ADB

Technical Assistance Report

Project Number: 47237-001
Capacity Development Technical Assistance (CDTA)
December 2013

Republic of Fiji: Urban Development Planning and Institutional Capacity Building

(Cofinanced by the Multi-Donor Trust Fund under the Water Financing Partnership Facility)

Asian Development Bank

CURRENCY EQUIVALENTS
(as of 25 November 2013)

Currency unit	–	Fiji dollar (F$)
F$1.00	=	$0.54
$1.00	=	F$1.86

ABBREVIATIONS

ADB	–	Asian Development Bank
DTCP	–	Department of Town and Country Planning
GIS	–	geographic information system
GSA	–	Greater Suva Area
MLGUDHE	–	Ministry of Local Government, Urban Development, Housing and Environment
MSPNDS	–	Ministry of Strategic Planning, National Development and Statistics
TA	–	technical assistance
UGMAP	–	urban growth management plan
WAF	–	Water Authority of Fiji

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Capacity development technical assistance (CDTA)
Targeting classification	–	General intervention
Sector (subsectors)	–	Water supply and other municipal infrastructure and services (urban sector development, water supply and sanitation)
Themes (subthemes)	–	**Environmental sustainability** (urban environmental improvement), capacity development (institutional development)
Climate change	–	Adaptation
Location (impact)	–	Urban (high), national (medium)
Partnership	–	Multi-Donor Trust Fund under the Water Financing Partnership Facility

NOTE

In this report, "$" refers to US dollars.

Vice-President	S. Groff, Operations 2
Director General	X. Yao, Pacific Department (PARD)
Director	I. Matsumoto, Urban, Social Development and Public Management Division, PARD
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CONTENTS

I. INTRODUCTION

1. The Government of Fiji asked the Asian Development Bank (ADB) for capacity development technical assistance (TA) during a sector assessment mission to Fiji from 26 June to 4 July 2013.[1] A TA fact-finding mission visited Fiji on 18–27 September 2013 and reached an understanding with the government and other stakeholders on the impact, outcome, outputs, implementation arrangements, cost, financing arrangements, and terms of reference for consulting services. The design and monitoring framework is in Appendix 1.[2]

II. ISSUES

2. Fiji has a population of about 868,000, of which 53% is urban.[3] By 2030, it is estimated that two in three Fijians will be living in the country's urban centers.[4] Fiji's urban sector accounts for 60% of the country's gross domestic product, with the share of the Greater Suva Area (GSA) estimated at 40%.[5] The GSA, which consists of Suva City—the national capital—as well as the towns of Lami, Nasinu, and Nausori and their surrounding peri-urban areas, accounts for 57% of Fiji's urban population. By 2021, the population of the GSA is expected to grow by 16% (footnote 5).

3. Despite the economic importance of the country's cities and towns, infrastructure and services have not kept pace with urbanization. Inadequate provision of infrastructure and services is contributing to environmental degradation and increased health risks, and acts as a binding constraint to social and economic development. Current planning regulations ban high-density urban development in unsewered areas. Because existing sewerage infrastructure covers only 40% of the GSA, the lack of adequate wastewater infrastructure has constrained high density development, and contributed to urban sprawl and environmental degradation. Access to improved water supply services among the urban population is close to 100%, but levels of nonrevenue water are high at about 50%.

4. Urbanization in the GSA is driving the emergence of a metropolitan area that stretches beyond the administrative boundaries of local city and town councils, and is fuelling the rapid growth of informal settlements. Most urban growth in the GSA is now occurring in underserviced peri-urban areas. While town planning schemes regulate land use within municipalities, peri-urban areas within the GSA are managed by rural local authorities. Outdated and unclear institutional arrangements and legal frameworks are unsuitable for addressing today's urban development challenges. There are a variety of mandates and jurisdictions for different tiers of authority for urban development. This administrative fragmentation has resulted in weak alignment between spatial planning and urban infrastructure investments in the GSA.

5. The limited supply of affordable, serviced residential land in urban centers has resulted in the emergence of informal settlements. In 2011, an estimated 44,000 people, or 17% of the

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1 ADB. 2013. *Fiji: Update*. Manila. IN.130-13. In preparation for future reengagement following elections in 2014, ADB has committed to mobilizing TA to undertake background studies to foster sustainable infrastructure development, and examine options for upgrading urban settlements and services.

2 The TA first appeared in the business opportunities section of ADB's website on 14 November 2013.

3 United Nations Statistics Division. Country Profile: Fiji. http://data.un.org/CountryProfile.aspx?crName=FIJI (accessed 20 September 2013)

4 Ministry of Local Government, Urban Development, Housing and Environment. Official communication.

5 Cities Development Initiative for Asia. 2012. *Pre-Feasibility Study for GSA Sustainable Urban Transport Project*. Volume 1. Manila.

GSA population, were living in 86 informal settlements in the GSA.[6] Informal settlements are often located in marginal, low-lying or flood-prone land in mangrove swamps and foreshore areas. The absence of improved sanitation and other urban infrastructure exacerbates the poor living conditions.

6. The country's Urban Policy Action Plan, developed with ADB assistance, is intended to support efficient, effective, and sustainable urban development that can make an optimal contribution to the social, economic, and environmental development of Fiji.[7] It aims to (i) expand the capacity of local and central government to meet mandates and stakeholder needs; (ii) improve urban infrastructure and services; (iii) establish responsive institutional, regulatory, and policy frameworks for the management of urban development; and (iv) provide financing mechanisms to enable greater investment in urban infrastructure. Under this plan, an urban growth management plan (UGMAP) was developed for the GSA, which aims to strategically address critical urbanization issues with a focus on peri-urban areas and informal settlements. It emphasizes promoting integrated urban management at the metropolitan level. Implementation of the UGMAP has been constrained by a lack of capacity within the agencies responsible for urban development in the GSA.

7. ADB is providing support to the Water Authority of Fiji (WAF) through the Suva–Nausori Water Supply and Sewerage Project, which was approved in 2003.[8] The project is supporting (i) an increase in the delivery of safe water supply and sewerage services in the Suva–Nausori urban area, and (ii) institutional reforms to make the water supply and sewerage services more sustainable, and (iii) strengthened water supply and sewerage management and operations, and environmental monitoring. While the project has contributed to increased sewerage coverage, expanded wastewater treatment capacity, and improved reliability of water supply services in the GSA, additional investments are needed to meet the water supply and sanitation needs of the growing urban population.

8. In absence of adequate urban planning and management arrangements, existing urban development challenges will become even more acute over time as the population of the GSA increases. An up-to-date metropolitan-level urban planning framework is needed to guide critical investments in basic infrastructure services, particularly in informal settlement areas, to support more sustainable and inclusive urban development in the GSA. Enhanced coordination among concerned national and local government agencies, and strengthened institutional capacity, are also critical for improved urban management.

9. The TA is consistent with the aims of the government's Urban Policy Action Plan and ADB's Pacific Approach, 2010–2014, which identifies urban development, water, and sanitation as operational priorities.[9] The TA is also in line with the Urban Operational Plan, 2012–2020, which promotes livable cities that are green, competitive, and socially inclusive; and the Water Operational Plan, 2011–2020, which promotes more efficient water use across users, and expanded wastewater management and reuse including sanitation.[10]

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[6] Cities Development Initiative for Asia. 2012. *Pre-Feasibility Study for GSA Drainage and Flood Management Project*. Volume 1. Manila.

[7] ADB.1999. *Technical Assistance to the Republic of the Fiji Islands for Urban Sector Strategy Study.* Manila (TA 3243).

[8] ADB. 2003. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grants to the Republic of the Fiji Islands for the Suva–Nausori Water Supply and Sewerage Project.* Manila (Loan 2055-FIJ, approved in December 2003).

[9] ADB. 2009. *ADB Pacific Approach, 2010–2014*. Manila.

[10] ADB. 2013. *Urban Operational Plan, 2012–2020.* Manila; ADB. 2011. *Water Operational Plan, 2011–2020.* Manila.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

10. The impact of the project will be efficient, sustainable and inclusive urban development. The outcome of the project will be strengthened national urban development policies and plans.

B. Methodology and Key Activities

11. **Output 1: The Urban Growth Management Plan for the Greater Suva Area is updated by the Department of Town and Country Planning.** The UGMAP for the GSA will be reviewed and updated to reflect changes to urban development trends that have taken place over the past 10 years, as well as expected future growth patterns in the GSA. The updated UGMAP will include the development of a metropolitan-level spatial plan to guide future growth and infrastructure planning. Hazard and climate change risk assessments will be carried out to inform land use planning in the GSA. The capacity of the Department of Town and Country Planning will be strengthened using a "learning by doing" approach to prepare TA outputs. The updated UGMAP will be used to guide, coordinate, and prioritize land development and public infrastructure investments in the GSA.

12. **Output 2: The Suva–Nausori Water Supply and Sewerage Master Plan is reviewed and high-priority investments are assessed by the Water Authority of Fiji.** Water supply and sewerage infrastructure are key determinants of existing and future urban growth patterns in the GSA. WAF has prepared a water supply and sewerage master plan for the Suva–Nausori area. The master plan will be reviewed and updated, guided by the UGMAP, and feasibility and due diligence assessments will be carried out on high-priority water and sewerage investments to support sustainable urban development in the GSA. Associated training will carried out to build WAF's strategic planning capacity through an expansion of current twinning arrangements to ensure sustainable delivery of water supply and sewerage services.[11]

13. **Output 3: An urban management board for the Greater Suva Area is established by the Ministry of Local Government, Urban Development, Housing and Environment.** The feasibility of establishing an urban management board for the GSA under the Ministry of Local Government, Urban Development, Housing and Environment (MLGUDHE), as recommended in the UGMAP, will be assessed. The board will support strengthened metropolitan-level coordination of urban planning and management in the GSA among urban development stakeholders, including national and local government agencies, utility service providers, and the private sector. A detailed implementation plan for the board's establishment will be developed and initiated after its endorsement by key stakeholders.

14. The TA assumes that urban development will remain a key national development priority. Current and earlier national development plans identify housing, urban infrastructure development, and urban institutional reforms as key development priorities. There is a risk that priority measures and investments identified in the UGMAP and the Suva–Nausori Water Supply and Sewerage Master Plan may be not be implemented as a result of capacity and financing constraints. To mitigate this risk, the TA seeks to address capacity gaps in critical

[11] ADB. 2007. *Technical Assistance for Supporting Water Operators' Partnership in Asia.* Manila (TA 6396-REG). The TA will finance travel and support costs for WAF staff to participate in training offered by Hunter Water as part of ongoing twinning arrangements.

areas, including spatial planning, hazard risk assessment, institutional reform, and urban infrastructure investment planning.

C. Cost and Financing

15. The TA is estimated to cost $1,150,000 equivalent, of which (i) $800,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-Others); and (ii) $350,000 will be financed on a grant basis by the Multi-Donor Trust Fund[12] under the Water Financing Partnership Facility and administered by ADB.

16. The government will provide counterpart support in the form of (i) documents, data, statistics, information, and maps that it has at its disposal; (ii) an adequate number of qualified counterpart staff, including remuneration and per diem; (iii) office accommodation and equipment, including desks, chairs, and photocopiers; (iv) logistical assistance for the workshops and seminars, including venue provision; and (v) other in-kind contributions. The cost estimates and financing plan are in Appendix 2.

D. Implementation Arrangements

17. The executing agency for the TA will be the Ministry of Strategic Planning, National Development and Statistics (MSPNDS). The MSPNDS will be responsible for coordinating activities among relevant agencies, and ensuring that TA outputs are consistent with national development objectives. The MLGUDHE will be the implementing agency for the project, and will supervise all tasks performed by the consultants. A national steering committee will be established to oversee and monitor TA implementation. The permanent secretary of the MSPNDS will chair the national steering committee, which will comprise of senior officials from the Ministry of Finance; the MLGUDHE; the Ministry of Works, Transport, and Public Utilities; and WAF. The national steering committee will convene on a quarterly basis to guide and assess overall TA implementation progress.

18. The TA will be implemented from 1 March 2014 to 30 September 2015. The outline terms of reference for consultants are in Appendix 3. International expertise (24.5 person-months) will be obtained in the areas of urban planning, urban management, water supply and wastewater infrastructure planning and engineering, social development, gender and poverty analysis, natural hazard and climate risk assessment, economic analysis, and environmental safeguards and resettlement. National consultants (33 person-months) will have expertise in urban planning, water supply and wastewater engineering, community participation and social development, geographic information systems, and computer-aided design.

19. The consultants will be engaged by ADB in accordance with the Guidelines on the Use of Consultants by ADB (2013, as amended from time to time). A national urban planner will be recruited on an individual basis. All the other consultants will be selected and engaged through a firm based on a simplified technical proposal under the quality- and cost-based selection process, using a 90:10 weighting. A full technical proposal will be used for the selection of the consulting firm. The proceeds of the TA will be disbursed in accordance with the *Technical Assistance Disbursement Handbook* (2010, as amended from time to time). Equipment, such as computers, printers, and associated consumables, will be procured using the shopping method, in accordance with ADB's Procurement Guidelines (2013, as amended from time to time). All equipment purchased under the TA will be turned over to the MLGUDHE after TA completion.

[12] Contributors: the governments of Australia, Austria, Norway, Spain, and Switzerland.

20. The consultants will assist the government in organizing consultation workshops and forming working groups to ensure adequate stakeholder participation and dissemination of results during TA implementation. These forums will ensure that inputs from a broad range of stakeholders are adequately reflected in the design of TA outputs to ensure local ownership, and that good practice and lessons learned during TA implementation are widely shared.

IV. THE PRESIDENT'S DECISION

21. The President, acting under the authority delegated by the Board, has approved (i) ADB administering a portion of technical assistance not exceeding the equivalent of $350,000 to be financed on a grant basis by the Multi-Donor Trust Fund under the Water Financing Partnership Facility; and (ii) ADB providing the balance not exceeding the equivalent of $800,000 on a grant basis, to the Government of Fiji for Urban Development Planning and Institutional Capacity Building, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Efficient, sustainable, and inclusive urban development	Access to sewerage services in the GSA increases to 60% by 2020 (baseline: 40% in 2013)	National statistical reports WAF reports	**Assumption** Government is able to mobilize sufficient resources to undertake priority urban infrastructure investments. **Risks** Uptake of services among households is low. Development partner support is limited.
Outcome Strengthened national urban development policies and plans	Number of households targeted by informal settlement upgrading initiatives increases to 5,000 per year by 2016 (baseline: 2,260 in 2014)	MLGUDHE reports National budget documents	**Assumption** Government remains committed to promoting inclusive urban development as national priority
Outputs 1. UGMAP for the GSA is updated by the DTCP	By 2015: UGMAP and associated spatial plan is used by local councils and utility service providers to guide land use planning and service delivery	DTCP reports	**Assumptions** Central and local government remain committed to implementing urban governance reforms. Suitable counterpart staff are made available. **Risks** Approval of TA recommendations is delayed. There is limited government capacity to implement TA recommendations.
2. Suva–Nausori Water Supply and Sewerage Master Plan is reviewed and high-priority investments are assessed by WAF	High-priority water supply and wastewater investments are included in the government's urban investment program	WAF reports	
3. Urban management board for the GSA is established by the MLGUDHE	Urban management board meetings are convened on a quarterly basis once established	MLGUDHE reports	

Activities with Milestones	Inputs
1. UGMAP for the GSA is updated by the DTCP 1.1 Assess urbanization trends and spatial development patterns within the GSA (March 2014) 1.2 Carry out hazard risk assessment to identify areas in the GSA exposed to risk (April 2014) 1.3 Develop a metropolitan spatial plan (August 2014) 1.4 Update relevant sections of UGMAP (December 2014) **2. Suva–Nausori Water Supply and Sewerage Master Plan is reviewed and high-priority investments are assessed by WAF** 2.1 Review existing master plan and progress in implementation (March 2015) 2.2 Review data and statistics on water supply and sewerage in the GSA (May 2014) 2.3 Prepare twinning training plan for WAF staff (May 2014) 2.4 Assess current and future demand for water supply and sewerage services based on urban development patterns in the GSA (June 2014) 2.5 Identify feasible least-cost options for ensuring adequate water supply, sewerage services, and wastewater treatment in the GSA (September 2014) 2.6 Prepare draft project profiles and preliminary design and costing for identified high-priority water supply and sewerage investments (October 2014) 2.7 Carry out social, economic, and financial feasibility analysis on identified high-priority investments and necessary safeguards assessments in high-priority investments (December 2014) **3. Urban management board for the GSA is established by the MLGUDHE** 3.1 Carry out consultations with stakeholders (March 2014) 3.2 Review global best practices and lessons learned from the development of metropolitan institutional coordination arrangements (January 2015) 3.3 Confirm the relevance of the proposed urban management board, or propose amendments to these arrangements (February 2015) 3.4 Review Town and Country Planning Act to determine whether establishment of the urban management board requires amendments to existing legislation 3.5 Assist the MLGUDHE in developing a detailed sequenced action plan (April 2015) 3.6 Provide support for the convening of the urban management board (August 2015)	**ADB: $800,000** **Multi-Donor Trust Fund[a] under the Water Financing Partnership Facility: $350,000** The government will provide counterpart support in the form of counterpart staff remuneration and per diem; office accommodation; use of furniture, communications, and photocopiers; and other in-kind contributions.

ADB = Asian Development Bank; DTCP = Department of Town and Country Planning; GSA = Greater Suva Area; MLGUDHE = Ministry of Local Government, Urban Development, Housing and Environment; TA = technical assistance; UGMAP = urban growth management plan; WAF = Water Authority of Fiji.

[a] Contributors: the governments of Australia, Austria, Norway, Spain, and Switzerland.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
($'000)

Item	Amount
A. Asian Development Bank[a]	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	433.0
ii. National consultants	115.0
b. International and local travel	83.0
c. Reports and communications[b]	3.0
2. Training, seminars, and conferences	68.0
3. Surveys	13.0
4. Equipment[c]	3.0
5. Contingencies	82.0
Subtotal (A)	**800.0**
B. Multi-Donor Trust Fund under the Water Partnership Financing Facility[d]	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	190.0
ii. National consultants	50.0
b. International and local travel	36.0
c. Reports and communications[b]	2.0
2. Training, seminars, and conferences	30.0
3. Surveys	7.0
4. Equipment[c]	2.0
5. Contingencies	33.0
Subtotal (B)	**350.0**
Total	**1,150.0**

Note: The technical assistance (TA) is estimated to cost $1,150,000, of which contributions from the Asian Development Bank and the Water Financing Partnership Facility are presented in the table above. The government will provide counterpart support in the form of counterpart staff; office accommodation, including furniture and use of communications and photocopiers; and other in-kind contributions. The value of government contribution is estimated to account for 5% of the total TA cost.

[a] Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-Others).

[b] Costs will cover expenses associated with printing and disseminating reports, producing knowledge products, and communication costs (e.g., telephone, internet).

[c] Equipment will include the purchase of computers, printers, and required software.

[d] Contributors: the governments of Australia, Austria, Norway, Spain, and Switzerland. Administered by the Asian Development Bank and disbursed on a front-loaded basis.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Overview

1. The technical assistance (TA) will require about 57.5 person-months of consulting services, including 24.5 person-months of international and 33.0 person-months of national consultant inputs.

2. The consultants will be required to manage and administer the budget for all surveys, workshops, and training activities, which will be included as a provisional sum in the consulting services contract.

B. Scope of Work

3. **Urban planning and management specialist and team leader** (international, 8 person-months). The team leader will have at least 10 years of experience in urban planning, land management, and implementation of urban governance reform and institutional strengthening initiatives in developing countries. Extensive knowledge and experience working on land management in Pacific island countries would be an asset. The consultant will have a master's degree in urban planning or a similar field from an internationally recognized university. He or she will have strong team leadership experience, a demonstrated ability to manage interdisciplinary teams, cultural empathy, and sound organizational and reporting skills. At least 10 years of experience managing international development projects is essential. In collaboration with other experts, the team leader will perform the following tasks.

(i) Review relevant background studies and data including the Urban Policy Action Plan and Urban Growth Management Plan (UGMAP) for the Greater Suva Area (GSA).
(ii) Review existing institutional arrangements for urban planning and management in the GSA, and associated studies on institutional reforms. Carry out an assessment of global best practices and lessons learned for metropolitan management in similar urban contexts. Assess constraints and opportunities for more coordinated urban planning and management in the GSA.
(iii) In collaboration with the Department of Town and Country Planning (DTCP), undertake a review of available data and statistics to assess current urbanization trends, land use and population growth patterns in the GSA, and predicted future trends.
(iv) Assess available social and economic data to evaluate the incidence and depth of poverty and other social development indicators for the GSA population, and current levels of access to urban services.
(v) Review and update spatial development scenarios in the GSA to provide strategic direction for urban development in the GSA over the next 10 years. Confirm land suitability for future residential, commercial, industrial, and institutional development, based on assessed current and future demand; and identify recreation and conservation areas that will contribute to appropriate density levels and discourage urban sprawl. Confirm the delineation of a municipal boundary for the GSA.
(vi) Carry out consultations and hold public forums to provide input into the review, and updating as needed, of the spatial plan.
(vii) Based on assessed needs, trends, and priorities, work with stakeholders in a participatory manner to review and update the relevant sections of the UGMAP for the GSA.
(viii) Carry out required on-the-job training for DTCP staff to enable their full participation in the preparation of TA outputs, using a "learning by doing" approach.

(ix) Develop a detailed implementation plan for improving metropolitan-level management of the GSA, i.e, urban management board. The plan will be developed with stakeholders in a highly participatory manner. Following endorsement of the plan by the national steering committee, provide support for convening initial meetings of the urban management board.
(x) Identify core infrastructure needs in line with spatial development scenarios, e.g., transport links, power, and drainage, to address the current and future needs of the GSA population.

4. **Water supply engineer** (international, 4 person-months). The engineer will have at least 10 years of experience planning and designing water supply infrastructure. He or she will have a degree in a relevant engineering field from an internationally recognized university. In collaboration with other experts, the engineer will perform the following tasks.

(i) Review the Suva–Nausori Water Supply and Sewerage Master Plan and associated investment strategies, including documents from other relevant sectors.
(ii) Review available data on access, reliability, and quality of water supply services for domestic, commercial, and industrial use in the GSA.
(iii) Prepare and implement a capacity development program for the Water Authority of Fiji (WAF) through twinning arrangements to improve the utility's strategic planning capacity, focusing on business practices and asset management.
(iv) Work with WAF to confirm estimated household, commercial, and industrial demand for water supply services over a 20-year period, based on high, medium, and low projection scenarios.
(v) Review and confirm priority least-cost investments for upgrading water supply networks, including reducing nonrevenue water and expanding access to informal settlements.
(vi) Work with WAF to determine the scope of and prepare outlines or designs for the agreed project components, including preliminary designs, specifications, and costs for the design of high-priority water supply investments. Prepare project implementation schedules.
(vii) Prepare a procurement capacity assessment of WAF using ADB's procurement capacity assessment questionnaire. Prepare a procurement plan in accordance with ADB's Procurement Guidelines.

5. **Wastewater engineer** (international, 4 person-months). The engineer will have at least 10 years of experience in planning and designing wastewater infrastructure. He or she will have a degree in chemical engineering or a related engineering field from an internationally recognized university. In collaboration with other experts, the engineer will perform the following tasks.

(i) Review the Suva–Nausori Water Supply and Sewerage Master Plan and associated investment strategies, including documents from other relevant sectors.
(ii) Review available data on access to wastewater services for domestic, commercial, and industrial use in the GSA, including the extent of sewerage system network coverage.
(iii) Work with WAF to confirm estimated household, commercial, and industrial demand for sewerage services over a 20-year period.
(iv) Confirm the capacities of existing trunk sewers, and pumping and treatment facilities; and ascertain the quantities and characteristics of sewerage and industrial wastewater generated in the GSA, including current and projected future sewerage loadings and characteristics of sewerage from different sources, based on high, medium, and low projection scenarios over a 20-year horizon.

(v) Identify options for providing improved sanitation services to informal settlements in the GSA.
(vi) In collaboration with WAF, prepare a strategy for prioritizing the expansion of existing sewerage networks.
(vii) Review and confirm priority least-cost investments for upgrading and expanding sewerage system network coverage, and expanding access to improved sanitation in informal settlements, including consideration of alternative low-cost options, to encourage the appropriate density of development and safeguard environmental quality. Develop options for wastewater treatment and recovery, including the potential to earn carbon credits, to ensure that the required discharge standards are achieved.
(viii) Work with WAF to determine the scope and prepare outlines and designs for the agreed project components including preliminary designs, specifications, and costs for the design of high-priority sanitation investments. Prepare project implementation schedules.
(ix) Provide recommendations on the possible use of the design–build–operate model and maintain contracts for wastewater treatment facilities.

6. **Climate change and hazard risk specialist** (international, 1 person-month). The specialist should be qualified in engineering, disaster risk management, or a related field; and should have experience in carrying out hazard risk assessments for natural hazards and climate change, particularly in urban areas. Experience producing visualization products such as multi-hazard maps is required. In collaboration with other experts, the specialist will perform the following tasks.

(i) Use available natural hazard and climate risk data to assist the DTCP in assessing areas within the GSA that are at risk from natural hazards and climate change.
(ii) Prepare hazard maps to assist the urban planning team in visualizing areas exposed to various risks, in order to steer urban development in the GSA away from these areas.
(iii) Carry out targeted training to build the capacity of DTCP staff to apply risk information in urban planning, and to assess development applications.

7. **Economist** (international, 1.5 person-months). The economist should hold a post-graduate degree in economics or a related field, and at least 10 years of experience in the economic analysis of urban investment projects. The economist will (i) prepare a least-cost assessment for the project's physical components; (ii) prepare an economic analysis of the project consistent with the financial analysis; (iii) provide an analysis of the distribution of the net benefits (and cross-subsidies) across key beneficiaries; and (iv) identify key risks that may affect the economic viability of the project, including undertaking sensitivity analysis.

8. **Financial analyst** (international, 2 person-months). The analyst will have a professional accountancy designation, and at least 10 years of experience in preparing project financial analysis. The analyst will have in-depth knowledge and experience with ADB's financial analysis and management guidelines. The analyst will undertake the following tasks.

(i) Conduct a financial management assessment of WAF.
(ii) Prepare a financial analysis of the project as follows: (a) calculate the financial internal rate of return and weighted average cost of capital, taking into account all the financial costs and benefits; including calculating the repayment period for the project in financial terms; (b) identify all risks to the proposed project revenue and costs, and conduct relevant sensitivity analyses on the financial results; including calculating switching values for the investment costs.
(iii) Prepare a detailed financing plan and cost estimates for a project.

(iv) Review WAF's tariff structure and propose measures to improve cost recovery.
(v) Design the fund-flow mechanism and identify appropriate disbursement of financing and procedures, based on the project needs and WAF's capacity to management funds and disbursements.

9. **Environmental safeguard specialist** (international, 1.5 person-months). The specialist will have academic qualifications in environmental engineering, sciences, or an equivalent field; and at least 6 years of experience in environmental assessment and preparation of environmental impact assessments, including assessments for water and sanitation projects in developing countries and preparation of safeguards documents in accordance with ADB requirements. The specialist will also have experience identifying required investments for climate-proofing of infrastructure. In collaboration with other experts, the specialist will be responsible for carrying out all environmental due diligence, including the preparation of an environmental assessment and review framework, and initial environmental examinations for all subprojects in accordance with ADB's Safeguard Policy Statement (2009).

10. **Resettlement specialist** (international, 1.5 person-months). The specialist will have an advanced degree in a relevant field such as a social sciences discipline; and at least 8 years of experience working on social safeguards to mitigate the social impact of infrastructure projects in developing countries, including analyzing resettlement impacts, undertaking participatory consultation, and developing compensation and grievance redress mechanisms. In collaboration with other experts, the consultant will be responsible for carrying out all social safeguards due diligence, including the preparation of a resettlement framework and resettlement plans as needed for all subprojects in accordance with ADB's Safeguard Policy Statement (2009).

11. **Social development, gender, and poverty specialist** (international, 1 person-month). The specialist should hold an advanced degree in a relevant discipline, such as public health or social sciences, and at least 8 years of demonstrated experience in the water and sanitation sector in developing countries. He or she will have experience in preparing social survey designs, and in gender and poverty analysis to ensure equitable access to basic water and sanitation services. In collaboration with other experts, the specialist will be responsible for (i) preparing a summary poverty reduction and social strategy for the project; (ii) preparing a gender action plan; and (iii) supporting other poverty, gender, and social analysis work to update the UGMAP, and to determine appropriate options for providing low-income households in informal settlements basic access to water supply and sanitation services.

12. **Urban planner** (national, 12 person-months). The planner will hold a bachelor's degree in urban planning, geography, or a related field, and have at least 10 years of professional experience in the field of urban planning. He or she will also have experience working in Fiji government agencies responsible for town and country planning or local government, and working on projects financed by international development partners. The planner will support the international urban planning and management specialist in carrying out required tasks for the review and updating of the UGMAP, and in preparing spatial plans. The planner will also be responsible for facilitating consultations and workshops.

13. **Water supply and wastewater engineer** (national, 12 person-months). The engineer should hold a relevant qualification in civil engineering from a recognized university and have at least 6 years of experience in the planning and design of urban infrastructure, including water supply and wastewater schemes. He or she will support the international water supply and

wastewater engineers in reviewing existing investment plans, carrying out an investment needs analysis, and developing suitable options as priority investments.

14. **Community participation and social development specialist** (national, 3 person-months). The specialist should hold qualifications in a social science or related discipline, and have significant experience carrying out community consultations, including experience working on informal settlement issues in Fiji. The specialist will assist the international social development, gender, and poverty specialist in carrying out all necessary consultations, and in conducting poverty and social analyses of priority investments.

15. **Geographic information systems specialist** (national, 6 person-months). The specialist will hold relevant qualifications in geographic information systems (GIS), remote sensing, or an equivalent area; and at least 2 years of applied experience using GIS software, preferably for urban planning purposes. He or she will support the preparation of hazard maps, and all GIS maps required for updating the UGMAP and spatial plans.

C. Reporting

16. Inception, interim, draft final, and final reports will provide information on progress, outcomes of training and consultations, and key achievements. The inception report should include a background assessment, summary of key issues, and approach for implementing the next phase of TA activities. A summary of required consultant outputs and associated milestones is in Table A3.

Table A3: Consultant Reporting Schedule

Major Outputs	Expected Completion Date
Inception report	April 2014
Draft project profiles for high-priority investments identified in the Suva–Nausori Water Supply and Sewerage Master Plan and Interim Report	September 2014
Draft feasibility and due diligence assessments for high-priority water and sanitation investments	December 2014
Updated Urban Growth Management Plan and associated metropolitan spatial plan	December 2014 April 2015
Draft action plan for establishment of an urban management board	August 2015
Draft final report	September 2015
Final report	