

Banco Mundial publica su experiencia sobre colaboración público-privada para mejorar saneamiento en Guayaquil

Oportunidades e impacto para el sector de agua, saneamiento e infraestructura:

El Banco Mundial publicó la semana pasada un resumen sobre la experiencia de la colaboración público privada en Guayaquil para mejorar el acceso a 2 millones de habitantes a los servicios de saneamiento, reducir la contaminación ambiental y mitigar los riesgos de cambio climático.

Con el financiamiento del Banco para la Reconstrucción y Desarrollo (IBRD) y del Banco Europeo de Inversión (BEI), la Empresa Municipal de Agua Potable y Alcantarillado de Guayaquil (EMAPAG EP) contrató con el sector privado la ejecución de este proyecto de infraestructura para tratar el 100% de las aguas residuales domésticas del sur y noreste de la ciudad.

El alcance de los trabajos abarcan: la construcción de las Plantas de Tratamiento de Aguas Residuales (PTAR) de Las Esclusas y Los Merinos que incluye un sistema de cogeneración para abastecer el 35% de su demanda energética, se contempla la instalación de 35,000 conexiones intradomiciliarias, la rehabilitación de redes de alcantarillado con tecnología como las excavaciones sin zanja que minimizan la rotura de pavimento y afectación de tráfico y a los negocios reduciendo los costos y tiempos de ejecución, robots con cámaras de circuito cerrado para diagnóstico de redes y curado en sitio de las tuberías.

Según el Banco Mundial, la Estación de Bombeo La Pradera tiene un avance físico de 93%, la PTAR de Las Esclusas un avance de 48% y la rehabilitación de la red de alcantarillado de La Chala un 90% con corte a julio de 2019.

El monto financiado por el IBRD asciende a \$336.1 millones y cuenta con garantía soberana emitida por el Gobierno de Ecuador.

El BEI y EMAPAG aportaron con \$102.5 millones y \$16.4 millones y se prevé que la PTAR Las Esclusas entre en operación en septiembre de 2021 mientras que la PTAR Los Merinos a fines de 2023.

Improved wastewater management and equitable access to sanitation services in Guayaquil

Building on Guayaquil's experience with public private partnerships (PPP), the World Bank Group through financing from the International Bank for Reconstruction and Development (IBRD) is supporting national efforts to increase access to improved sanitation services and to reduce wastewater pollution. Supporting the introduction of innovative technology and high environmental standards, the WBG-supported Project will contribute to achieving universal access to piped sanitation services and ensure that wastewater is adequately treated in the largest city of Ecuador. It includes infrastructure investments to ensure adequate treatment of wastewaters generated by close to 2 million people living in Guayaquil. As of July 2019, 8,166 residents have directly benefitted from the Project and 39,197 people in urban areas have been provided with access to improved sanitation services under the Project.

Challenge

Ecuador's 2016 national sectoral strategy established that universal and equitable access to potable Water and Sanitation Services (WSS) should be reached by 2030. Guayaquil concentrates the largest population and business activities of Ecuador. However, seven of every ten people have access to contaminated drinking water and 12% of households in the southern (and poorest) area of the city, lack piped sewerage. Wastewaters with high organic loads from more than 80% of industrial companies are discharged untreated into the sewage networks, or to rivers. The soil in the areas where two new wastewater treatment plants (WWTP) will be built, is formed by a mixture of clay and sand, which in addition to generating settling issues, require a vibro-substitution method with tamping to minimize liquefaction problems. An environmentally adequate treatment of wastewater generated in Guayaquil's basins, is fundamental to reduce health problems from contamination and pollution among the most vulnerable, as well as to mitigate climate change risks.

Approach

IBRD provides technical and financial support to enable sustainable wastewater management in Guayaquil. Along with the European Investment Bank (EIB) and Guayaquil's Municipal Water and Sewage Company (EMAPAG EP), the IBRD financing is focused on providing the infrastructure required to treat 100 percent of domestic wastewaters collected in the southern and northeastern wastewater basins of the city of Guayaquil. This includes improving and completing two full sanitation service chains, i.e. installing more than 35,000 new intra-household sanitary connections; improvements in the sewerage networks, and the construction of the Los Merinos and Las Esclusas WWTPs. Both WWTPs incorporate a cogeneration facility transforming biogas derived from sewage sludge digestion into electricity, with the potential to generate up to 35% of their energy needs. Using innovative methods and technologies, this Project builds on the efficiency gains brought by the PPP, while minimizing disruptions and negative environmental impacts. One of the technical innovations brought into the Project design is the use of innovative and cost-efficient methods such as closed-circuit television (CCTV) technology and robotic

equipment in the rehabilitation of the sewerage system, which helped minimized social and environmental impacts during works. Video camera inspections and trenchless rehabilitation works generated minimal disruptions on surrounding communities, surface traffic and business activities while increasing safety and reducing costs and execution time.

Results

As of July 2019, 8,166 residents have directly benefitted and 39,197 people in urban areas have been provided with access to improved sanitation services under the Project. As of July 2019, the La Pradera pumping station showed 93% of physical progress, the Las Esclusas WWTP showed 48% of physical progress, and the La Chala sewerage network rehabilitation works were 90% completed.

Bank Group Contribution

IBRD financing includes an original loan of US\$102.5 million and an additional financing of US\$233.6 million, for a total of US\$336.1 million. As of September 2, 2019, 25.37% of IBRD funding had been disbursed. The Project has a National Sovereign Guarantee.

Partners

The Project was requested by Guayaquil Municipality and the loan has a national Sovereign Guarantee from the Government of Ecuador. It is financed with parallel co-financing from the European Investment Bank (EIB: US\$102.5 million) and Guayaquil's Municipal Water and Sewage Company (EMAPAG EP: US\$16.4 million) and is expected to be implemented until 2023. More specifically, the construction of the La Pradera force main is fully financed by the EIB, and the construction of the Las Esclusas WWTP is co-financed by the EIB and IBRD.

Moving Forward

The Project will serve to achieve universal access to piped sanitation services for close to 2 million people in the southern and northeastern wastewater catch basins of the city; and ensure that 100 percent of the wastewater generated in these basins is treated as per applicable environmental standards. The Las Esclusas WWTP is expected to start operations by September 2021 and to provide services to about a million people living in the city's southern area. In addition, the Los Merinos WWTP expected to come into operation by the end of 2023, providing services to an additional million residents of the city's northeastern area.

In the near future, the WBG will continue to support the city's efforts to improve institutional capacity to reduce water pollution and increase equitable access in Guayaquil's more vulnerable areas. In line with the recently approved Country Partnership Framework for FY19-23 (approved on June 11, 2019), the WB's program will aim at boosting the financial and environmental sustainability of water supply and sanitation services

Beneficiaries

Works are still under construction.





Fuente: [The World Bank](#), 15-octubre-2019.