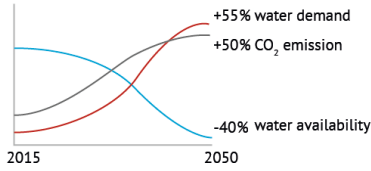


# Linking Water and Climate: Greenhouse Gas Reductions in the Water Sector

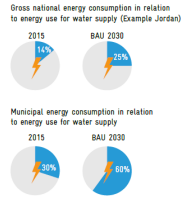
## THE CHALLENGE

Limiting climate change to 1.5° C requires substantial reductions in greenhouse gas emissions (GHGs) in all sectors. The urban water sector shows under-recognized opportunities to reduce carbon emissions, mitigate climate change and contribute to the successful implementation of the Paris Agreement through increasing the Nationally Determined Contributions (NDCs) of supporting countries.

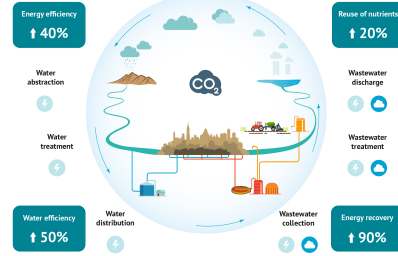
### Rising Water Demand & Decreasing Water Availability



The water sector is energy intensive in water stressed countries



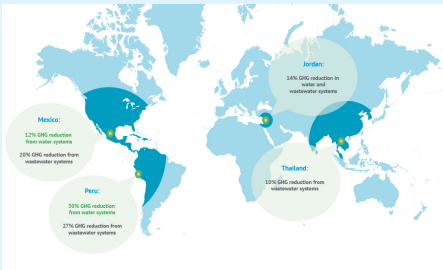
Global demand for water will increase by 55% by 2050, while water availability will decrease by 40%. While the water sector has to cope with the impacts of climate change, it also contributes to 3-5% of global CO<sub>2</sub>e from energy consumption as well as methane and nitrous oxides emissions from wastewater treatment processes. If no appropriate measures are implemented, emissions could increase by at least 50%.



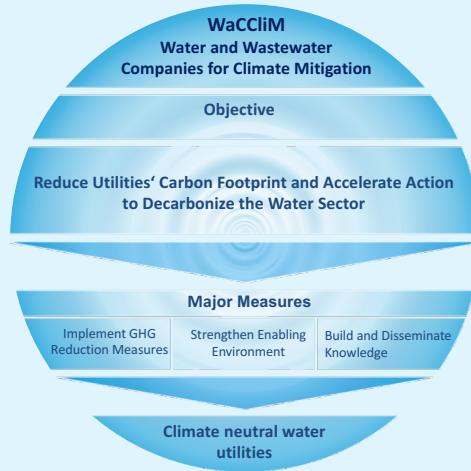
### Urban water cycle and mitigation measures

The project uses a circular perspective on water management and considers all components of the urban water cycle from water supply, wastewater to reuse of water.

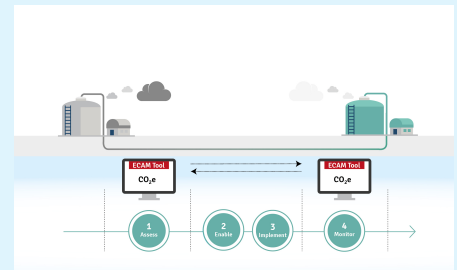
## WHERE ARE WE WORKING?



WaCCliM is pioneering GHG reductions in the water sector in Mexico, Thailand, Peru and Jordan. The programme offers utilities a roadmap to achieve energy and carbon neutrality.



## WaCCliM ROADMAP



The Energy Carbon performance and carbon emissions Assessment and Monitoring Tool (ECAM Tool), a carbon footprint tool for water and wastewater utilities is a cornerstone to the roadmap. ECAM helps utilities understand their energy usage and total GHG emissions at system-wide level (water supply and wastewater).

## THE IMPACT

A carbon neutral urban water sector would contribute up to 20 percent of the 4 Gt CO<sub>2</sub>e of the NDCs being committed by countries. This carbon reduction contribution can be put into motion through working with utilities in emerging economies, where emissions are the highest due to a large portion of untreated or poorly treated sewage, as well as poorly managed sewage sludge. Based on GHG emission reduction and cost effectiveness measures were prioritized that can lead to a total of ~ 10,000 t CO<sub>2</sub>e/a GHG reduction per year in the three cities.

MEXICO San Francisco del Rincon	PERU Cusco	THAILAND Chiang Mai	JORDAN Madaba
<p>GHG mitigation: 2,500 t/a Beneficiaries: 100,000</p>	<p>GHG mitigation: 5,300 t/a Beneficiaries: 415,000</p>	<p>GHG mitigation: 400 t/a Beneficiaries: 100,000</p>	<p>GHG mitigation: 15% t/a Beneficiaries: 190,000</p>
<p><b>Benchmarking the Carbon footprint can become a powerful tool to enhance climate mitigation measures in the water sector</b></p>			
<p>Climate proofing utilities and advancing implementation of SDGs &amp; NDCs</p>			

## Our Partners