

Keeping our Planet Cool, Strengthening Food Security with Sustainable Cold Chains

44th Meeting of the Open-Ended Working Group of the Parties of the Montreal Protocol

KEY TAKEAWAYS

- **Lack of an effective cold chain is estimated to directly result in the loss of [526 million tonnes of food production or 13% of the global food supply](#). At the same time, refrigeration equipment used in the food cold chain is responsible for [1% of global GHG emissions](#).** If access to cold chain is not provided in a sustainable way, emissions will rise.
- **We need a more efficient, secure, and resilient food system worldwide.** Cold chains are a critical infrastructure impacting not only the agriculture but health, energy, and overall economic development. It is necessary to look at the water-energy-food nexus to deliver sustainable food cold chains.
- The COVID-19 pandemic has accentuated the need for vaccine refrigeration but also for science-based international cooperation that deliver **common ground for multilevel decision-making**.
- Developing sustainable cold chains is more than just procuring and installing solar cooling systems in farms or chillers using climate-friendly refrigerants at supermarkets. **Food must be kept at a certain temperature all the way from the farm to the domestic fridge**, and both the static and the mobile elements must work seamlessly together.



- **Creating a sustainable cold chain is a wicked problem with diverse drivers and barriers, all interconnected and different by country** – from post-harvesting inventory concerns to packaging and handling issues, from business models that underpin investments to rising temperatures.
- We need to **quantify and value the broader socio-economic impacts of sustainable cold chains** on communities. The report “**Sustainable food cold chains**” highlights the complexities of the food cold chain and explores how it can evolve in a sustainable way, especially economically and socially.
- Governments should work with industry to properly benchmark energy and greenhouse gas emissions savings from demonstration pilots. **This cannot be done without data.**
- **Digital twins are also key to testing projects’ resilience, through holistic system approaches.** They help envision future needs and make sure that systems designed today will also be reliable in 30-40 years.

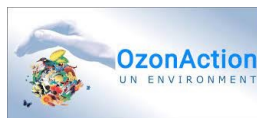
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- **When developing strategies to develop cold chains, it is essential that no one is left behind.** By expanding access to cold chains especially to women and girls, evaluating potential unintended consequences, implementing inclusive solutions at a local level.
- The Government's role consist of motivating users and pioneers to lead the change – showcasing case studies is a starting point, but also bringing together different players, **promoting collaboration and coordination.**
- **Phasing out high GWP refrigerants and increasing the efficiency of cooling equipment is a must.** This should be a priority policy action area for governments. But, at the same time, industry needs installers that can make sustainable cold chain systems run as they should and in a safe manner: **governments need to support trainings and upskilling of technicians.**
- **Efficient technologies exist,** but it is important to raise awareness around their benefits such as improving health and economic opportunities for individual farmers and the agricultural system. **Industry cannot make change to happen on its own,** it needs the help and vision of policymakers for this reality to come into place and push for market transformation.
- **Data is the starting point for investment in sustainable cold chain systems to happen.** Opportunities are there, but we need to demonstrate that it is safe to invest. For example, pilots can help demonstrate worthiness and attract financiers.
- Fundings must be directed towards farmers and shop owners in the form of **new business models.** These include Public Private Partnerships, Cooling as a Service, and cooperatives made of financial institutions, NGOs, and agribusiness - but not subsidies. Pilots are demonstrating technologies all the time, but what is interesting to prove is the **long-term economical, social, and environmental effectiveness of the business models that leverage them.**
- **Governments can actively pursue an integrated approach to overcome siloed approaches.** Policy strategies and plans need system-level thinking, through a multistakeholder and multisectoral approach, incentivizing clear communication at all stages.
- **National Cooling Action Plans** are a good starting point toward more comprehensive cooling and cold chain action.

For more information and to access the recording, **please visit** [the Cool Coalition website](https://www.coolcoalition.org/).



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