.g. whether compensation rates were at replacement cost, etc.)</p> <p>Results on outcome (whether APs were able to restore livelihoods)</p> <p>Compliance on monitoring and disclosure (whether reports have been submitted, posted on website)</p> <p>Whether any issues and corrective measures identified to achieve the RP/IPP objective. If yes, actions with target dates and responsible agency/person)</p> <p>Follow-up item/plan for next report</p>
Summary and Conclusions	<p>Summary of main findings</p> <p>Main issues identified and corrective actions noted</p> <p>A table on follow-up action which can be updated each period to track completion of actions required</p>
Attachments	<p>Monitoring checklist (based on items identified in the RP/IPP)</p> <p>Photographs</p> <p>Additional information as required</p>

Annex 3 – Suggested Contents of Environmental Monitoring Report

Heading/Section	Contents
Introduction	Brief background on CADIP and the projects; Institutional arrangements for project management and environmental management;
Monitoring Activities	Who participated in the monitoring; Methodology for monitoring (whether checklists prepared etc.); When the monitoring was undertaken and what period it covers; Summary of other monitoring undertaken in the period (i.e. form contractor's monthly reports and if any survey/sample monitoring undertaken); Main activities – observations/inspections, consultations, interviews with contractor staff etc.
Works in Progress	Details of the works being undertaken, (with photographs); Include whether any environmental training/awareness has been provided to contractor staff in the period (what, by whom etc.)
Monitoring Results and Actions Required	Whether works and measures comply with the approved EMP/CEMP; Should follow sequence of items identified in EMP/CEMP and verify that all mitigations measures noted are being implemented' Corrective actions cited (date to be resolved and person responsible on contractor team and verification by IA/PMU)
Summary and Conclusions	Summary of main findings; Main issues identified and corrective actions noted; Can include summary table which can be updated each period to track completion of actions required
Attachments	Monitoring checklist (based on items identified in the EMP/CEMP) refer annex 1 Additional photographs Additional information as required

79. **Gender and social dimensions monitoring:** The Gender Action Plan (GAP) will be implemented by the PIU as required. It is not envisaged that there are any significant issues with CADIP as pertaining to gender and social issues.

80. The CADIP will engage a social safeguards specialist (international) who will provide guidance to the social safeguards officer (national) in the PIU to develop and establish an effective monitoring and reporting systems and processes. Baseline surveys will be undertaken at the start of project implementation and all indicators in the GAP will be continuously monitored and reported. These will be included in the PIU quarterly reports and project monitoring reports. The social safeguards officer will monitor the GAP and produce biannual reports on GAP activities to ADB and the government. A mid-term review will be carried out and a project completion report will be undertaken at project end.

C. Evaluation

81. Soon after the loan is approved or PIU consultants are mobilized, ADB will field an inception mission to agree with the government, NAC on implementation requirements of the project as well as discuss in detail the procedures relating to procurement of works and goods,

recruitment of consultants and disbursements. ADB and the government will undertake semi-annual reviews of the project to consider: the (i) scope of the project, (ii) implementation arrangements, (iii) compliance with loan covenants, (iv) physical achievements against targets and milestones, and (v) project implementation issues requiring resolution or action. The midterm review will be made after one year and half of the loan effectiveness date. Prior to the midterm review, NAC with the assistance of PIU will prepare a position paper outlining any proposals for any changes required under the project which will not adversely affect the Tranche 3's outcomes. The midterm review will examine in detail the implementation progress and project design (institutional, administrative, organizational, technical, environmental, social, poverty reduction, resettlement, economic, and financial aspects), and identify courses of action that would improve project performance, viability, and the achievement of targets and project objectives. All the assumptions and risks noted in the design and monitoring framework will be reviewed. Within six months of physical completion of the project, NAC will submit a project completion report to ADB.²²

82. ADB will undertake a project completion review (PCR) of the project after 12-24 months from physical completion date. The PCR will evaluate the processing and design of the project, both by ADB and the borrower amongst others assess and evaluate (i) performance of the borrower and EA in managing and implementing the project, in complying with ADB's guidelines, policies, practices, procedures, and loan covenants, and evaluate project costs, disbursements, and institutional improvements; (ii) assess the performance of consultants; (iii) review problems encountered during implementation and the effectiveness of measures to resolve them, by the borrower, EA, and ADB; (iv) assess whether the borrower, EA, and ADB monitored progress effectively in comparison with quantifiable and monitoring targets; (v) re-evaluate the financial and economic performance of the project at its initial stage of operation and compare with the qualified indicators in the design and monitoring framework and Project Performance Report; (vi) assess the project's transition to operations, and identify any remedial measures needed; (vii) assess future operation and maintenance schedules to ensure sustainability of the project; (viii) recommend any other steps that the borrower and EA need to take to ensure the project's sustainable operation; (ix) assess the performance of the monitoring and evaluation system established for the project and re-examine the indicators selected for monitoring operations and assessing development impact; (x) assess significant environmental and poverty reduction impacts (including socio-cultural impacts where applicable) of the project, and evaluate the implementation and effectiveness of any environmental control measures, resettlement plans, and poverty reduction measures, and (xi) assess whether the immediate development objective has been met and the likelihood of attaining long-term development goal.

D. Reporting

83. The EA will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions; (c) updated procurement plan and (d) updated implementation plan for next 12 months; and (iii)) semi-annual safeguard monitoring reports; and (iv) a project completion report within 6 months of physical completion of the project. To ensure projects continue to be both viable and sustainable, project accounts and the executing agency AFSs, together with the associated auditor's report, should be adequately reviewed.

²² Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public Sector-Landscape.rar>.

E. Stakeholder Communication Strategy

84. During the early implementation phase of the project, a communication strategy and communication plan will be developed by PIU based on Table 23 below, which indicates the types of information, responsibility, target audience, frequency/timing, and means of communication.

Table 26: Stakeholder Communication Strategy

Information to be Communicated	Responsibility	Target audience	Frequency/timing	Means of Communication
Periodic Financing Request Report with linked Documents	ADB	ADB, Government of PNG, NAC, civil society, private sector, development partners, and general public	Once	ADB website
Project performance report and project information Document	ADB	ADB, Government of PNG, NAC, civil society, private sector, development partners, and general public	Every quarter	ADB website
Quarterly reports	NAC PIU	ADB, Government of Papua New Guinea, NAC staff	Every quarter	Reports
Procurement related Information	NAC	Bidders and general public	As per procurement plan	NAC website, newspaper (as per procurement guidelines)
Land access for airport improvements on state Land	NAC	Affected people	As per the Resettlement Plan	Consultation with community liaison representatives by the provincial government; grievance redress
Potential environmental and social impact during construction period	NAC	Local communities near airports, women's and church groups, provincial and local authorities, Department of Environment & Conservation, and contractor	Before and during project construction, and during maintenance visits	Various: Information brochures, consultations radio 'tok save', local press
Airport improvements	NAC	General public, airport users, and Provincial Authorities	Before the airport improvements start and after the improvements are completed	NAC website, public notice, information in NAC regional offices, community meetings
Airport safety information	NAC	General public, airport users	Public consultation and campaign ongoing over life of Project	Public notice, radio, TV, and Press

ADB = Asian Development Bank, NAC = National Airports Corporation, PIU = project implementation unit.

IX. ANTICORRUPTION POLICY

85. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.²³ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.²⁴

86. To support these efforts, relevant provisions are included in the loan agreement/regulations and the bidding documents for the project.

A. Anticorruption Measures

87. In accordance with ADB requirements, a governance risk assessment in the areas of public financial management, procurement and anticorruption was undertaken in 2010 and significant risks and associated mitigating measures identified in each. In addition, risks and associated mitigating measures in human resource management and project implementation were identified. Refer to the risk assessment and risk management plan.²⁵

88. As identified in the risk assessment and risk management plan certain anticorruption safeguards have, or will be, incorporated into the project to mitigate the risk of diversion of funds and to enhance and strengthen governance, accountability and transparency.

89. **Project website.** A project website will be established within the existing NAC website where the borrower will disclose key project related information including the audited project financial accounts, project progress, and procurement activities including the publishing of shortlists, invitation for bids and contract awards.

90. **Supervision consultants.** Supervision consultants will monitor civil works and operational activities.

91. **Audit requirements.** As indicated above, contracts financed from ADB funds will include provisions specifying the right of ADB to audit and examine the records and accounts of all contractors, suppliers, consultants and other service providers. In addition, contracts, project accounts and financial statements will be independently audited and forensic audits will be conducted of suspected corruption cases. An internal audit of the project shall be included in the work plan of the internal audit unit of NAC. An external audit will be executed to check the project accounts and financial statements and advise PIU/NAC quarterly basis if necessary.

92. **Ombudsman.** The existing PNG Ombudsman institution may be called upon to investigate any irregularities or complaints.

²³ Available at: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>

²⁴ ADB's Office of Anticorruption and Integrity website is available at: <http://www.adb.org/integrity/main>.

²⁵ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendixes).

93. **Grievance redress mechanism.** Within 3 months of the effective date, the project implementation staff shall prepare a grievance redress mechanism, acceptable to ADB, and appoint an officer to receive and resolve complaints or grievances or act upon reports from stakeholders on misuse of funds and other irregularities, safeguards issues if any, including relating to interactions with communities. The project implementation staff shall inform stakeholders of their right to submit complaints or grievances relating to the project.

X. ACCOUNTABILITY MECHANISM

94. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.²⁶

XI. RECORD OF FAM CHANGES

95. All revisions/updates during course of implementation should be retained in this Section to provide a chronological history of changes to implemented arrangements recorded in the FAM.

- (i) April 2013: Updated FAM was prepared during a fact-finding of Tranche 2.
- (ii) May-July 2013: FAM was further updated to refine its contents prior to loan negotiations.
- (iii) October 2013: FAM was updated to amend the implementation plan, the design and monitoring framework, and typos during loan negotiations.
- (iv) November 2013: S-curve of contract awards and disbursement of ADB cost (Figure 3) was added.
- (v) March 2016: FAM was updated during the fact-finding of Tranche 3.
- (vi) July 2016: FAM was updated after receiving inter departmental comments
- (vii) Dec 2016: FAM was updated during loan negotiations

²⁶ For further information, see: [http://www.adb.org/Accountability-Mechanism/default .asp](http://www.adb.org/Accountability-Mechanism/default.asp).