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World's first holistic tool to measure and report greenhouse gas emissions from urban water services launched

ECAM, a tool for the water sector to transition towards energy and carbon neutrality

The Energy Performance and Carbon Emissions Assessment and Monitoring (ECAM) tool enables water utilities to measure and manage their greenhouse gas (GHG) emissions and energy consumption at a system-wide level. By identifying areas to reduce GHG emissions, increase energy savings and improve overall efficiencies to reduce costs, ECAM offers a holistic approach for urban water utilities to shift to low energy, low carbon water management.

The water sector can make significant contributions to the Paris agreement target of keeping global temperature rise to well below 2°, and the respective Nationally Determined Contributions, although awareness of this opportunity is currently limited.

“The contribution of the water sector to greenhouse gas emissions is complex and therefore often under-recognised”, said Astrid Michels, Project Manager of the [Water and Wastewater Companies for Climate Mitigation \(WaCCliM\) project](#) that has developed the ECAM tool, “ECAM helps utilities develop an emissions baseline, identify areas of improvement to reduce indirect and direct emissions, and monitor progress over time.”

ECAM is a free and open source tool that has been successfully piloted by utilities in Jordan, Mexico, Peru and Thailand that participate in the WaCCliM project, to achieve dramatic reductions in GHG emissions:

San Francisco del Rincón, Mexico, has achieved almost a 50% reduction of its total GHG emissions compared to the baseline established with ECAM in 2014. This has been achieved through treating more wastewater to reduce methane emissions and improving pumping efficiency. Additional measures have been identified that would lead to a reduction of 65% in total emissions.

Cusco, Peru, has saved 5,300 t CO₂ emissions per year, representing 20% of its total carbon emissions. A total GHG reduction potential of 30% has been identified through greater pumping efficiency and wastewater reuse.

Chiang Mai, Thailand, has used ECAM to establish a baseline for municipal wastewater treatment and identify a 12% GHG reduction potential.

Madaba, Jordan joined WaCCliM in 2016 and is using ECAM to assess its carbon footprint to unlock financing for low carbon water and wastewater infrastructure to help meet its GHG reduction potential.

In addition to the pilots, utilities in over 20 cities have now used the ECAM tool to assess and drive GHG reductions. ECAM was recently endorsed by the C40 Cities Climate Leadership Group as a means to empower cities around the world to measure the emissions of their urban water, identify and plan reduction measures, and shift to a low-carbon, resilient future.

Ricardo Cepeda-Marquez, Head of the Water & Waste Initiative at C40 CITIES, said: “As cities and water utilities recognize the significant opportunities to reduce GHG emissions, improve service quality, water and energy efficiency in water supply and wastewater treatment, tools like ECAM are helping them to focus on the areas of largest potential impact and economic return. The C40 Cities organization looks forward to collaborate on the WaCCliM Project to increase the ambition of cities and water utilities to reduce emissions in the water sector and to contribute towards meeting the Paris Agreement targets.”

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Notes to Editors

ECAM is a free and open source tool developed by the [International Water Association](#) (IWA), the [Deutsche Gesellschaft für Internationale Zusammenarbeit](#) (GIZ) and the Catalan Institute for Water Research (ICRA).

ECAM is a central component of the WaCCliM project, part of the [International Climate Initiative](#). The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) supports this initiative on the basis of a decision adopted by the German Bundestag.

ECAM tool development was based on the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories methodology. It provides the opportunity to develop scenarios and model reduction impacts of future measures, as well as to monitor GHG reduction results after their implementation. It can help utilities prepare for future reporting needs on climate mitigation. ECAM also assists in linking Monitoring, Reporting and Verification of mitigation actions in the water sector to national level.

For further information please visit www.wacclim.org/ecam-tool/ or contact:

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