Climate action in urban water services

WaCCliM: working for a resilient and low-carbon, low-energy water sector

Water and wastewater systems emit significant amounts of CO2 and other greenhouse gases. The water sector can make a major contribution to meeting the COP21 Paris Agreement to limit global warming to well below 2°C.

Water sector contribution to global and local Greenhouse Gas emissions

Globally
The water sector contributes 3% of the total global emissions, however...
A carbon neutral water sector would contribute over 20% of all Nationally Determined Contributions (NDCs).

Locally
The water sector contributes 10 - 20% of total emissions from

- Energy
- Methane & Nitrous Oxide

The water sector can help achieve the 2°C target

Carbon accounting in the water sector

Water sector emissions are typically assessed in a fragmented way under different urban sectors. WaCCliM provides specific carbon accounting for the urban water sector.

Water utilities working with WaCCliM are becoming sector leaders, and are seizing the opportunity to become more efficient and effective in an uncertain future.

The path to a carbon neutral urban water sector

- Invest wisely the 10 Trillion dollars planned for water infrastructures by 2030
- Untreated sewage discharged
- Adequate sludge management
- Energy wastage
- Water losses
- Organic waste recovery

These climate actions also contributes to improving human and environmental health.

Up to 30% CO2e reduction potentials identified in WaCCliM pilot utilities by 2018
Anticipated reductions at WaCCliM pilots by 2018

Mexico: 12% GHG reduction from water systems 20% GHG reduction from wastewater systems

Peru: 30% GHG reduction from water systems 10% GHG reduction from wastewater systems

Thailand: 10% GHG reduction from wastewater systems

Jordan: Just starting the WaCCliM programme

“WaCCliM helps utilities to contribute to national carbon reduction targets agreed to under the Nationally Determined Contributions”

The WaCCliM Roadmap

WaCCliM offers utilities a roadmap to carbon neutrality, guiding utilities to increase awareness, assess their situation, identify measures to be implemented via adequate financing and monitor progress. The Energy Performance and Carbon and Monitoring (ECAM) Tool is a cornerstone to the roadmap. ECAM benchmarks the energy used or produced to highlight savings opportunities, and presents the utility with a holistic overview of its carbon emissions.
Mexico, the national challenge

Mexico was seen as a leader during the Paris COP21 negotiations, even though it is responsible for less than 2% of global GHG emissions. It has committed ambitiously to reducing 25% of its greenhouse gas emissions by 2030, with the potential to raise the target up to 40%. It is a signatory to the Paris Pact on Water and Adaptation to Climate Change.

In Mexico, water utilities have a difficult task meeting user’s demands. Low tariffs, high water consumption, and a complicated legal framework have led to unsustainable water abstraction, high energy costs, high water loss, and inadequate wastewater treatment, which contribute to very high GHG emissions. Climate change will exacerbate current conditions.

Reducing greenhouse gas emissions from urban water services: a significant contribution to Mexico’s carbon targets

Mexico’s water sector contributes significantly to its overall greenhouse gas emissions. Taken together drinking water and wastewater contribute 13.8% of Mexico’s total GHG emissions.

- **6.8%**: WASTEWATER contributes 6.8% of total GHG emissions in Mexico, including industrial water.
- **7%**: WATER SUPPLY, including household water heating, contributes up to 7% of all GHG emissions in Mexico.
WaCCliM in Mexico

The WaCCliM pilot utilities in San Francisco del Rincón are already pioneering the way in sustainable, low-carbon, urban water management.

The WaCCliM pilot has assisted the two utilities to assess their current situation and identify significant measures to reduce emissions by over 12% on water supply and 20% on wastewater in addition to the 30% reduction associated to increasing wastewater coverage.

This includes greater treatment of wastewater, energy produced from biogas and energy savings. Further promising energy saving measures are being investigated for both drinking water and wastewater systems to reduce both GHG emissions and operating costs.

Utilities SAPAF and SITRATA serve a population of 158,000. Some 95% of whom are connected to the water supply, 81% have wastewater collection coverage, and just last year wastewater treatment coverage increased from 48% to 81%. This resulted in an immediate 30% reduction in emissions per person.

Energy costs make up 22% of total running costs. This presents a financial driver for further reducing GHG emissions and operating costs, improving services, and increasing wastewater treatment.

**Call to action**

At scale, WaCCliM can help drive climate action in urban water services by decreasing greenhouse gas emissions and increasing energy savings.

Join us and support the WaCCliM roadmap for low energy, low carbon utilities.

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