SECTOR ASSESSMENT (SUMMARY): ¹
WATER AND OTHER URBAN INFRASTRUCTURE AND SERVICES

1. Sector Performance, Problems, and Opportunities

1. Fiji’s urban centers comprise two cities, 12 incorporated towns, and seven unincorporated towns. These centers have a population of about 457,900, equivalent to 48% of the total population, and are expected to increase to about 60% of the national population by 2030. Greater Suva Area (GSA)—comprising the city of Suva and the three incorporated towns of Lami, Nasinu, and Nausori and their respective peri-urban areas—accounts for about 57% of the urban population. Poverty incidence over 2003–2009 in Fiji’s urban areas ranged from 21% in the Central Division to 52% in the Northern Division.²

2. Fiji has achieved its Millennium Development Goal (MDG) 7 targets for both water supply and sanitation. The proportion of Fiji’s urban population with access to safe water rose from 94% in 1990 to 100% by 2012, while the proportion of the urban population with access to improved sanitation increased from 85% to 92% over the same period.³ However, rapid urbanization is putting serious strain on existing infrastructure and is eroding the gains made by government to improve water supply to urban areas. Many urban dwellers now experience intermittent water supply, water shortages and cuts.

3. The country’s Urban Policy Action Plan⁴ and growth management plans for major urban centers are intended to provide the necessary policy framework for addressing these issues. However, weak sector agency coordination, limited strategic spatial planning, inadequate investment in urban infrastructure and services, and limited regard for environmental issues still exist.⁵

4. The Water and Sewerage Department under the Ministry of Infrastructure and Transport is responsible for the development of water supply and sanitation sector policies and regulation to ensure the provision of safe drinking water and efficient sanitation services to all communities. The Water Authority of Fiji (WAF) is responsible for the delivery of water supply and sewerage services to Fiji’s urban centers.

5. The Water Supply and Sewerage Department was declared a public reform enterprise in June 2006. WAF was created as a commercial statutory authority in 2011. WAF is classified a regulated industry under the provision of the Commerce Commission Decree (2010) and is subject to price regulation by the Commerce Commission. The decree enables the Commerce Commission, with the approval of the minister for public enterprises, to set the maximum prices for water supply and sewerage services. The minister for infrastructure and transport is responsible for developing technical regulations through the Water Supply and Sewerage

¹ This summary is based on existing Asian Development Bank (ADB) knowledge products and Fiji Water Authority annual reports.
Department. Work is under way to establish a framework for technical regulations that will require WAF to report on key sector performance indicators.

6. While WAF has significantly improved the delivery of water supply and sewerage services, it faces a number of challenges that place its viability at risk. WAF does not operate as an independent commercial enterprise as (i) revenue generated by WAF is deposited into the government’s consolidated funds; and (ii) the government and the price regulator, the Commerce Commission, are unwilling to approve requests by WAF to increase water supply and sewerage tariffs. Water supply and sewerage tariffs were last amended in 1999 (to remove value-added tax). Water supply tariffs are significantly below the cost of production (covering raw water extraction, treatment, and conveyance to consumers). In 2013, revenue generated by water and sewerage charges was equivalent to 44% of WAF’s operating costs. WAF is reliant on grants from the government to finance its capital and recurrent costs.6

7. Other challenges faced by WAF include (i) inadequate measurement (metering) of the treated water and wastewater volumes; (ii) high losses from the water supply networks through leakage and illegal connections resulting in nonrevenue water of 51%; (iii) increased responsibilities for design and operation of commercially unviable rural water supplies; (iv) an under-resourced water quality laboratory; (v) high reliance on electricity for operations, which increases operation costs; and (vi) regulatory and environmental compliance.

8. The government faces the complex challenge of delivering urban services to growing informal settlements in urban and peri-urban areas. In 2007, it was estimated that upward of 140,000 people, equivalent to 15.7% of the national population, were living in 200 informal settlements around the country. The majority of these settlements are located along the Lami–Suva–Nausori corridor, the Nadi–Lautoka–Ba corridor, and in Labasa.7 Almost all informal settlements lack access to basic services, particularly improved sanitation, drainage, and solid waste management. Settlements are commonly located on marginal lands such as mangrove swamps, which are prone to flooding. Poverty incidence in Fiji’s informal urban settlements has been estimated at 53%—the highest among urban groups (footnote 3). The lack of access to urban services has a disproportionately negative impact on women.

9. Demand for affordable serviced residential allotments in Fiji is high, but the supply is limited. The Housing Authority of Fiji is the only provider of low-cost serviced residential land in Fiji for those families earning less than F$50,000 annually. The price of Housing Authority serviced residential allotments is not affordable to many low-income families. The Housing Authority has the conflicting mandates of providing affordable housing to low-income households, while as a statutory authority, providing an adequate return on investment. The Public Rental Board is mandated to provide housing with affordable rents to low income earners, but the demand for low-cost rental housing is substantially greater than the supply. The Public Rental Board has neither the financial resources nor the land to develop new rental properties.

10. Substantial investment to expand urban infrastructure and services is needed to improve urban living standards, particularly among low-income households and women living in informal

---

6 Asian Development Bank (ADB) staff assessment based on government budget information; excludes depreciation and subsidies.
settlements and peri-urban areas. Investments are also needed to improve the quality and coverage of centralized sewerage to improve environmental management. Strengthened water supply and sanitation regulation, and enhanced urban governance arrangements that improve coordination among all the stakeholders involved in urban management, are needed to raise sector performance. A recent private sector assessment for Fiji concludes that potential exists for public–private partnership (PPP) arrangements such as performance-based operations and maintenance contracts to improve the operational efficiency of urban water supply and sewerage services.⁸

2. Government’s Sector Strategy

11. Fiji’s Green Growth Framework sets out an overarching vision for Fiji’s long-term development priorities, and is intended to extend the Roadmap for Democracy and Sustainable Social and Economic Development, 2009–2014 to guide future national development planning.⁹ This planning framework sets out specific strategies to improve access to safe drinking water and sanitary waste disposal systems. Priorities include expansion of centralized sewerage networks and upgrading of treatment facilities to improve discharge standards, as well as reductions in nonrevenue water to 25%. Access to adequate, quality, and affordable accommodation is also identified as a priority to improve living conditions for the urban poor, including strengthening of social housing programs, and implementing programs to upgrade informal settlements. Urban water supply and sewerage investment plans exist for all major towns, but many require updating. The government allocated close to $40 million for capital investments in 2014, to upgrade water supply distribution networks, implement nonrevenue water reduction programs, install replacement meters, and upgrade wastewater treatment plants. The government is also considering possible use of PPPs to improve water supply and sewerage services delivery. However, necessary prerequisites include putting technical regulations into place that establish key performance indicators, and adjustment of tariff levels to reflect the actual costs of service delivery.

12. Fiji’s 2011 National Housing Policy supports the provision of affordable and decent housing for all. The policy advocates a shift away from direct provision of affordable housing, which has resulted in a limited supply of housing for mostly the better-off among low-income groups. The policy promotes a move toward creating an enabling environment for the development of an affordable housing market through selective and innovative policy interventions. For informal settlement upgrading, the policy promotes security of tenure, and demand-driven community-based approaches. In 2014, the government launched its City Wide Squatter Upgrading Project and Town Wide Informal Settlement Upgrading Project, which will expand basic services to informal settlements in urban and peri-urban areas, and support incremental informal settlement upgrading activities. Addressing Fiji’s affordable urban housing challenge will require (i) addressing rigid and inflexible development and building standards set out in the Town and Country Planning Act, 1995 and Public Health Act, 1936 to reduce housing costs; (ii) developing a housing mortgage market that is better able to reach the poor and women; (iii) securing adequate low-cost land for subdivision development; and (iv) encouraging greater private sector participation in land development, construction, and management activities.

3. ADB Sector Experience and Assistance Program

13. The Asian Development Bank (ADB) has provided substantial levels of support to the sector since 1988. ADB supported improved delivery of water supply and sanitation services to the GSA through the Suva–Nausori Water Supply and Sewerage Project ($47 million of ordinary capital resources approved in 2003, and $23 million of ordinary capital resources in additional financing approved in 2009), benefiting an estimated 250,000 people. The project also contributed to the establishment of WAF.

14. In December 2013, ADB approved a grant of $1.15 million for technical assistance (TA) for *Urban Development Planning and Institutional Capacity Building*. The objective of the TA is to promote more efficient, sustainable, and inclusive urban development in Fiji, by providing support for strengthening national urban development policies and plans. The TA is also providing support for the review and updating of the Suva–Nausori Water Supply and Sewerage Master Plans. ADB also provided assistance in 2012 for the development of a pilot inclusive informal settlement development plan for Caubati informal settlement, located in the GSA. This plan built on existing plans and strategies, and identifying community priorities for service provision and settlement upgrading through TA for *Supporting ADB’s Engagement in Fragile Situations*. ADB will continue to provide assistance to the development of urban infrastructure in Fiji’s growing cities and towns and explore viable water sources. It is proposed that ADB provide lending and non-lending support during 2014–2018 to (i) improve access and delivery of urban services, including urban water supplies and sanitation; (ii) strengthen technical and economic regulation of the water and sewerage sectors; and (iii) further corporatize WAF so that it is able to operate as a more financially autonomous entity. Capacity building through technical assistance and training will also be considered.

15. ADB support will emphasize the principles of improved cost recovery in the delivery of water supply and sewerage services through tariff adjustments, and strengthening of service standards through the implementation of technical regulations for the sector. ADB will also work with WAF to explore the feasibility of PPP arrangements to support improved operational efficiencies in service delivery. Investments in urban water supply will target reductions in nonrevenue water to manage existing water resources better. ADB-supported activities will consider gender and natural hazard and climate change risks to include gender design features, and climate change adaptation measures, in the preparation of sector investments.

16. A number of lessons are evident from ADB support for infrastructure development projects in Fiji. The country relies on international markets, particularly New Zealand and Australia, for civil works contracts. The preparation of accurate cost estimates is difficult, as external factors that are hard to gauge often directly affect costs in Fiji. Physical contingencies must be sufficient to allow for technical uncertainties. In addition, the selection of procurement methods must take into account the capacity of implementing agencies to manage and coordinate contracts, and their ability to attract sufficient qualified bidders.

Inadequate Quality and Coverage of Urban Services

**National and Sector Impacts**

- Social and Economic Development Constrained
- Public Health Risks
- Environmental degradation

**Core Issue**

- Inadequate Quality and Coverage of Urban Services

**Causes**

**Financial:**
- Inadequate funding for operations and maintenance and service expansion
- Insufficient cost recovery due to low tariff levels and high levels of non-revenue water
- Councils are not able to generate sufficient revenues from local taxes to fund critical infrastructure investments
- Inadequate financing for infrastructure development and service provision in informal settlements and peri-urban areas

**Technical:**
- Urban populations are rapidly expanding into informal settlements and peri-urban areas
- Limited serviced land available for residential and economic development
- Building codes and development controls contribute to high housing and infrastructure development costs which limits supply
- Inadequate regulation, collection and treatment of wastewater contributes to environmental degradation

**Institutional:**
- Planning and management of urban growth is weak
- Weak coordination between national government, local councils, and service providers results in poor management of urban growth
- Lack of effective integrated and spatial planning to guide urban growth
- Rural authorities are not well-equipped to manage urban growth in peri-urban areas

**Public Health Risks**

**Social and Economic Development**

**Constrained**

**Environmental degradation**
## Sector Results Framework (Water and other Urban Infrastructure and Services, 2014–2018)

<table>
<thead>
<tr>
<th>Country Sector Outcomes</th>
<th>Indicators with Targets and Baselines</th>
<th>Outputs with ADB Contribution</th>
<th>Indicators with Incremental Targets</th>
<th>Planned and Ongoing ADB Interventions</th>
<th>Main Outputs Expected from ADB Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased access to reliable and adequate supplies of safe water in urban centers and to sanitary and environmentally safe sewerage waste systems and treatment facilities</td>
<td>Universal access to urban water supply is maintained by 2019 (2013 baseline: 100%)</td>
<td>Water supply and sanitation systems expanded, improved, and well managed</td>
<td>Level of unaccounted for water reduced to 25% by 2018 (2013 baseline: 51%)</td>
<td>Planned key activity areas &lt;br&gt; (i) Urban water supply and sewerage systems (99% of funds)</td>
<td>Planned key activity areas and pipeline projects</td>
</tr>
<tr>
<td>Access to improved sanitation among the urban population is increased to 98% by 2019 (2013 baseline: 92%)</td>
<td>Access to improved sanitation among the urban population is increased to 98% by 2019 (2013 baseline: 92%)</td>
<td>Water supply and sanitation systems expanded, improved, and well managed</td>
<td>Water supply pipes installed or upgraded increased to 3,770 km by 2018 (2013 baseline: 3,690 km)</td>
<td>(ii) Water and sewerage regulation (1% of funds)</td>
<td>1 sewerage treatment plant upgraded</td>
</tr>
<tr>
<td>Poverty rate among informal settlers falls to 30% by 2019 (2009 baseline: 38%)</td>
<td>Poverty rate among informal settlers falls to 30% by 2019 (2009 baseline: 38%)</td>
<td>Water supply and sanitation systems expanded, improved, and well managed</td>
<td>Length of sewer mains increases to 580 km by 2018 (2013 baseline: 520 km)</td>
<td>(iii) Capacity development TA for strengthening water and sewerage sector regulation ($1.2 million)</td>
<td>60 km of sewers constructed</td>
</tr>
<tr>
<td>Population of the GSA with sewerage connections increased to at least 53% by 2018 (2013 baseline: 40%)</td>
<td>Population of the GSA with sewerage connections increased to at least 53% by 2018 (2013 baseline: 40%)</td>
<td>Water supply and sanitation systems expanded, improved, and well managed</td>
<td>Volume of wastewater collected and treated to primary standard increases to 20,000 million liters annually by 2018 (2013 baseline: 18,401 million liters)</td>
<td>Ongoing projects with estimated amounts &lt;br&gt; (i) Urban Water Supply and Sewerage Sector Project ($100 million)</td>
<td>Ongoing projects</td>
</tr>
<tr>
<td>Pipeline projects with estimated amounts</td>
<td>Pipeline projects with estimated amounts</td>
<td>Ongoing projects</td>
<td>Ongoing projects with approved amounts &lt;br&gt; (ii) Water and sewerage regulation (1% of funds)</td>
<td>(ii) Water and sewerage regulation (1% of funds)</td>
<td>2 water treatment plants and 1 sewerage treatment plant rehabilitated</td>
</tr>
<tr>
<td>(i) Urban Water Supply and Sewerage Sector Project ($100 million)</td>
<td>Planned key activity areas and pipeline projects</td>
<td>Ongoing projects</td>
<td>Ongoing projects with approved amounts &lt;br&gt; (iii) Capacity development TA for strengthening water and sewerage sector regulation ($1.2 million)</td>
<td>(iii) Capacity development TA for strengthening water and sewerage sector regulation ($1.2 million)</td>
<td>20 km of sewers constructed</td>
</tr>
<tr>
<td>(ii) Water and sewerage regulation (1% of funds)</td>
<td>Planned key activity areas and pipeline projects</td>
<td>Ongoing projects</td>
<td>Ongoing projects with approved amounts</td>
<td>(iii) Capacity development TA for strengthening water and sewerage sector regulation ($1.2 million)</td>
<td>Planned key activity areas and pipeline projects</td>
</tr>
<tr>
<td>(iii) Capacity development TA for strengthening water and sewerage sector regulation ($1.2 million)</td>
<td>Planned key activity areas and pipeline projects</td>
<td>Ongoing projects</td>
<td>Ongoing projects with approved amounts</td>
<td>(iii) Capacity development TA for strengthening water and sewerage sector regulation ($1.2 million)</td>
<td>Planned key activity areas and pipeline projects</td>
</tr>
</tbody>
</table>

ADB = Asian Development Bank, ESG = environmentally sustainable growth, GEM = gender effective mainstreaming, km = kilometer, TA = technical assistance.

a Population with access to water services (either with direct service connection or within reach of a public water point) as a percentage of the total population under the Water Authority of Fiji’s nominal responsibility.

b Population with sewerage services (direct service connection) as a percentage of the total population under the Water Authority of Fiji’s nominal responsibility.