Food Cold Chain

Overview

A high functioning, compliant cold chain is essential for reducing food waste and increasing the productivity of Australia's agri-food and fisheries sector.

It is, however, often overlooked given its ubiquitous nature, distributed ownership and shared responsibilities for product integrity. Studies by both international and Australian researchers detail the economic, social and environment benefits from both expanding the cold chain to foods not regularly refrigerated and improving the efficacy of our current systems.

The National Food Waste Strategy Baseline update (FIAL, 2021) found that 423,000 tonnes of food waste occurred in 'Distribution.' Since most of the commodities were 'fresh,' this reflects on the performance of the cold chain. Importantly this is an underestimate of the overall impacts of an ineffective cold chain, where food may be downgraded or wasted further along the supply chain in wholesale, retail or consumption stages as a result of temperature abuse during supply.
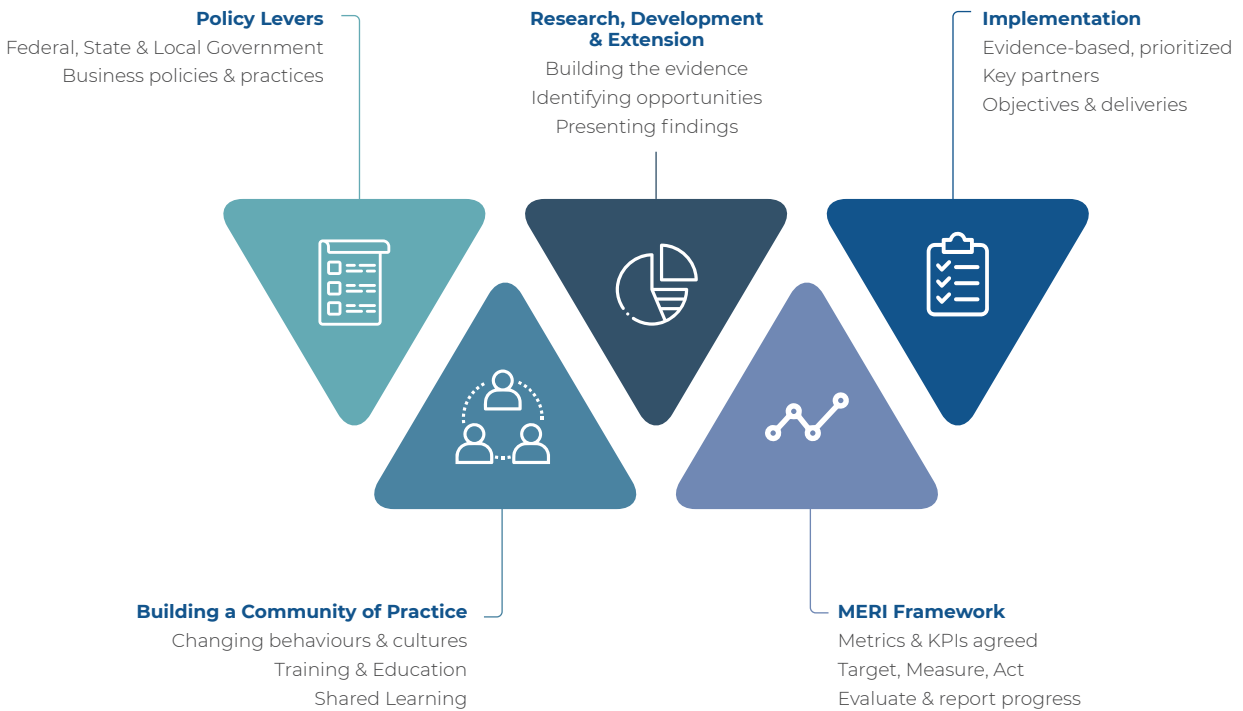
A key focus of this Sector Action Plan is raising awareness, developing skills and capacity building across the breadth of cold chain actors. Programs such as the Cold Food Code and SME Benchmarking initiatives provide a structured approach to improving the performance of the cold chain and reducing food waste. Working with the Voluntary Agreement Program of the Australian Food Pact and AusIndustry's Entrepreneurs Program provides clear pathways to reach industry stakeholders with a vested interest in ensuring the cold chain performs optimally.

Sector Action Plans

Sector Action Plans (SAPs) provide a structured approach to understanding and tackling food waste hotspots along the food supply chain.

While some SAPs will focus on a specific commodity such as dairy or meat, others will examine a supply chain stage such as Hospitality or Institutions. Two **cross cutting SAPs** have been developed for Food Rescue and **for the Food Cold Chain**.

While each SAP is co-designed by those actors most able to affect change in their sector, SAP initiatives for reducing the impacts of food loss and waste will generally fall under five pillars of activity:

Policy Levers
Federal, State & Local Government
Business policies & practices

Research, Development & Extension
Building the evidence
Identifying opportunities
Presenting findings

Implementation
Evidence-based, prioritized
Key partners
Objectives & deliveries

Building a Community of Practice
Changing behaviours & cultures
Training & Education
Shared Learning

MERI Framework
Metrics & KPIs agreed
Target, Measure, Act
Evaluate & report progress

Key SAP Outcomes for the Food Cold Chain

The co-design process for each SAP identifies key long-term outcomes to structure and guide development and priorities for the Plan.

Long-term outcomes from effective implementation of the Food Cold Chain SAP will be:

▶ Increased information on the size and location of food loss and temperature abuse, which reduces food quality and can lead to loss across the cold chain

▶ An ongoing understanding of the root causes of failures in the cold chain

▶ Increased compliance with best practice procedures in the cold chain

▶ Improved transparency of cold chain processes across the supply chain; including sharing data and coordinating responses amongst cold chain actors

▶ Improved coverage and operation of mobile and stationary refrigerated storage in the cold chain.

Food Cold Chain SAP Actions by Pillar:

▶ **Policy Levers:** Internationally Voluntary Agreements have proven powerful industry-led policy levers for food waste reduction. In August 2021 the **Australian Food Pact** was launched, providing scope for signatories to review and improve their cold chain management as part of their commitments. Applying the 'Target, Measure, Act' approach to audit performance and improve management, through continuous improvement of the cold chain will be a priority for signatories.

▶ **Research, Development and Extension:** While specific research needs such as real time monitoring and developing a cost benefit analysis for CAPEX and OPEX improvements across the cold chain have been identified, a clear priority is Extension through Education and Communication initiatives. The Australian Food Cold Chain Council (AFCCC) has developed a cold chain **Benchmarking tool for SME's**, implemented through AusIndustry's Entrepreneur Program and initial modules for a **Cold Food Code**, providing an overview and training on thermometers. The next priority module to be developed for the Code is Fresh Produce. Applying the Code with Pact signatories will extend its reach to improve the efficacy of the cold chain.

▶ **Communities of Practice:** Collaboration and engagement is being fostered through a stakeholder engagement plan for the Cold Food Code and hosting a **Cold Chain Summit**. The Summit will consider how well functioning cold chains can eliminate product damage in transit/handling - maximising product quality; inform vehicle load configurations; and support better management of ethylene, humidity control and mixed loads. The Summit will incorporate a Trade Show, Conference and Policy Workshops for equipment and transport companies, cold chain practitioners, food businesses, government officials and researchers.

▶ **Implementation:** Infrastructure, Resources and Technology: Applying the Code rigorously will improve operation of mobile and stationery cold chain machinery.

▶ **Monitoring, Evaluation, Reporting and Improvement (MERI):** The SFWA SAP MERI Framework has been applied to the Food Cold Chain SAP to identify initial priorities for data collection and reporting.

Initial priorities

Priorities for the first year of the SAP (2022) are:

▶ Continue Benchmarking with SMEs

▶ Develop Fresh Produce module of the Cold Food Code (for delivery through with Australian Food Pact signatories) and implement Engagement Strategy

▶ Seek Sponsorship and host the Cold Food Summit

▶ Develop workable approaches for data management.

For further information please contact:
enquiries@fightfoodwastecrc.com.au
or visit www.stopfoodwaste.com.au