

Project Aim

REHEATZ aims to improve the environmental and economic sustainability of food production in Zambia by identifying opportunities to recycle waste heat from wastewater.

We are developing waste heat recovery systems to take advantage of any identified opportunities so that the energy needs, carbon emissions and energy costs associated with water heating can be reduced.

This will contribute to the achievement of Sustainable Development Goal 13 (carbon emission reduction) and improve the sustainability and accessibility of food in Zambia.

To achieve this, we are:

Engaging with Zambian stakeholders from industry, government, and the community to determine their needs and vision around reducing fuel use and carbon emissions.

Assessing the potential for heat recovery in the Zambian food and beverage industry.

Co-Designing a solution with Zambian stakeholders that can recover waste heat at multiple locations and scales.

Implementing waste heat recovery technology at a pilot site in Zambia.

Project Team

Our research team consists of experts in heat recovery, organisation management, development geography, and food production.

We are interested to explore more opportunities to recover waste heat, if you want to get involved, please get in touch using the details below.

Contact Us

ReheatzSDG@gmail.com

[@ReheatzSDG](https://twitter.com/ReheatzSDG)

www.reheatz.ie

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An Roinn Gnóthaí Eachtracha
Department of Foreign Affairs



Recovering Embedded
Heat in Zambian food production

Kupezamo ubwino ndi phindu mukathumidwe pa
zakupanga zakudya m' mafakitoli m' Zambia

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



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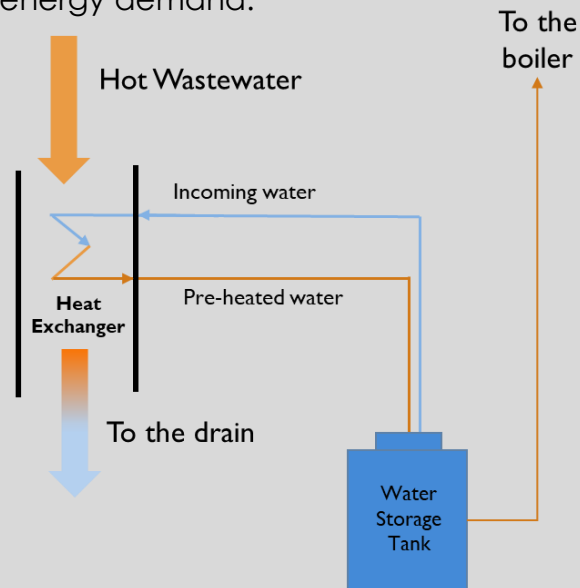


Waste Heat Goes Down the Drain!

There is often a significant quantity of heat left over in the wastewater generated by various processes during food production which use hot water. Instead of letting this heat go down the drain, we can recover it through various wastewater heat recovery processes. Recovering this heat can effectively offset heating requirements for water, reduce fuel expenses and shrink the carbon footprint.

How it works

Using novel heat exchangers, the embedded heat in wastewater is transferred to cooler incoming fresh water that is then stored in a water tank. When demands arise, this pre-heated water is sent to the boiler thus reducing the water-heating energy demand.



Assessments of the potential for heat recovery in the Zambian food and drink industry using background data gathering, site visits and monitoring have allowed us to identify significant energy resources as well as cost and CO₂ emission saving potential.

Pilot Site

This demonstration project at the facilities of Zambeef PLC is being used to demonstrate the potential of Waste Water Heat Recovery systems in Zambia. The pilot plant captures waste heat which is lost in wastewater discharges.

The pilot site will demonstrate the potential to reduce fuel consumption for water heating by up to 10% as well as reduce coal by up to 200 ton/y, and carbon emission by up to 294 ton/y.



If you feel your food or drink processing enterprise could benefit from this technology, we are available to carry out a complementary feasibility assessment. Opportunities for additional funded pilot plants may also be available.