

# Report and Recommendation of the President to the Board of Directors

Project Number: 42394-22

September 2011

Proposed Grant and Administration of Grant Kingdom of Tonga: Nuku'alofa Urban Development Sector Project

#### **CURRENCY EQUIVALENTS**

(as of 6 September 2011)

Currency Unit – pa'anga (T\$)

T\$1.00 = \$0.62 \$1.00 = T\$1.61 A\$1.00 = \$1.06 \$1.00 = A\$0.95

#### **ABBREVIATIONS**

ADB – Asian Development Bank

EIRR – economic internal rate of return

IUDSP – Integrated Urban Development Sector ProjectMFNP – Ministry of Finance and National Planning

NRW – nonrevenue water

O&M – operation and maintenance PAM – project administration manual

PUMA – Planning and Urban Management Agency
TNIIP – Tonga National Infrastructure Investment Plan
TSDF – Tonga Strategic Development Framework

TWB – Tonga Water Board

UIDP – Urban Infrastructure Development Plan

WAL – Waste Authority Limited

#### **NOTES**

- (i) The fiscal year (FY) of the government ends on 30 June. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2011 ends on 30 June 2011.
- (ii) In this report, "\$" refers to US dollars unless otherwise stated.

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# PROJECT AT A GLANCE

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#### I. THE PROPOSAL

- 1. I submit for your approval the following report and recommendation on (i) a proposed grant and (ii) proposed administration of a grant to be provided by the Government of Australia, both to the Kingdom of Tonga for Nuku'alofa Urban Development Sector Project.<sup>1</sup>
- 2. The project will provide high priority urban infrastructure identified in the Nuku'alofa Urban Infrastructure Development Plan and strengthen the policy environment for delivery of urban services. The project will expand on infrastructure development being undertaken in Nuku'alofa through the Nuku'alofa Reconstruction Project and the Integrated Urban Development Sector Project.<sup>2</sup>

#### II. THE PROJECT

#### A. Rationale

- 3. **Urban growth.** Nuku'alofa, Tonga's capital, has a population of 34,058 (34% of the national population) and is forecast to grow to 45,000 (or about 40% of Tonga's population) by 2030. Migration to Nuku'alofa from Tonga's outer islands is significant. Urban growth in Tonga has not been matched by the provision of, or improvement in the delivery of, urban services. Living conditions for many Nuku'alofa residents are deteriorating, and demand for improved urban infrastructure is increasing.
- 4. Development pressure in Nuku'alofa is increasing as a result of population growth. The existing urban infrastructure is already insufficient to meet the demands of the current urban population. Upgrading of existing infrastructure is being undertaken through the Nuku'alofa Reconstruction Project and the Integrated Urban Development Sector Project. However, the scope of these projects is limited and they will not meet all immediate infrastructure needs. Further investment in urban infrastructure is required. Land for urban expansion of Nuku'alofa is limited to peripheral agricultural and ecologically sensitive areas.
- 5. **Government policy and strategy.** The Government of Tonga's development aims and program are presented in the Tonga Strategic Development Framework (TSDF).<sup>3</sup> The TSDF specifically targets infrastructure and has four priority themes for economic infrastructure: (i) renewable energy and stable electricity prices, (ii) improved access to markets, (iii) improved management of the water and waste cycle, and (iv) improved asset management. ADB's Country Partnership Strategy, Tonga, 2007–2012<sup>4</sup> supports implementation of the TSDF. The draft National Spatial Planning and Management Act 2011 (NSPM) pending in the legislature, when enacted, will provide the framework for land use planning and development. Urban planning objectives articulated in the NSPM include the creation of an urban structure with equitable access to employment, transportation, recreational and other opportunities, and to protect public utilities and other assets and enable the orderly provision and coordination of public utilities and other facilities for the benefit of the community.
- 6. The government has prepared costed and prioritized infrastructure development plans for Tonga, the Tonga National Infrastructure Investment Plan (TNIIP), and for Nuku'alofa, the

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The design and monitoring framework is in Appendix 1.

The Nuku'alofa Reconstruction Project is funded through a CNY440 million loan from the People's Republic of China and was approved in 2007. The Integrated Urban Development Sector Project was approved by the Asian Development Bank (ADB) in March 2008. (ADB. 2008. Report and Recommendation of the President to the Board of Directors: Proposed Asian Development Fund Grant, and Technical Assistance Grant to the Kingdom of Tonga for the Integrated Urban Development Sector Project. Manila.)

Government of Tonga. 2011. Tonga Strategic Development Framework 2011–2014. Nuku'alofa.

<sup>&</sup>lt;sup>4</sup> ADB. 2008. Country Partnership Strategy: Tonga, 2007–2012. Manila.

Urban Infrastructure Development Plan (UIDP). The UIDP will guide urban infrastructure development for Nuku'alofa in the short term (FY2011–FY2013), medium-term (FY2014–FY2016), and long-term (FY2017–FY2031). The infrastructure investments identified in the UIDP are generally aligned with urban infrastructure investments identified in the TNIIP.

- 7. Further assistance is required to improve planning and the sustainability of urban services. The Planning and Urban Management Agency (PUMA) of the Ministry of Transport will be responsible for implementing the NSPM. Capacity development will be required within PUMA to implement and enforce the NSPM and to establish the National Spatial Planning Authority advisory committee. The policies for water supply and solid waste services tariffs are obsolete and require amendment to enable recovery of operation and maintenance (O&M) costs in the short term and full cost recovery of O&M, depreciation, and financing costs in the medium- to long-term. Planned and preventative maintenance for urban infrastructure are neither prepared nor implemented, with the exception of Tonga Power Limited, resulting in the rapid dilapidation of urban assets.
- 8. **Water supply.** About 98% of households in Nuku'alofa have access to the piped water supply provided by Tonga Water Board (TWB), a state-owned enterprise. Water for the TWB water supply is pumped from the Mataki'eua Tongamai well field and is chlorinated prior to distribution. Currently, only 32 of the 40 production wells are operating. Water quality monitoring data indicate increasing salinity of the Mataki'eua Tongamai acquifer, particularly in the wells closest to Faga'uta Lagoon. The construction of additional production wells to the west of the existing wells will reduce the risk of further saline intrusion. Diesel-powered pumps at the wellfield are a source of soil contamination and potential water contamination and have higher O&M costs than electric pumps.
- 9. Nonrevenue water (NRW) in the Nuku'alofa water supply network is estimated to be 30%–50%. Unmetered usage from fire hydrants and leakage from consumer service connections are considered to be substantial. Current average daily production, estimated at 7,000 cubic meters (m³) per day, is inadequate to meet demand and the system losses. Demand is projected to increase from the current level of 4,800 m³ per day to 6,600 m³ per day by 2016. Reduction of NRW is essential to reduce the required production rates at the Mataki'eua Tongamai well field and water production costs.
- 10. The financial performance of TWB has steadily improved since FY2008, with the operating loss falling from T\$820,000 in FY2008 to T\$167,000 in FY2010. This trend is expected to continue in FY2011. Preliminary results for the year to date in March FY2011 indicate an operating surplus of T\$1.1 million. This improvement is attributed to increased water revenue, which grew by 35%, and improved bill collection, which increased from 88% to 94%. Total operating costs during the same period increased by 16%. TWB charges its customers T\$2.97 per 1,000 liters. TWB does not receive subsidies from the government and relies on external grants to finance capital works.
- 11. **Sanitation.** Most households in Nuku'alofa rely on individual septic tank systems for wastewater disposal. Many septic tanks are undersized, improperly constructed, and maintained only when full or overflowing. Septic tanks are the main source of contaminants in aquifers within the Nuku'alofa area. Contaminated groundwater discharging to the coastal fringe and lagoon areas causes excessive algal growth, and there are concerns about impacts on the aquatic ecosystems. Monitoring wells to assess groundwater quality have been constructed, and a water quality monitoring program commenced in June 2010.
- 12. **Solid waste management**. In 2007, a new landfill was commissioned at Tapuhia; a household solid waste collection system was implemented on Tongatapu; and the Waste

Authority Limited (WAL) was established to take control of solid waste collection and disposal. This includes responsibility for disposal of septage at the Tapuhia facility. The performance of WAL over the past 3 years has been poor. In particular, billing and revenue collection are ineffective. The replacement of the WAL board and chief executive officer in May 2011 is expected to result in improved management. The revenue collection rate for solid waste charges is about 27% of billings. A revenue collection rate of about 70% is required, based on current solid waste charges, for recovery of O&M costs. WAL is not financially viable, and despite a maintenance fund provided by Australian Agency for International Development, is unable to fund adequate maintenance and repairs, and has a growing maintenance backlog that places the provision of solid waste collection and disposal services at risk. Capacity development within WAL is urgently required to (i) provide robust financial management and for tariff setting, billing, revenue collection, and accounting; (ii) provide a sustainable asset management system, including the preparation of a 5-year asset management plan; and (iii) strengthen governance and management.

- 13. **Roads.** Traffic growth in Nuku'alofa has resulted in congestion of the main approach roads to the urban area and roads in the town center. Limited traffic management at strategic locations, particularly regarding parking, contributes to traffic congestion. The absence of adequate road drainage and the poor maintenance of existing drains result in frequent flooding of roads. The surfaces of most local residential access roads are gravel, and they are impassable during wet weather. Limited provisions for pedestrians (i.e., footpaths) result in pedestrian—vehicular traffic conflicts, particularly after heavy rainfall, when roadside flooding forces pedestrians onto the main roadways.
- 14. **Drainage.** Tongatapu is flat and low-lying, the highest elevation being 70 meters above sea level. Most of the urban area of Nuku'alofa is only 1–2 meters above sea level and is subject to periodic flooding during heavy rain. Most floodwater eventually infiltrates into the limestone substrata, but extensive low-lying areas within the urban area are frequently flooded and provide ideal conditions for mosquitoes and transmission of waterborne diseases. Development of residential subdivisions on the fringes of Nuku'alofa is constrained by large areas of undrained surface water, requiring substantial filling of properties and raising of roads. The piecemeal raising of road levels and filling of properties has altered the natural drainage patterns, and created additional swamps and open water bodies, resulting in flood damage to property and a loss of access to unfilled properties.
- 15. **Asset management.** Management of existing and new urban infrastructure is a high priority. Government policy specifies that the cost of O&M of economic infrastructure must be funded from user charges. The government intends to work closely with public enterprises, the private sector, and development partners to lift the overall performance of the economic infrastructure sector, and, as a minimum, to achieve self-funding of sustainable O&M by the government and public enterprises.
- 16. **Sector financing**. The project meets the criteria for sector financing as (i) the government has prepared a prioritized and costed urban sector development plan for Nuku'alofa, the UIDP, and the TNIIP; (ii) Tonga is implementing the Integrated Urban Development Sector Project (IUDSP)<sup>5</sup>, which has a sector loan modality, and has the capacity to implement both the UIDP and the TNIIP; and (iii) the policies for development of Tonga's urban sector as provided in the IUDSP are appropriate, are supported by infrastructure development polices articulated in the TNIIP and the TSDP and will undergo further improvement. The NSPM will provide the framework for planning and coordinating urban

<sup>&</sup>lt;sup>5</sup> ADB. 2008. Report and Recommendation of the President to the Board of Directors: Proposed Asian Development Fund Grant, and Technical Assistance Grant to the Kingdom of Tonga for the Integrated Urban Development Sector Project. Manila.

development.<sup>6</sup> The estimated investment cost to implement the UIDP is \$186 million comprising \$87.5 million for short-term (high priority) investments, \$48.5 million for medium-term investments, and \$50 million for long-term investments. The project will assist the government in implementing the UIDP and the NSPM and to reform tariff and asset management policies for TWB and WAL. Lessons from previous relevant ADB and development partner operations in Tonga have been incorporated in the project design.

# B. Impact and Outcome

17. The impact of the project is improved living conditions for the population of Nuku'alofa. The outcome of the project will be Nuku'alofa residents have access to improved municipal services.

# C. Outputs

- 18. Output 1: Strengthened policy environment for delivery of urban services. The project will strengthen the policy environment for delivery of urban services in Tonga by (i) building capacity within PUMA to develop urban planning and management policies and to implement the NSPM for improved planning and coordination of urban services and urban infrastructure development; (ii) reforming TWB and WAL tariffs for recovery of water supply and solid waste services O&M costs, and (iii) building capacity to develop and implement urban infrastructure asset management plans.
- 19. **Output 2: Effective, efficient, and sustainable water supply services in Nuku'alofa.** The core subproject will (i) increase the water production at the Mataki'eua Tongamai well field; (ii) increase the raw water storage capacity; (iii) improve the management of the water supply network through the creation of supply zones and improved bulk supply metering; (iv) reduce NRW from the current level, estimated at about 50%, to less than 25%; (v) develop consumer water meter replacement policies and replace defective consumer meters; and (vi) improve revenue collection, billing, and financial management capacity.
- 20. **Output 3: Sustainable solid waste services in Nuku'alofa.** This core subproject will assist WAL to improve its service delivery to the residents of Nuku'alofa by improving waste disposal operations at the Tapuhia landfill, improving and expanding solid waste collection services, and strengthening financial management capacity in WAL.
- 21. **Output 4: Other municipal services within Nuku'alofa improved.** Other municipal services will be improved through the implementation of selected high-priority urban infrastructure components identified in the UIDP and the TNIPP (candidate subprojects), including at least one sanitation subcomponent such as a sanitation and wastewater master plan for Nuku'alofa. Candidate subprojects will be selected in accordance with the agreed selection criteria and due diligence requirements set out in the Project Administration Manual (PAM) and will be approved by the project steering committee and ADB.
- 22. **Output 5: Raised community awareness of municipal services**. The project will raise community awareness of municipal services issues including planning and development consent requirements; household responsibilities for managing solid waste (reduce, recycle, reuse); and public health benefits of safe waste handling and disposal. The project will improve customer complaints mechanisms in the TWB and WAL, and conduct public consultation on service standards, water conservation, and demand management. The community awareness

<sup>&</sup>lt;sup>6</sup> National Spatial Planning and Management Bill summary (accessible from the list of linked documents in Appendix 2)

programs will also highlight the responsibilities of the Nuku'alofa community as beneficiaries of urban services, such as the need to pay for services. Women's groups and community associations will be consulted and encouraged to participate in urban planning and design issues.

23. **Output 6: Effective project management services.** The project management unit, supported by project implementation assistance consultants will: (i) provide project design and supervision; (ii) monitor project performance; (iii) report project progress; (iv) provide quality and cost control; (v) screen candidate subprojects for resettlement and environmental impacts and prepare of resettlement plans, and initial environmental evaluations; (vi) administer contracts; and (vii) monitor the implementation of the gender action plan.

# D. Investment and Financing Plans

24. The project is estimated to cost \$14.59 million (Table 1) including taxes and duties of \$2.09 million equivalent. Cost estimates by project outputs are summarized in Table 1. Detailed cost estimates by expenditure category and by financier are in the PAM.

Table 1: Project Investment Plan (\$ million)

Item		Amount <sup>a</sup>
A.	Base Cost <sup>b</sup>	
	Output 1: Strengthened policy environment	0.76
	Output 2: Water supply improvements	5.93
	Output 3: Solid waste improvements	1.93
	Output 4: Other municipal services	1.78
	Output 5: Community awareness	0.16
	Output 6: Project management services	1.20
	Subtotal (A)	11.76
B.	Contingencies <sup>c</sup>	2.83
	Total Project Cost (A+B)	14.59

a Including taxes and duties of \$2.09 million.

Physical contingencies computed at 15%. Price contingencies computed at an average of 8.0% for local currency costs and 1.2% for foreign costs over the project implementation period (using Asian Development Bank price escalation factors).

Source: Asian Development Bank.

25. The government has requested a grant<sup>7</sup> not exceeding \$6.06 million from ADB's Special Funds resources to help finance the project. The Government of Australia will provide joint grant cofinancing of about \$6.44 million equivalent. <sup>8</sup> The Government of Tonga will provide \$2.09 million equivalent in local currency to finance taxes and duties. The financing plan is in Table 2.

A country's eligibility for ADF grants under the revised grant framework is determined by its risk of debt distress. The latest debt sustainability analysis determined that Tonga had a high risk of debt distress and was, therefore, eligible to receive 100% of its ADF allocation as grants.

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b In mid-2011 prices.

<sup>&</sup>lt;sup>8</sup> The Government of Australia will provide grant financing of A\$6.1 million (\$6.44 million equivalent). Land acquisition costs may be financed by ADB and the Government of Australia where all requirements under ADB's Involuntary Resettlement Policy (1995) are complied with and the acquisition is undertaken and implemented in compliance with ADB-approved resettlement plans and framework. ADB and the Government of Australia grant funds may finance transportation and insurance costs of equipment financed by the project.

**Table 2: Financing Plan** 

Source	Amount	Share of Total (%)
Asian Development Bank	6.06	41.54
Government of Australia	6.44	44.15
Government of Tonga	2.09	14.31
Total	14.59	100.00

Source: ADB.

# E. Implementation Arrangements

26. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual (PAM).<sup>9</sup>

**Table 3: Implementation Arrangements** 

Aspects	Arrangements					
Implementation period	January 2012-June 2	017				
Estimated completion date	December 2017					
Management						
(i) Oversight body	Name: Nuku'alofa Urban Development Sector Project Steering Committee Chair: Minister for Finance Members: Secretary for Transport; Secretary for Ministry of Lands, Survey and Natural Resources; Secretary for Ministry of Environment and Climate Change; General Manager, Tonga Water Board; General Manager, WAL; Director, PUMA (secretary to the project steering committee)					
(ii) Executing agency	MFNP	,				
(iii) Implementing agency	PUMA					
(iv) Implementation unit	project management u	Located within the Planning and Urban Management Agency. The project management unit will be supported by project implementation assistance consultants.				
Procurement	ICB	5 contracts	\$8.4 million			
	NCB	1 contract	\$0.4 million			
	Shopping	2 contracts	\$0.2 million			
Consulting services	QCBS	256 person-months	\$2.8 million			
Retroactive financing and/or advance contracting Disbursement	Advanced contracting will be undertaken to recruit project implementation assistance consultants.  ADB and the Government of Australia grant proceeds will be					
	(2007, as amended from	nce with ADB's <i>Loan Dis</i> from time to time) and det the government and AD	ailed arrangements			

ADB = Asian Development Bank, ICB = International competitive bidding, MFNP = Ministry of Finance and National Planning, NCB = National competitive bidding, PUMA = Planning and Urban Management Agency, QCBS = Quality- and cost-based selection, WAL = Waste Authority Limited. Source: Asian Development Bank.

#### III. DUE DILIGENCE

# A. Economic and Financial Analysis of Selected Core Subprojects

27. Financial analyses of the water supply and solid waste core subprojects were undertaken using with- and without-project scenarios over a 20-year operational period with the

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<sup>&</sup>lt;sup>9</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

residual value at the end of this period assumed to be zero. The financial costs of the core subprojects were used, including the recurrent replacement costs of capital equipment items, but excluding price contingencies and interest and other charges during construction. Resettlement and consulting costs were included in the analysis. The financial internal rate of return for the water supply core subproject is 13%, and the financial internal rate of return for the solid waste core subproject is 20%.

Economic analyses were undertaken for the water supply and solid waste core subprojects by comparing the discounted costs and benefits under the with- and without-project scenarios over 2012-2032 in constant 2012 prices. The without-project case represents a continuation of the existing situation, and the with-project case represents the project investment scenario. The economic internal rate of return (EIRR) for the water supply core subproject is estimated at 13%, slightly higher than the opportunity cost of capital (12%) and the EIRR for the solid waste core subproject is 31%. Sensitivity analyses were undertaken on the economic results to examine the impacts of key assumptions and project risks as follows: (i) total costs increased by 10%, (ii) total revenue reduced by 10%, (iii) total costs increased by 10% and total revenue reduced by 10%, and (iv) construction period lengthened by 1 year. Under these scenarios, the viability of the water supply core subproject falls, with EIRRs of 9%-11%. 10 While Tonga is not a fragile state per se, ADB's Pacific Approach considers small isolated Pacific states, including Tonga, as fragile and elements of ADB's approach to fragile states apply including relaxation of expected economic rates of return. The solid waste core subproject remains economically viable under these adverse scenarios, with EIRR values remaining well above the opportunity cost of capital, the lowest value being 24%.

#### B. Governance

29. **Financial management.** To facilitate cash flow during project implementation, the executing agency, the Ministry of Finance and National Planning (MFNP), will open an imprest account for the ADB grant and an imprest account for the Government of Australia grant, immediately after grant effectiveness to be used exclusively for the ADB and the Australian Agency for International Development shares of eligible expenditures. A public financial management (PFM) performance assessment conducted in 2010 concluded that Tonga's PFM system is based on a solid legal and regulatory framework and underpinned by a set of well established expenditure control procedures covering wages and salaries, non-salary items and procurement. <sup>11</sup> The MFNP is administering the imprest account for the Integrated Urban Development Sector Project (footnote 5) using statement of expenditure procedures with a ceiling of \$100,000. Annual independent audits of the Integrated Urban Development Sector Project imprest account for FY2009 and FY2010 are satisfactory and show no anomalies in management. Statements of expenditure will be prepared by the PMU and verified by the MFNP.

30. **Procurement.** A procurement capacity assessment of MFNP was performed and concluded that Tonga's procurement regulations and procedures are comprehensive and that the MFNP procurement unit is functioning well but has limited procurement experience and qualifications. Procurement of all goods and services under the project will be carried out in accordance with ADB's Procurement Guidelines (2010, as amended from time to time). All contracts for works will be awarded using international competitive bidding procedures.

<sup>11</sup> Kingdom of Tonga. 2010 *Public Financial Management Performance Report*. Nuku'alofa. Accessible from the list of linked documents in Appendix 2.

Procurement capacity assessment (accessible from the list of linked documents in Appendix 2).

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ADB. 2007. Achieving Development Effectiveness in Weakly Performing Countries (The Asian Development Bank's Approach to Engaging with Weakly Performing Countries). Manila. ADB. 2009. ADB's Approach to Assisting the Pacific (2010–2014). Manila

Miscellaneous minor goods expected to cost under \$100,000 equivalent will be purchased using shopping procedures. Project consultants will be recruited in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time) using quality- and cost-based selection procedures. The government has requested ADB to assist in recruiting the project implementation assistance consultants. ADB will assist by selecting the consultants on behalf of the executing agency (MFNP). However, MFNP will be responsible for negotiating the contract with the consultants and supervising their services.

31. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and MFNP. The specific policy requirements and supplementary measures are described in the PAM (footnote 7).

# C. Poverty and Social

- 32. A social survey conducted in April 2011 concluded that communities in Nuku'alofa identify the poor as those facing hardship. Lack of employment and other income-earning opportunities are the main causes of hardship. Other causes included too many dependents, landlessness, the burden of family, community obligations, poor health, and poor family budgeting. Specific groups most vulnerable to hardship include children, youth, women, the disabled, and the elderly. The project will address hardship by fostering equitable, reliable, and quality water and waste management services and other urban services.
- 33. The project is classified as effective gender mainstreaming, with the majority of project outputs having specific gender design features to facilitate and ensure women's participation and access to project benefits. Significant concerns of women in Nuku'alofa include (i) affordability of urban services, (ii) improving water and power usage (conservation), (iii) improving the health and well-being of households and the community, (iv) greater access to information on urban services and urban planning, (v) greater involvement in developing solutions for communities through women's committee support, and (vi) involvement in consultation and decision making. The project gender action plan (GAP) will address these concerns and ensure that any potential harmful effects on women are avoided. The GAP includes specific actions that will allow women to benefit from the project.<sup>13</sup>

## D. Safeguards

34. **Environment**. The project is classified environmental category B. Initial environmental examinations (IEEs) for the water supply and solid waste subprojects and an environmental assessment and review framework (EARF) were prepared in accordance with ADB's Safeguard Policy Statement (2009). The water supply core subproject provides a positive environmental benefit through sustainable water resource management. The solid waste core subproject will expand the environmentally safe waste disposal capacity of the Tapuhia landfill, and will reimplement and deliver more effective waste collection services and landfill operations. No significant environmental impacts will result from the implementation of the solid waste core subproject.

35. The EARF will guide the assessment of subsequent subprojects. PUMA will receive support from the project implementation assistance consultants in (i) preparing IEEs for subsequent subprojects, (ii) monitoring of contractor compliance and of ongoing impacts, and (iii) reporting on environmental monitoring. The EARF includes a reporting outline to guide the

<sup>13</sup> ADB Guidelines for Gender Mainstreaming Categories of ADB projects. <a href="http://www.adb.org/gender/gender-categories.asp">http://www.adb.org/gender/gender-categories.asp</a>. Gender Action Plan (accessible from the list of linked documents in Appendix 2).

<sup>14</sup> IEE: Water Supply Subproject, IEE: Solid Waste Subproject, and EARF (accessible from the list of linked documents in Appendix 2).

reporting on the main environmental effects. The government has endorsed the IEEs for the water supply and solid waste subprojects and the EARF.

- 36. Climate change. A climate risk profile for Tonga, prepared by ADB in 2008, indicates that the main impacts of climate change are expected to be high sea levels, extreme winds, and extreme high air and water temperatures. Best estimates of long-term, systematic changes in the average climate for Tonga indicate that sea level is likely to have increased by 36 centimeters and the frequency of severe short sea level rise resulting from storm surge (2.2 meters above mean sea level) will increase from a one in 580-year event to a one in 5-year event by 2050. The project will provide the Nuku'alofa water supply with greater resilience to climate change through the development of water supply wells located further from Faga'uta Lagoon and less likely to be subject to saline intrusion as a consequence of sea level rise.
- 37. **Involuntary resettlement**. The project is classified as category B. A resettlement framework (RF) was prepared in accordance with ADB's Safeguard Policy Statement, and a resettlement plan (RP) was prepared for the water supply core subproject. The government has endorsed the RF and RP. The solid waste core subproject is not expected to require land acquisition and a resettlement plan was not prepared for the subproject. The water supply core subproject will involve the construction of 12 new wells requiring long-term leases of small plots of land from three households and one farming enterprise. There will be no temporary impacts on private or public assets as a result of construction or new easements, as all additional works are on existing rights-of-way. A total of 19 people will be affected by land acquisition for the project. However, no relocation of dwellings or other structures will be required. No acquisition amounts to more than 10% of a household's total land holding. Therefore, none of the impacts are considered significant.
- 38. The solid waste core subproject consists of three components: (i) upgrading Tapuhia landfill, (ii) a pilot community waste bin project in five peri-urban villages, and (iii) financial management and accounting support. Components 1 and 3 have no land acquisition requirements or resettlement impacts. Component 2 will be implemented in select communities where land acquisition for community waste bins is not required. Selection of sites for component 2 activities will not occur until project implementation. Additional due diligence will then be undertaken to ensure that no resettlement impacts result from component 2. No construction activities under component 2 will be undertaken until ADB confirms it has no objection to the proposed sites.<sup>15</sup>
- 39. **Indigenous peoples**. The project is classified indigenous peoples as category C. The people in Tonga are Polynesian and consider themselves indigenous in terms of ethnic origin. The project is not expected to have a negative impact on any distinct and vulnerable group of indigenous peoples as defined under ADB's Safeguard Policy Statement. While a separate indigenous peoples plan is not needed, all project outputs will be delivered in a culturally appropriate and participatory manner to meet the needs of various beneficiaries.
- 40. All safeguard documents will be disclosed on ADB's website. The project will support capacity development within the executing and implementing agencies to manage safeguards.

# E. Risks and Mitigating Measures

41. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan. The integrated benefits and impacts of the project are expected to outweigh the costs.

<sup>16</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

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<sup>&</sup>lt;sup>15</sup> Resettlement Framework (accessible from the list of linked documents in Appendix 2).

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
Communities within Nuku'alofa do not	The project will build awareness within the Nuku'alofa communities
comply with urban planning requirements.	of the need for urban planning, development, and management.
Delay in land acquisition for core	Land requirements for core subprojects are minimal. Resettlement
subprojects	procedures and compensation affect a small number of households.
Community commitment to tariff	The project will: (i) build awareness among the TWB and WAL
increases for water and solid waste	customers of the costs associated with provision of water supply
services is not sustained.	and solid waste services and the obligations of customers; and (ii)
	strengthen the TWB and WAL customer relations divisions.
WAL will crowd out private sector	The project will work towards a long term approach of increased
operators providing waste collection	private sector involvement for waste management services,
services.	including placing WAL on a competitively neutral footing.
The NSPM is not enacted.	Extensive public consultation has fostered strong support for the
	NSPM amongst the Community and Legislature.

NSPM= National Spatial Planning and Management Bill; TWB = Tonga Water Board, WAL = Waste Authority Limited. Source: Asian Development Bank.

#### IV. ASSURANCES AND CONDITIONS

- 42. The government and the MFNP have assured ADB that implementation of the project will conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and grant documents.
- 43. The government and the MFNP have agreed with ADB on certain covenants for the project, which are set forth in the grant agreements.
- 44. As a condition to effectiveness of the grant from ADB's Special Funds resources, the commitment of grant co-financing from the Government of Australia will have become final in form and substance to ADB and the grant agreement concerning the provision by ADB of grant cofinancing from the Government of Australia will have been signed and delivered in form and substance satisfactory to ADB.

# V. RECOMMENDATION

- 45. I am satisfied that the proposed grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve
  - (i) the grant not exceeding \$6,060,000 to the Kingdom of Tonga from ADB's Special Funds resources, for the Nuku'alofa Urban Development Sector Project, on terms and conditions that are substantially in accordance with those set forth in the draft grant agreement presented to the Board; and
  - (ii) the administration by ADB of the grant not exceeding the equivalent of \$6,440,000 to the Kingdom of Tonga for the Nuku'alofa Urban Development Sector Project, to be provided by the Government of Australia.

Haruhiko Kuroda President

# **DESIGN AND MONITORING FRAMEWORK**

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact The living conditions for the Nuku'alofa urban population have improved.	National human development index is maintained at or increases from 0.677 (2009 baseline) by 2020.	United Nations Development Programme human development index reports	Assumption Continued commitment by the government to maintain and improve urban management and development  Risk Political interference in urban sector planning, development, and management
Outcome Nuku'alofa residents have access to improved municipal services.	The reliability of Nuku'alofa water supply (availability) at all locations increases to 99.9% at the network extremities by 2017 (2011 baseline: less than 50%).  Consumer access to solid waste management services in Nuku'alofa increases to 80% by 2017.  (2011 baseline: 40%)	TWB annual reports  WAL annual reports	Assumptions Funds are available for infrastructure maintenance. The government maintains commitment to managing urbanization in Tonga and growth of Nuku'alofa. The government maintains commitment to full cost recovery for municipal services
	TWB and WAL finance 100% of O&M, depreciation, and financing costs in the medium to long term.  (2011 baseline: full cost recovery is not achieved)	TWB and WAL annual reports	
Outputs 1. Strengthened policy environment for delivery of urban services	National Spatial Planning Authority advisory committee established and comprising at least 40% women by June 2012 (2011 baseline: 0%)	PUMA annual reports and cabinet reports	Assumptions The government maintains commitment to managing urbanization in Tonga and growth of Nuku'alofa, and coordination among government ministries and agencies improves.
	TWB (by 2014) and WAL (by 2017) finance 100% of their operation and maintenance costs from water sales (2011 baseline: TWB - 95%, WAL - 17%).	TWB and WAL annual reports	PUMA and a Nuku'alofa municipal institution have sufficient urban planning and management staff resources.  Risks  Communities within Nuku'alofa do not
2. Effective, efficient, and sustainable water supply services in Nuku'alofa (core subproject) provided by TWB	Losses from the Nuku'alofa water supply network are less than 25% by 2017 (2011 baseline: 50%).	TWB annual reports	comply with urban planning requirements.  Land acquisition is delayed.  Parliament delays or fails to pass the NSPM in 2011.  Community commitment to tariff increases for water and solid waste services is not

Design Summary	Performance Targets and Indicators	Data Sources ar Reporting Mechanisms	Assumptions ar	nd Risks
3. Sustainable solid waste services in Nuku'alofa (core subproject provided by WAL)	The Tapuhia landfill is operated in accordance with the operating procedures developed for the site (AusAID 2007) by 2015 (2011 baseline: not operated in accordance with Tapuhia landfill operating procedures)	WAL annual report	ts sustained.  WAL will crowd out privat operators providing waste services.  Implementation delays ar occur as a result of limited local contractors	e collection and cost overruns
4. Other municipal services within Nuku'alofa improved	At least one high priority component of the UIDP is implemented by 2018 (2011 baseline: 0%).	PUMA annual repo	orts	
5. Raised community awareness of municipal services	Average domestic water consumption decreases from 100 liters per capita per day to 90 liters per capita per day by 2017 (2011 baseline).	TWB annual repor	ts	
6. Effective project	By 2015, women represent 50% of participants at general meetings (2011 baseline: limited consultation and/or participation)	TWB annual repor	ts	
management services	The project is fully implemented by 31 June 2017 and within budget.	PUMA annual repo		
	By 2015, 30% of senior urban planning and management positions, including the project steering committee, are held by women (2011 baseline: 0%).	FOWA annual repu	אונס	
Activities with Milest	ones	•	Inputs	
services 1.1 Capacity within	ngthened policy environment for PUMA for urban policy developme	ent and	ADB ADF Grant \$6.06 million	
	of the NSPM developed by July 20 tariffs reviewed, amended, and imp		Component	Amount (\$ million)
1.3 Preparation of a	sset management plans mandated	d by all public	Strengthened policy	0.41
	providers by March 2013	d and implemented	Water supply improvements	3.02
1.4 TWB and WAL aby July 2013	asset management plans prepared	and implemented	Solid waste improvements	0.97
	tive, efficient, and sustainable w	vater sunnly	Other municipal services	0.92
	ku'alofa (core subproject) provid		Community awareness	0.09
2.1 17 existing water	er supply wells at the Mataki'eua To cluding installation of electric pump	ongamai well field	Project management	0.65

Design Summary		Performance Targets and Indicators	Data Sources and Reporting Mechanisms		d Assumptions and Risks	
2.2	Mataki'eua Tong Additional 4,000	pply wells constructed and commit amai well field by October 2013 m³ raw water reservoir constructe	d and	Government of Australia Gr \$6.44 million equivalent (A\$6.1 million)		nnt
	2013	t the Mataki'eua Tongamai well fie		Con	nponent	Amount (\$ million)
2.3		esel generator procured, installed		Stre	ngthened policy	0.44
2.4	commissioned at the Mataki eda Tongamai wen neid by bary 2010			er supply improvements	3.21	
2.5	Consumer meter	r replacement program and meter	replacement		d waste improvements	1.02
		mented by July 2012, and up to 2, Nuku'alofa replaced by July 2014	000 consumer	Othe	er municipal services	0.98
3.		inable solid waste services in N	luku'alofa (core	Con	nmunity awareness	0.09
	subproject prov	vided by WAL)	·	Proj	ect management	0.70
3.1 3.2	completed by Ja New landfill load	impervious liner to cell no. 2 of the nuary 2013 er procured, delivered, and entere by February 2013			ernment of Tonga 9 million	
3.3		ter quality monitoring program at 7	Tapuhia landfill	Con	nponent	Amount (\$ million)
3.4	WAL updates an	d implements its asset manageme		Stre	ngthened policy	0.1
	Tapuhia landfill f equipment by Ju	acility plant and solid waste handli	ing and processing	Wat	er supply improvements	1.11
		rie 2013 village-level waste collection servi	ce piloted in five	Soli	d waste improvements	0.39
	peri-urban village	es by January 2013		Othe	er municipal services	0.31
3.6		ement and billing software and as ed and commissioned by Septemb		Con	nmunity awareness	0.02
		ement and asset management cap		Proj	ect management	0.16
4. 4.1	(candidate subj	rojects identified, screened, select				
<b>5.</b> 5.1	Community awa	ed community awareness of mu reness and education implemente				
5.2	and the public is	laints mechanisms in TWB and W s consulted on service standards, v	water			
5.3	Women's group	nd demand management by Janua s and community associations are participate in urban planning and descriptions.	consulted and			
<b>6.</b> 6.1 6.2	Project impleme consultants field Strategic develo	etive project management service entation assistance and capacity deled (March 2012–April 2016) pment plan for Nuku'alofa and other energy by August 2012	evelopment			

on Tongatapu prepared by August 2013

ADB = Asian Development Bank, ADF = Asian Development Fund, AusAID = Australian Agency for International Development, m³ = cubic meter, PUMA = Planning and Urban Management Agency, NSPM = National Spatial Planning and Management Act, TWB = Tonga Water Board, UIDP = Urban Infrastructure Development Plan, WAL = Waste Authority Limited.

Source: ADB.

#### LIST OF LINKED DOCUMENTS

## http://www.adb.org/Documents/RRPs/?id=42394-022-2

- 1. Grant Agreement
- 2. Grant Agreement (Externally Financed)
- 3. Urban Sector Assessment (Summary)
- 4. Project Administration Manual
- 5. Contribution to the ADB Results Framework
- 6. Development Coordination
- 7. Financial and Economic Analysis
- 8. Country Economic Indicators
- 9. Summary Poverty Reduction and Social Strategy
- 10. Gender Action Plan
- 11. Initial Environmental Examination: Water Supply Improvement Subproject
- 12. Initial Environmental Examination: Solid Waste Improvement Subproject
- 13. Environmental Assessment and Review Framework
- 14. Resettlement Plan: Core Subproject (Water Supply)
- 15. Resettlement Framework
- 16. Risk Assessment and Risk Management Plan

#### **Supplementary Documents**

- 17. Core Subproject Outlines
- 18. Procurement Capacity Assessment Report and Recommendation
- 19. National Spatial Planning and Management Bill Outline
- 20. Kingdom of Tonga Public Financial Management Performance Report