ADB

28th Conference of the Parties of the UNFCCC (COP 28)

10 December 2023 | Asian Development Bank

Initiatives to Decarbonize the water sector

Decarbonizing the Water Sector in Asia and the Pacific

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Viet Nam: Low Carbon Agricultural Support Project

45406

A boom in livestock production resulting in the **rise of untreated rural waste**, which has serious consequences for health and the environment

The initiative

An estimated $74M via the **Low Carbon Agricultural Support Project** for:

- 36,000 small, medium and large-sized **biogas plants**
- Process waste into biogas and a **clean organic fertilizer**
- **Credit lines** through financial intermediaries
- Incentives to biogas stakeholders for the **development of carbon markets**
- Aid government efforts to access markets for carbon credits
- **Awareness raising** about environmentally-safe, climate-friendly waste management practices

Expected outcomes

- New supplies of clean energy
- Prevention of disease outbreaks
- Reduced carbon dioxide equivalent emissions of 150,000 tons annually.
- Lower energy costs for farmers & Boost household incomes (15%/y)
- Increase in organic fertilizer use

Kiribati: South Tarawa Water Supply Project

49453

- The underground freshwater lenses for the water supply are threatened
- Daily pumping of water will result in 3,914 tons of CO2 emissions over 20 years
- The use of kerosene to boil water for human consumption will result in 107,409 tons of CO2 emissions between 2018 and 2041.

The initiative

An estimated $62M project* :

- A 6,000 cubic-meter-per-day **reverse osmosis seawater desalination plant**
- Improvement of the **reticulated water network** to reduce leakages and ensure access to the new clean-water source
- **A photovoltaic power plant** to offset the GHG emissions from the desalination plant and the increased water treatment and distribution

Expected outcomes

- The entire population of Tarawa (circa 53% of Kiribati) will benefit directly
- CO2 emissions are expected to decrease by 111,323 metric tons over the 20-year period as water pumping is reduced and the country moves away from diesel generation

Solutions being developed under this project for Kiribati should be applicable and replicable to almost all remote atolls throughout the world

**ADB $13.0 M GCF $28.6 M (Grant) World Bank $13.0 M Government $7.2 M*

The Challenge: Energy reduction

The increase in service coverage ➔ additional investments required by water utility operators ➔ increased energy demand in their operations

- Countries in Asia and the Pacific generate approximately 40% of the world's greenhouse gas (GHG) emissions
- Energy management to be incorporated into the designs of urban water supply and wastewater utility investments

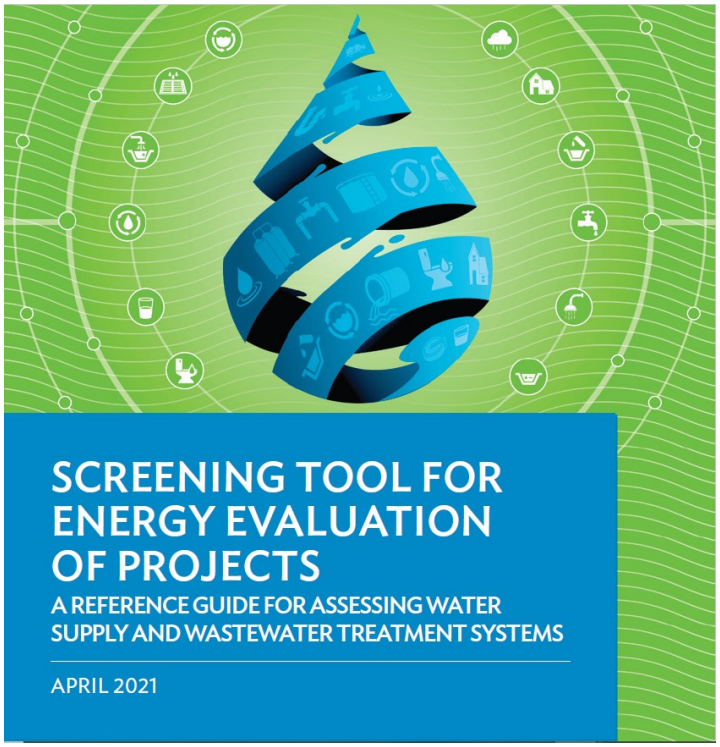
The initiative

Screening Tool for Energy Evaluation of Projects (STEEP):

- A free Excel-based reference guide to make system assessments and identify potential areas for energy use savings in existing or planned water supply and wastewater facility projects
- Easy to use step by step for significant savings
- Pilot projects implemented to improve the tool
- Evaluation of Projects (STEEP): https://www.livablecities.info/steep

Expected outcomes

- The potential energy savings can range from 20% to 80%, depending on the type and stage of project implementation
- Reducing GHG in the water sector (WSS) through energy savings



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