investment; d) a fixed cost for operations; e) a variable cost of operation per m^3 of drinking water; and f) the monthly volume in cubic meters of drinking water measured as it exits the plant.[46] The plant started operations in June 2018.[47]

Lessons Learned

This project shows how different financing options can be successfully blended in one project. In this case, the project was able to mobilize several different financing sources under the State Development Plan, which sets guidelines for properly managing resources available through different financing sources for water investment programs. As a result, the public authorities were able to combine and leverage a combination of resources available at the federal and state levels as well as from international financing institutions, to optimize their application.

22. Challenging Case: The Dar Es Salaam Water and Sewerage Authority (DAWASA), Dar es Salaam, Tanzania

Photo Credit[48]

Background

Dar es Salaam is Tanzania's former capital and largest city. Before this project, the city's water and sewerage infrastructure, built in the 1970s, was in poor condition, even posing significant potential health hazards. In 1997 the government established the Dar es Salaam Water and Sewerage Authority (DAWASA) to develop and operate the city's water infrastructure. However, it failed to provide much improvement to the city's water and sewerage system. Leakage and illegal connections contributed to around a 50 percent loss of the water produced. Equipment was outdated and the billing and collection system was extremely inefficient. Filters and sewage pumping stations were out of operation, resulting in partial treatment of water and significant pollution of the coastline. Revamping the entire system would require a considerable amount of money.

In 2002, the International Monetary Fund (IMF) and the World Bank offered debt relief assistance to Tanzania under the condition that the Government of Tanzania privatize its SOEs, including DAWASA. The government agreed.

Project Structure

Following a recommendation by the IMF, the government invested around USD 145 million to upgrade DAWASA before selling the company. Multilateral donors provided loans to the Tanzanian government to finance the project. The African Development Bank (AfDB) provided a loan of about USD 47 million, while the World Bank, the European Investment Bank, and Agence Française de Développement (AFD) provided a total of USD 98 million in financing. The World Bank also contributed another USD 61.5 million for restructuring DAWASA.

The project underwent six years of negotiations with private companies and several bidding processes. Initially, there were four private companies interested in the project, namely Northumbrian Water Group, Saur Internationale, Vivendi Environment (also known as Veolia Environment), and Biwater Gauff Tanzania Limited (BGT). However, three of the four companies pulled out due to concern over the high level of risk transferred to the operator. BGT (a joint venture between United Kingdom-based Biwater International and a German engineering firm, HP Gauff Ingenieure) then became the sole bidder, though it never fully satisfied the qualification criteria. As a result, BGT won the bid with no-objection from the World Bank as the transaction advisor.

Following the award, BGT created an operating company called City Water Services Limited (CWS) in partnership with a local investor, Super Doll Trailer Manufacture Company Limited (STM). BGT owned 51 percent (the minimum required by the winning bidder) of the shares in CWS and

[46] Campos, Maria. 2013. "Prestación de servicios públicos municipales en asociación públicoprivada: El caso de la Planta Desaladora en Ensenada, Baja California." CCA. Accessed May 25, 2019. http://www.cca.org.mx/ps/funcionarios/muniapp/descargas/Documentos_de_apoyo/informaciontematica/capp/Caso_PlantaDesaladora_Ensenada.pdf;

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[47] NADB. n.d. "Investing in the People & Environment of the U.S.- Mexico Border." NADB. Accessed April 5, 2019. http://www.nadb.org/Reports1/Press_Releases/spanish/2018/110618.pdf.

[48] Photo Credit: Roland (https://commons.wikimedia.org/wiki/File:Dar_es_Salaam_aerial.jpg), „Dar es Salaam aerial", https://creativecommons.org/licenses/by-sa/2.0/legalcode

STM owned 49 percent. Subsequently, CWS operated under a lease contract with DAWASA to provide water supply and sewerage services in Dar es Salaam for ten years. DAWASA was also responsible for funding and implementing capital investments. The project was primarily financed through external loans, with CWS providing USD 8.5 million in equity.

Under the contract, CWS was responsible for: (i) increasing revenue (doubling monthly collections within 12 months); (ii) identifying and regularizing unregistered connections; (iii) introducing a new billing system; (iv) renovating the city's water and sewerage infrastructure; and (v) reducing water loses from an estimated 70 percent to 44 percent in the first three years.

After it took over operations in August 2003, however, CWS faced numerous challenges. These challenges included failures by CWS shareholders to provide their agreed equity contributions; below forecast average monthly collections in 2004/05 (only 52 percent, less than that achieved by DAWASA in 2002/03); very low new water meter installation rates (only 2,500 out of the 170,000 water meters required); and launch of a billing software system, which proved inadequate. CWS also inherited many disputed and unverifiable connections, including the army camps' water connection. CWS had to disconnect the army camps' water supply due to an unpaid bill of over TZS 200 million (USD 172,000), leading to a backlash from the Tanzanian soldiers. CWS also retained approximately 1,400 DAWASA employees but had limited mechanisms and incentives to change the company culture or improve their performance.

These challenges crippled the finances of CWS. It failed to pay a regular rental fee to DAWASA and to deposit First Time Connection Tariffs into the account of that program. CWS also periodically withheld tariff collections from landlords to cover its operating costs. By March 2005, its accumulated losses were nearing USD 12.3 million.

Subsequently, CWS tried to renegotiate the contract with the government, including through the involvement of a mediator, but the parties failed to reach a consensus. In May 2005 DAWASA delivered notice to terminate the contract, which was opposed by CWS. This stalemate, coupled with the declining public support for privatization and an upcoming election, prompted the Minister of Water to intervene. Within the first 18 months of the contract period, the Tanzanian government deported the expatriate managers of CWS and the contract was subsequently terminated.

Lessons Learned

In August 2005, CWS brought the case to two different international arbitration tribunals in parallel, namely the ICSID Tribunal and UNCITRAL Tribunal. The former found that the Government of Tanzania did violate some treaty obligations, but the breaches did not cause CWS any losses. Therefore, CWS was not awarded any compensation. The UNCITRAL Tribunal rejected CWS' claims and instead awarded approximately USD 3.8 million in damages to DAWASA.

In June 2005, a public corporation called Dar es Salaam Water and Sewerage Company (DAWASCO) replaced CWS. DAWASCO also faced the same challenges as CWS but, over the next five years, operational performance improved. In 2018, DAWASA was merged with DAWASCO with the aim of providing better services to the citizens of Dar es Salaam.[49]

This project highlights the following:

- An appropriate allocation of risks is a key factor in the design of a successful PPP. In this case, significant risks were transferred to the private operator, although the sole bidder never fully met the qualification criteria. On taking control of the operations, the private partner had difficulty managing an already very precarious operating environment.
- Both parties should conduct robust due diligence before entering into a PPP. In this case, the private operator seemingly relied solely on the information set forth in the tender documents regarding the status of the water infrastructure that would be transferred from DAWASA. Had it independently verified the data, it may have learned beforehand that some of the information in the tender documents was inaccurate and adjusted its plans accordingly.
- It is important to understand the operating context and adjust the PPP's objectives to reflect the actual circumstances on the ground. In this case, the private operator had difficulty curtailing illegitimate water connections and seeking redress when customers refused to pay water bills, in part due to inadequate legal mechanisms for enforcement. Nonetheless, the PPP agreement set ambitious targets for regularizing connections and increasing collections within relatively short timeframes.

[49] African Development Bank. 2010. *Dar es Salaam Water Supply and Sanitation Project – Project Completion Report.* African Development Bank Group. Accessed December 3, 2019. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Tanzania_-_PCR-Dar_es_Salaam_Water_Supply_and_Sanitation_.pdf;

Biwater Gauff (Tanzania) Ltd. v. United Republic of Tanzania, ICSID Case No. ARB/05/22. Accessed December 3, 2019. https://www.iisd.org/itn/2018/10/18/biwater-v-tanzania/;

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