

PACIFIC PRIVATE SECTOR DEVELOPMENT INITIATIVE

Enabling the private sector to drive sustainable economic growth and lift Pacific people out of poverty

CASE STUDIES IN PRIVATE SECTOR PARTICIPATION: SOLID WASTE MANAGEMENT

Solid Waste Management Services in the Pacific

Solid waste management services in Pacific island countries (PICs) include five broad activities: collection, recycling and composting, waste-to-energy, waste treatment, and landfill management. In most urban areas in the Pacific, these functions are the responsibility of the municipal authorities, who finance the services through their own budgets, with only limited contributions from fees paid directly by users.

Poor solid waste collection and disposal practices in the Pacific have had serious consequences on environmental quality, public health, fisheries, agriculture, and sustainable development in general. Improving the performance of the sector will require efforts to reduce the amount of waste produced, and to extract maximum practical benefit from that waste before disposal. Public awareness, behavioral change, regulatory reform and enforcement, institutional strengthening, and the introduction of new technologies and investment are needed to achieve this goal.

Where and How Is the Private Sector Involved?

The private sector has been involved in the Pacific's solid waste sector for many years, providing waste collection and/or disposal services in Fiji, Papua New Guinea, Samoa, Solomon Islands, and Tonga.



Solid waste management services present increasing opportunities for private sector participation.

The Pacific Private Sector Development Initiative is a regional technical assistance facility cofinanced by the Asian Development Bank, the Government of Australia, and the Government of New Zealand.



The private sector is most commonly involved through service contracts with municipal authorities for waste collection, with various structures for performance-based payments.

Private contractors have begun to manage landfills in some PICs, using standard management contracts. Several waste-to-energy contracts are also in place. The waste-to-energy projects are currently for biomass energy generation, with the producers of biomass selling their excess energy to electricity utilities. The transition from public to private provision of services has required a substantial increase in tendering and contract management skills. The availability of these skills remains a challenge in most PICs.

A survey of eight PICs, conducted in 2015, identified 10 solid waste management contracts in place at the time of the survey. While the following table is only a partial listing, it provides a useful overview of the forms of private sector involvement in the sector.



Solid Waste Management Contracts in Pacific Island Countries, 2015

Country	Project	Form of Public-Private Partnership	Contract Period	Services Provided	Payment Mechanism
Papua New Guinea	Port Moresby waste collection	Service contract	3 years	Three contracts for waste collection (domestic, commercial, and medical)	Monthly fee; key performance indicators are collection rates and equipment standards (deductions if collections not completed).
	Baruni landfill operation and maintenance (O&M)	Management contract	3 years	O&M of landfill; same contractor also doing civil works upgrade	Flat management fee, plus payment against volume of waste managed
	New Britain palm oil biomass	Independent power production; build-operate-own		Conversion of biomass waste to energy; 3-megawatt plant selling power to PNG Power at negotiated price	Power purchase agreement
Fiji	Nadi recycling	Service contract			Fee for service, plus recycling revenue
	Naboro landfill O&M (Greater Suva area)	Management contract	5-year contract until 2010; then 2-year contracts	O&M of the Naboro landfill	Lump sum for first contract; now weight-based
	Suva green waste collection	Service contracts	3 years	10 contracts; each for collection from a specific zone	Lump sum component, plus fee per load of waste transported to the Naboro landfill
	Tropik Wood Industries and Fiji Sugar Corporation	Independent power production; build-operate-own		Conversion of biomass waste (wood waste and sugarcane waste) to energy; sale to Fiji Electricity Authority at negotiated price; Tropik Wood capacity is 9.2 megawatts	Power purchase agreements for excess power generated
Solomon Islands	Honiara garbage collection	Service contract	1 year	Household garbage collection in 4 out of 10 zones; three private contractors	
Samoa	Apia urban and rural solid waste (rubbish) collection services	Service contracts	3 years	Household garbage collection in 15 zones	Lump sum, monthly payments
	Apia waste management landfill maintenance	Service contract	3 years	Landfill O&M	Lump sum, monthly payments

Source: Pacific Private Sector Development Initiative research based on Pacific Region Infrastructure Facility Urban Working Group responses to questionnaire.

CASE STUDY

Port Moresby, Papua New Guinea

Solid waste management in Port Moresby is the responsibility of the Solid Waste Management Division of the National Capital District Commission (NCDC). The NCDC has been contracting rubbish collection to the private sector for over 10 years, experimenting with various contract sizes and duration. In 2006, to facilitate contract management, the NCDC formulated standard contract documents with defined scope of work, specifications, and performance requirements.

An audit report from the office of the Papua New Guinea auditor general (Performance Audit Report No. 01/2010) was released in 2010. It found that, while standard contracts were used to competitively tender waste collection services and nine contractors had been appointed in 2007 for a period of 5 years, none had signed contracts. Moreover, the tender process, managed by the NCDC's Tenders Committee, resulted in the appointment of two contractors who had not submitted bids. There was also a number of deviations between the value of the bids and the subsequent awards.

Without legally binding contracts, performance monitoring is compromised. The NCDC resorted to other practices, such as physical inspections, to provide a minimum of compliance data. This provided enough information to subsequently terminate two of the contractors. The audit report resulted in an NCDC commitment to strengthen the process for contract tendering in subsequent years.

In 2013, three new waste collection contracts were awarded in Port Moresby. Rather than covering geographic zones, each contract was based on the type of waste collected—household, commercial, or hazardous. All three contractors have signed legally binding contracts. The contract for household collection is the largest, with 25,000 households and 63 settlements covered. The commercial contract covers 250 sites, and the contract for hazardous waste covers 40 sites. Payments are made on a monthly basis, with deductions for noncompliance with the contract terms (frequency of collection). Performance is monitored with physical inspections. The NCDC also maintains a fleet of 10 compactor trucks, which were leased and subsequently sold to the largest contractor.

The NCDC also reserves approximately K50,000 per month for small contractors. The funds are allocated as needed. The small contractors collect waste at markets and indigenous villages, and perform street cleaning. They do not have legally binding contracts, but are registered as formal businesses.

The management of the city's Baruni landfill is contracted to a fourth operator, under a 3-year contract. In 2014, to improve environmental and safety conditions, the NCDC, with assistance from the Japan International Cooperation Agency, launched a rehabilitation program to install a semi-aerobic waste management system at the landfill. The civil works, valued at K12 million, are being undertaken by the same contractor who is managing the landfill, but are being financed by the NCDC. While the NCDC did consider contracting both the rehabilitation and management of the landfill as a single build-operate-transfer contract, which could have delivered further efficiency incentives, it did not proceed with this model because its market investigations revealed that no contractors were willing to make the investment of K12 million.

The NCDC experience underscores the importance of robust and transparent procedures for tendering and contracting, if the benefits of PPPs are to be realized.



What Has Been the Tangible Impact of the Public–Private Partnership Contracts?

The NCDC’s objective in contracting out solid waste collection and landfill management in Port Moresby was to improve service quality and reduce costs. Outsourcing has expanded the NCDC’s ability to provide services to a growing city and created market opportunities for private businesses. However, deficiencies in the procurement and contracting process have made it impossible to accurately measure the return on investment generated by the public–private partnership (PPP) contracts.

The NCDC experience underscores the importance of robust and transparent procedures for tendering and contracting, if the benefits of PPPs are to be realized. The NCDC has developed its capacity in contract structuring, management, and implementation, but inadequate tendering and selection processes have undermined the effectiveness of these contracts.

How Can the National Capital District Commission Extract More Value from the Public–Private Partnership Contracts?

The NCDC’s Tenders Committee is responsible for the tendering and awarding of service contracts in Port Moresby. It reports to the NCDC Board, which is composed of 11 members, five of whom are elected officials, including the chair, who is also the governor of the National Capital District (NCD). The involvement of the NCDC Board in the awarding of contracts provides an opportunity for political considerations to enter into decision making. This is reflected in the frequent variances between the bid evaluation recommendations made by the NCDC Solid Waste Management Division and the awards decided by the Tenders Committee.

Measures that could help the NCDC to increase competition for, and extract more value from, the PPP contracts include:

- (i) depoliticizing the bid evaluation process and making it more objective and transparent,
- (ii) expanding the performance measures within the contracts,
- (iii) opening the bidding process to foreign contractors, and
- (iv) strengthening the NCDC’s ability to monitor performance.

CASE STUDY

Suva, Fiji

The collection, transportation, and disposal of solid waste in Fiji’s cities and towns are the responsibilities of individual municipal councils, under the country’s Local Government Act. In the capital city, Suva, solid waste management is carried out by the Suva City Council (SCC).

Household waste is collected by the SCC, using its fleet of compactor trucks. The SCC believes that its collection system is cost-effective and customer-friendly. It does not plan to outsource these services to the private sector. The cost of compactor trucks is seen by the SCC as a barrier to private sector participation, although Port Moresby has shown that this can be overcome by councils leasing trucks to private contractors.

Green waste collection in Suva is outsourced, as part of municipal cleaning and maintenance contracts, which also include grass-cutting, clearing of drains, and street-sweeping. Suva is divided into 10 sectors, tendered separately through the SCC tender process, which encourages local contractor participation and an equitable distribution of economic opportunities. Contracts have a 3-year term. They include a lump sum component and a fee for each load of waste transported to the Naboro landfill. Current contractors include eight incorporated companies, a youth group, and a church group. Performance is monitored daily through physical inspections, and penalties are applied for nonperformance. Fiji’s Office of the Auditor General recommended in 2014 that the SCC enter into legally binding contracts with contractors. The SCC reports that standardized contract documents are now being used, and that improvements in contract management and monitoring have led to improvements in service delivery.

The SCC also has a 2-year contract with a waste disposal company to provide skip bins at informal settlements and council facilities (about 28 sites in total). The contract includes fixed rental and haulage fees. Commercial and industrial wastes in Suva are collected by private companies.

The city's waste is disposed of at a sanitary landfill at Naboro, which also serves the towns of Lami, Nasinu, and Nausori, as well as Navua and Korovou. The Government of Fiji owns the landfill, and the Department of Environment (DOE) is responsible for its operation.

Since the landfill opened in 2005, its management has been contracted out to a private operator from New Zealand. Until 2010, a 5-year contract provided a lump sum payment to the company for the disposal of 100,000 tons of waste per year. Since 2010, the company has been awarded two weight-based contracts with 2-year terms, following competitive tenders. There has since been a number of contract extensions and interim contracts due to delays in the process for tendering and awarding of contracts. The most recent 2-year contract has expired, and is expected to be extended until a new, longer-term contract is awarded.

In the absence of a longer-term contract, there has been insufficient investment in equipment by the contractor, which is impacting services at the facility. Delays in the development of the landfill's second stage, which is the government's responsibility, have resulted in additional strain and overload at the existing site.

In February 2016, the DOE called for expressions of interest for a waste-to-energy facility at Naboro. However, amid uncertainty about key project parameters and the tender process, it is unlikely that any contract that might be awarded would maximize value for money for the government. Further, the absence of an integrated solid waste management strategy for the Greater Suva area means that there are uncertainties about the future quantity of solid waste, landfill requirements, and waste-to-energy potential.

What Has Been the Tangible Impact of the Public-Private Partnership Contracts?

Green waste collection in Suva has been outsourced by the SCC for over 25 years, while household waste collection has never been outsourced. The SCC is satisfied with its current practices for managing household waste, but it has not analyzed whether they yield higher value for money than that which might be achieved by outsourcing these services to private contractors.

While the DOE reports that the management contract for the Naboro landfill has resulted in efficient operation and compliance with international standards, an inefficient procurement process and the resultant contract uncertainty have seen a fall in service levels.



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How Can More Value Be Extracted from the Public-Private Partnership Contracts?

There are three plausible strategies to extract more value from the existing PPP contracts:

- (i) develop a longer-term, integrated solid waste management strategy for the Greater Suva area;
- (ii) conduct rigorous PPP value-for-money analyses for current SCC solid waste management practices; and
- (iii) develop a longer-term, transparent, and competitive PPP procurement process for the operation and management of the Naboro landfill as well as the proposed waste-to-energy facility (potentially as a single PPP).

WHAT ARE PUBLIC-PRIVATE PARTNERSHIPS?

PPPs are agreements between the public sector and the private sector to provide assets and/or services over a period of time. PPPs can be used in most infrastructure sectors, including solid waste management, water, power, transport, and telecommunication. PPPs are different from traditional public procurement in that PPP contracts are performance-based, with payments made against the successful delivery of defined outputs over time.

PPPs often combine the construction of infrastructure with the operation of the assets for a set period of time. In the solid waste management sector, for example, PPPs can involve the construction and operation of landfill and/or recycling infrastructure. The existing commercial legal frameworks in most PICs allow public agencies to enter into PPP contracts.

WHAT ARE THE DIFFERENT FORMS OF PUBLIC-PRIVATE PARTNERSHIPS?

PPPs can take different forms, depending on the nature of the service to be provided. PPP arrangements fall into four broad categories as illustrated below:

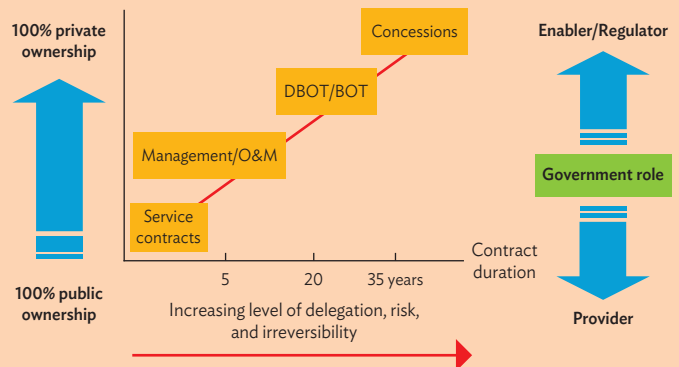
Service contracts. These contracts are the simplest form of PPP. The private partner does not operate any public assets, but simply contracts with the public sector to provide a specified level of service. These contracts are typically 2–3 years in duration and are common for services such as waste collection.

Operation and maintenance contracts. These contracts typically involve the operation of public assets by a private partner. The private partner receives a management fee based on performance and, in some cases, a profit-sharing incentive. In the solid waste management sector in the Pacific, management contracts are currently in place for the operation and maintenance of landfill facilities.

Build-operate-transfer contracts. These involve significant investment by the private partner, who constructs and operates the infrastructure required to provide the service. Contract periods can be for as long as 30 years, allowing sufficient time for the private operator to earn a fair return on investment. Many power plants, including waste-to-energy facilities, have been built using this PPP structure, with the public sector signing an offtake agreement with the private operator.

Concessions. These are the most complex PPPs. They involve the rehabilitation and expansion of an existing asset as well as its operation over time, under an exclusive license. Concessions require careful structuring and monitoring if the public good is to be protected, and for the PPP to deliver the appropriate value for money.

Forms of Public-Private Partnership Contracts



BOT = build-operate-transfer, DBOT = design-build-operate-transfer, O&M = operation and maintenance.
Source: Pacific Private Sector Development Initiative.

* These case studies were prepared by the Pacific Private Sector Development Initiative, following input from the Pacific Region Infrastructure Facility and its Urban Development Sector Working Group.



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Pacific Private Sector
Development Initiative
Level 20, 45 Clarence Street
Sydney 2000 Australia
Tel: +61 2 8270 9444
E-mail: psdi@adb.org
www.adbpsdi.org
@ADB_Sydney_PSDI
www.facebook.com/adbpsdi