

## Climate action in urban water services

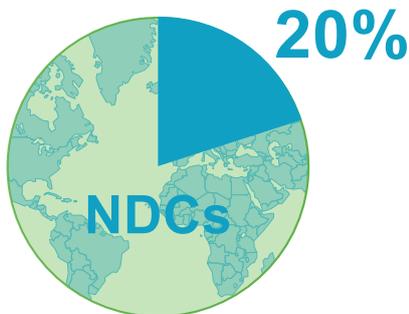
### WaCCliM: working for a resilient and low-carbon, low-energy water sector

Water and wastewater systems emit significant amounts of CO<sub>2</sub> 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).



The 4 Gigatons CO<sub>2</sub>e of NDCs is not sufficient to meet the target. All sectors need to do more than what is being committed.

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.**

#### Locally



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



Energy



Methane & Nitrous Oxide

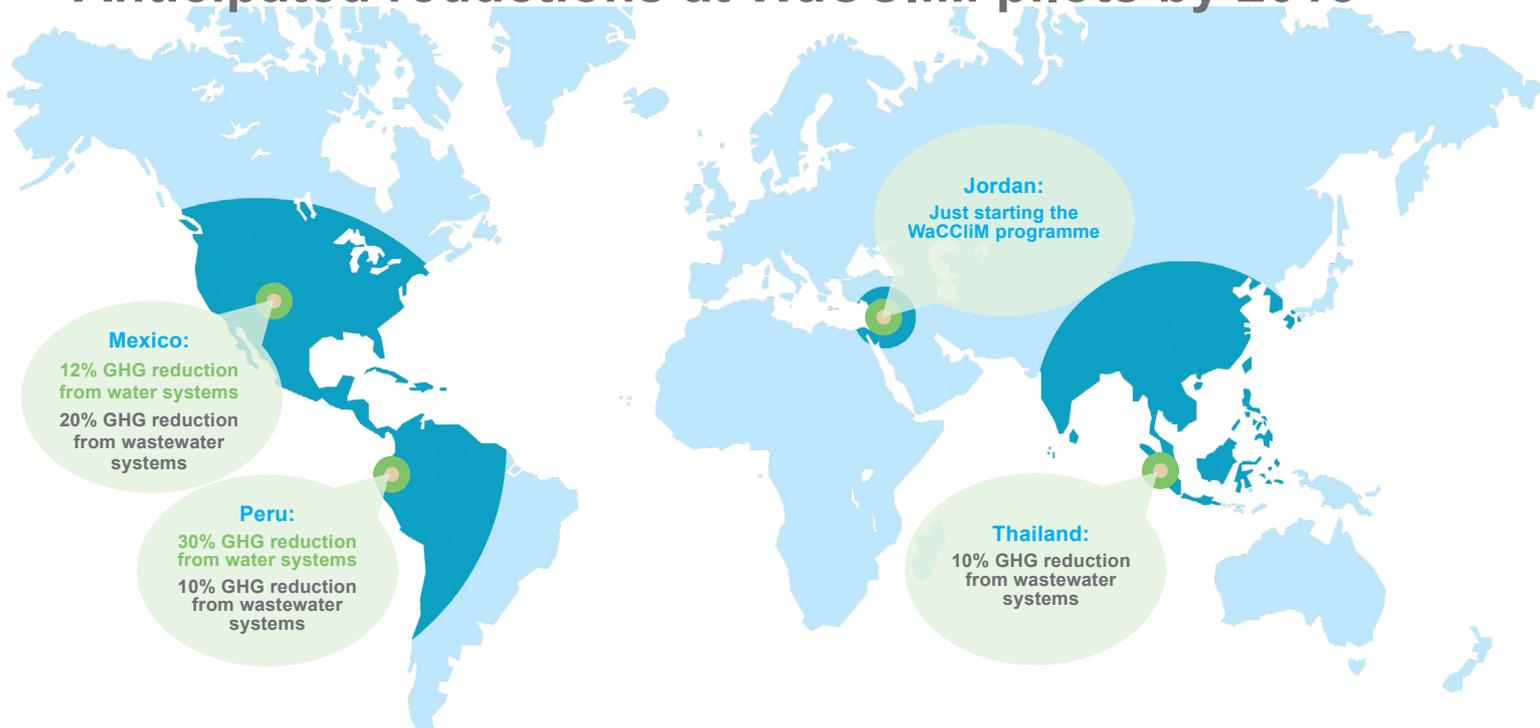
### The path to a carbon neutral urban water sector

- 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% CO<sub>2</sub>e reduction potentials identified in WaCCliM pilot utilities by 2018**

# Anticipated reductions at WaCCliM pilots by 2018



Pilot water and wastewater utilities are pioneering the way for others to adopt the WaCCliM roadmap in their countries and beyond

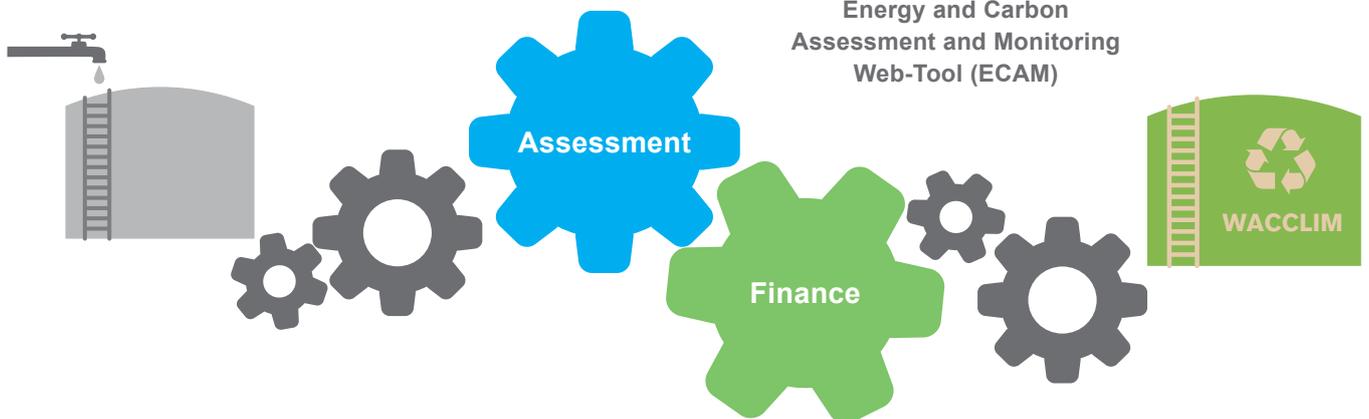
**“WaCCliM helps utilities to contribute to national carbon reduction targets agreed to under the Nationally Determined Contributions”**

## 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.



Energy and Carbon Assessment and Monitoring Web-Tool (ECAM)

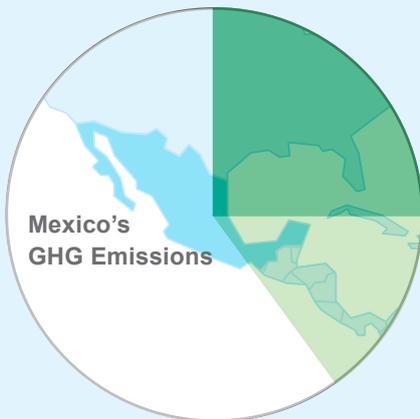


# Mexico, the national challenge

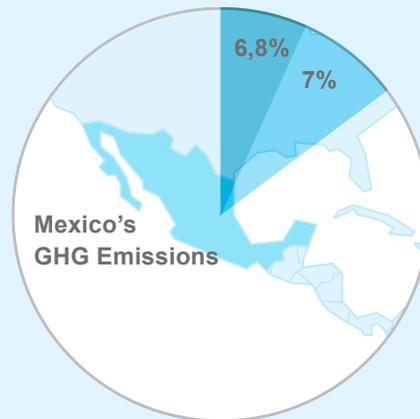
Mexico was seen as a leader during the Paris COP21 negotiations, even though it is responsible for less than 2% of global GHG emissions. It has committed ambitiously to reducing 25% of its greenhouse gas emissions by 2030, with the potential to raise the target up to 40%. It is a signatory to the Paris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

## Mexico is the 14th largest GHG contributor and leading the way towards progressive climate action.



Mexico is committed to a 25% reduction of GHG emissions, potentially rising to 40%



**13.8%**  
from water

The Water sector contributes 13.8% to Mexico's GHG emissions. (Including industrial water. Not including bottled water related emissions)

## 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

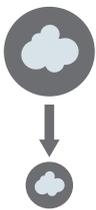
The WaCCLiM pilot utilities in San Francisco del Rincón are already pioneering the way in sustainable, low-carbon, urban water management.

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.



**GHG emissions reduced by more than 40% per person**

Equivalent to 2,200 ton CO<sub>2</sub>e / year



**Increased energy generation by 40,000 kWh in 2015**

Equivalent to the power for 24 homes



**Reduce energy use by 20% with proposed measures**

## 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.**

## Contact

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**giz** Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

On behalf of:

 Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

**IWA**  
the international water association

of the Federal Republic of Germany