

Assessing Carbon Emissions and Energy Performance of Water and Wastewater Utilities



LINKING WATER AND CLIMATE GREENHOUSE GAS REDUCTIONS IN THE WATER SECTOR

The **E**nergy Performance and **C**arbon Emissions **A**ssessment and **M**onitoring (**ECAM**) Tool, enables utilities to quantify their Greenhouse Gas (GHG) emissions and contributions to Nationally Determined Contributions (NDCs) and offers solutions for reducing emissions from energy use and wastewater management.

What is the Background?

The water sector is increasingly impacted by climate change. At the same time, it contributes 3%-5% of global and up to 15% of local carbon emissions. Limiting climate change to 1.5°C requires substantial reductions in GHG emissions 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. It has the potential to become a leader in reducing GHG emissions through energy efficiency, renewable energy production and recovery of nutrients.

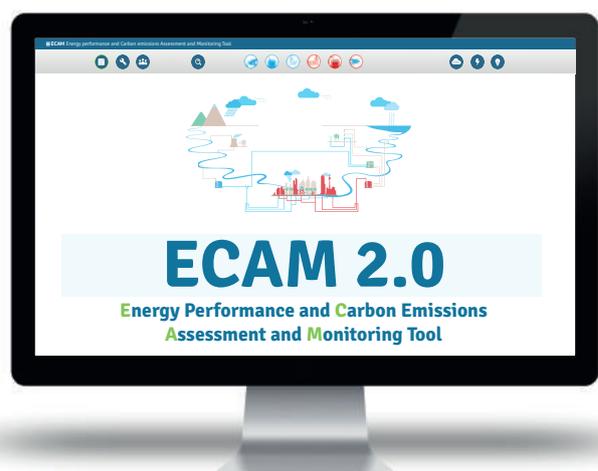
In order to enable water and wastewater utilities to take actions for climate change mitigation, the ECAM tool and accompanying trainings were developed.

What is the **ECAM** - Training about?

The ECAM-Training is a dynamic, interactive training concept and curriculum, available in English, French and Spanish. Its overall objective is to provide support that will enable water professionals to assess and monitor energy performance and carbon emissions within the water sector and receive an overview of the potentials and opportunities to reduce GHGs.

Specific learning objectives of the training are:

- Understand overall global climate change context and GHG emission sources within the urban water cycle.
- Apply web-based ECAM tool to assess and monitor baseline GHG emissions and identify opportunities for reduction.
- Understand and be able to explain to others the purpose and approach of the ECAM tool.



What are the ECAM - Training Modules?

The ECAM-Training is a modular concept: it comprises modules covering relevant areas for climate mitigation within the stages of the urban water cycle:

1. Introduction

2. Setting the Scene

3. Roadmap

4. ECAM Tool

5. Initial Assessment

6. Detailed Assessment

7. Sludge Management

8. Water Efficiency

9. Opportunities

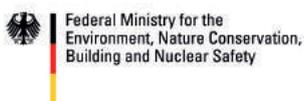
10. Bringing it all together

11. Wrap-Up and Closure

Each of the modules contains introductory presentations to familiarise participants with the topics. Interactive exercises allow for more focused examination and reflection on selected aspects of energy performance and carbon emissions assessment and monitoring.



On behalf of:



of the Federal Republic of Germany

Who should get involved?

The primary target group for ECAM-Training is the staff of water and wastewater utilities and other professionals working in the water sector. This may include:

- technical utility staff and managers
- regulators and prospective local decision-makers
- university researchers, practitioners (and future trainers)

In addition, decision-makers and staff from international institutions as well as other governmental or non-governmental bodies interested in climate mitigation, could also receive the training.

What Training Options are available?

Participants of the training do not need precognition. Based on a training needs assessment, the trainer will be able to adapt the ECAM-Training modules to address participants' specific needs.

Thanks to its modular design, the ECAM-Training can be structured according to specific requirements. Depending on the group and desired intensity of training and exercises, the following options are available:

- 0.5 days **executive level**
- 2-3 days **operational level**

Training Materials

Training material is available (free of costs) and can be accessed via www.wacclim.org. It consists of training manuals, presentation slides, ECAM files for exercises, solutions for exercises, background information and agendas.

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