



# Reducing Food Loss and Waste through Sustainable Cold Chains

# Food Waste & Cold Chains

---

- One third of food produced for human consumption, equivalent to 1.3 billion tonnes and valued at USD 990 billion, is lost or wasted each year, while near 821 million people are undernourished.
- Producing food that is lost/wasted requires significant resources, including water, land, energy, labor and capital, uses inputs such as fertilizers and pesticides, and generates **8% of global greenhouse gas emissions**
- The development of cold chain technologies is one opportunity to close the gap on food loss and carbon emissions, since spoilage could be avoided if proper refrigeration infrastructure were in place. However-- most cooling is currently energy-intensive and highly polluting with electricity wasted through the application of outdated technologies and approaches.

# SDG Target 12.3: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along the supply chains



# New UN Environment Assembly Resolution urges governments & stakeholders to:

- Set national strategies to reduce FLW in line with SDG 12.3, establish mechanisms for measurement, take appropriate measures for the reduction of FLW, including policy, education and awareness-raising, and promote broad-based dialogue and cooperation between private and public sectors across the whole value chain; and

Develop or share best practices on energy efficient cold chain solutions, sustainable cooling technologies, and food preservation innovations; promote applied research on the impacts of climate conditions on the production, storage and transport leading to FLW, including in high ambient temperature countries; and to engage industry in adopting energy efficient refrigeration and other cold chain solutions for SMEs, farmers and producers.



# How we envisage implementing the Resolution

UN Environment, in partnership with FAO, provides technical support on food loss and waste to governments, fosters regional and global cooperation, and facilitates the exchange of knowledge and best practices.

Ongoing and enhanced actions will include:

- Development of the Food Waste Index and support for measurement at country level
- Regional capacity building
- Awareness-raising & behavior change, while driving action in international initiatives such as Champions 12.3

New action under development

- Stakeholder/expert consultation, workshop and/or report on a Food Systems Approach to Sustainable Cold Chains, evaluating energy efficient cold chain solutions, sustainable cooling technologies, and food preservation innovations through a sustainable food systems lens, and providing recommendations.

# About the Cool Coalition



The Cool Coalition addresses a major ‘blind spot’ in the energy transition by creating a unified effort of governments, businesses and civil society on clean and efficient cooling. It takes a cross-sectoral approach to cooling systems, including building design, energy efficiency, cold chains, renewables and energy storage.

The Cool Coalition will combine the global resources of its co-leads and champions – UN Environment, Rwanda, Chile, Denmark, World Bank Group, Danfoss, ENGIE, Arcelik, IEA, K-CEP, SEforALL, CCAC, C40, RMI etc. – to support governments to develop comprehensive and cross-sectoral national cooling action plans, to be included in NDC enhancement, while, setting ambitious targets, tracking results and monitoring impact.

---

**EUREKA 2019**

---

Clementine O'Connor  
Programme Management Officer, Sustainable Food Systems  
UN Environment  
[clementine.oconnor@un.org](mailto:clementine.oconnor@un.org)