

Climate Change – the ECAM Tool

Introduction:

The climate change table was moderated by Annel Michael Phiri (ZEMA), Kasenga Hara (NWASCO) and Nyonge Phiri (LWSC). The topic of the table were innovations in the water supply and sanitation sector, particularly a tool that is intended to be implemented in Lusaka, Zambia.

Greenhouse gas (GHG) emissions are driving climate change. Changes in our climate directly impact the availability and quality of water, creating unprecedented challenges for drinking water and wastewater utilities. Water utilities are also a source of global GHG emissions from energy consumption, as well as nitrous oxide and methane emissions in wastewater systems. Even though the WASH sector is not considered the most notorious emitter of GHGs, it is reported as being one of the most adversely affected, with a reduction in the water resources as being the most notable effect for countries like Zambia.

The ability of water utilities to take effective climate mitigation action by reducing their GHG emissions is complex. Among other aspects, it relies on an adapted policy framework that incentivises the utility, access to support, right competences to identify and implement improvements, etc. Additionally, having a simple and reliable GHG accounting makes it easier for drinking water and wastewater utilities to report on the progress towards carbon neutrality.¹

The Energy Performance and Carbon Emissions Assessment and Monitoring ([ECAM](#)) tool is a free web-based tool that is designed for assessing the carbon emissions that utilities can control within the urban water cycle and prepare these utilities for future reporting needs and mitigation action on climate change. The benefit of the tool is that it will help the sector to contribute to the national and overall picture of emission reduction and especially allow the utilities themselves to better understand their operational performance and identify their mitigation potential in order for them to make informed decisions on their actions to contribute to the overall emission reduction picture.

Link WG3 factsheet paper if ready in time

Summary of the discussion:

The sanitation sector in Zambia has the responsibility of reporting up to national level on their climate change contributions, in order to inform the IPCC at global level.

With the tool, there is a number of benefits, for the utilities as well as for the water and sanitation sector as a whole:

- **Operational costs reduction**, as the utilities are able to identify where the needs are
- Utilities are able to **benchmark** what these operations are and where the need for emission reduction is. If the utility is able to see from the various services (water supply, wastewater or faecal sludge) where the needs they will be able to decide where the emission reductions can happen and inform the operational adjustments.

¹ ECAM – Our Approach: <http://wacclim.org/our-approach/>

- **Attraction of international financing** for climate change adaptation/mitigation funds. The water and sanitation sector can contribute to climate mitigation and potentially mobilize climate financing (i.e., Green Climate Fund).
- Climate mitigation in the water and sanitation sector have far-reaching positive impacts in multiple sectors. **Cross-sector benefits** – the tool allows us to see what the emissions from the sanitation sector are that may contribute to the reduction of climate adverse impacts – in other sectors such as agriculture. If we are reducing our emissions, it automatically assists other sectors to be able to mitigate hazards that come with climate change. The water energy, agriculture, food nexus as offer awareness opportunity across sectors for example.
- **Waste to energy conversion**, value of faecal sludge and wastewater sector can be used to supply energy to the energy sector and inform cost reduction in energy use at household level. This can capture **private sector interest** (i.e. techno-alternative energy).

Identified challenges include

- The ECAM tool does not provide **emission reducing interventions** (expertise is needed in this).



Second round of Climate Change World Café Table (from left clockwise): Kapanda Kapanda (GIZ Zambia), Nyonge Phiri (LWSC), Kasenga Hara (NWASCO), Hanh Nguyen (East meets West Foundation Vietnam), Chaiwe Sanderse-Mushauko (GIZ Zambia), Webby M. Simwayi (ZEMA), Trevor Surr ridge (GIZ Zambia), Arne Panesar (SuSanA Secretariat).