

How frozen food can help a warming planet







# **TODAY'S MODERATOR**



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# THREE DEGREES OF CHANGE

The role of food freezing in achieving a resilient, equitable and sustainable food system with minimum environmental impact

Opportunities and barriers to move to a -15°C cold chain

Is -18°C still relevant in today's food systems?

A collaborative work of the Centre for Sustainable Cooling (UoB), the International Institute of refrigeration (IIR), the African Centre of Excellence for Sustainable Cooling and Cold-chain (ACES) and LSBU:



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## THE THREE DEGREES: WHAT DOES THIS MEAN FOR ENERGY AND EMISSIONS?

Total energy consumption of the global frozen food cold chain estimated to be 484 TWh/yr.

Moving from -18°C to -15°C reduces energy consumption by **25 TWh/yr** and GHG emissions by **17 Mt CO<sub>2</sub>e/yr**.



25 TWh/yr is equivalent to twice the electricity consumption of Kenya

**11.4 GW is more than 70% of the UK total onshore capacity and would cost \$15 billion** 

# THE THREE DEGREES: WHAT DOES THIS MEAN FOR FOOD SAFETY AND QUALITY?

Moving to -15°C has NO impact on food safety!

At -12°C all microorganisms are inactivated.

Even if stored at -18°C, if food is not properly handled before freezing, -18°C will not guarantee quality

What happens before freezing is more important than what happens during freezing

Factors more important than temperatures: **Product, Processing** and **Packaging**, selection, antioxidants with preservation effect, blanching, rapid freezing, storage and distribution, packaging.

## MEMBER STATUS – ACROSS THE COLD CHAIN







**KUEHNE+NAGEL** 















## MOVING FORWARD WITH THE COALITION

#### MEMBERS RECRUITMENT

#### FASTTRACK APPROACH

## FOOD SAFETY REGULATIONS &







# **OUR INDUSTRY SPEAKERS**



## Thomas Eskesen

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### Raul Saca

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## Mathew Moore

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