



Tackling Food Loss and Waste (FLAW) in Asia-Pacific: Addressing Challenges and Policy Framework

This article explores the urgent challenge of food loss and waste (FLAW) in the Asia-Pacific region, highlighting its impacts on food security, environmental sustainability, and economic development. It outlines major strategies, including FAO's Five-Pillar Framework and the APEC-endorsed Trujillo Principles, while showcasing successful policies from countries like Japan, China, Australia, and India. The piece also discusses technological innovations, cold chain infrastructure, circular economy models, and community-driven initiatives aimed at reducing FLAW. By promoting regional cooperation, data-driven policies, and sustainable practices, the Asia-Pacific region can build a resilient, inclusive, and climate-smart food system by 2030.



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Background

Food loss and waste (FLAW) is a critical global issue seriously affecting the Asia-Pacific region, posing challenges to food security, environmental sustainability, and economic growth. FLAW refers to food that is lost during production and supply chain stages or wasted at retail, food service, and household levels. Globally, approximately one-third of all food produced—equivalent to 1.3 billion tonnes—is lost or wasted annually.

The Asia-Pacific region accounts for substantial levels of FLAW, ranging from 5–6% in Australia and New Zealand to 20–21% in Central and Southern Asia. In the region, the problem is particularly acute, with fruits and vegetables leading the losses at 45%, followed by fish and seafood (35%), cereals (30%), dairy products (20%), and meat and poultry (20%).

The consequences of FLAW are far-reaching. It depletes natural resources like water, energy, and land; contributes significantly to

greenhouse gas emissions; and undermines biodiversity. Moreover, FLAW exacerbates food insecurity in a region where millions face hunger and malnutrition. For instance, studies show that 29% of the global population is moderately or severely food insecure, while food waste continues to grow unchecked.



FAO's Five-Pillar Strategy for Addressing FLAW

The FAO's regional strategy, adopted in 2021, provides a blueprint for Member Nations:



1. AWARENESS AND PARTNERSHIPS

Strengthening platforms like the Asia-Pacific Food Loss and Waste Network for knowledge exchange.



2. CRITICAL POINT IDENTIFICATION

Mapping hotspots in staple crop supply chains using the Food Loss Index.



3. INVESTMENT MOBILIZATION

Catalyzing \$200 million in public-private partnerships for cold chain expansion in Southeast Asia.



4. PROGRESS MONITORING

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5. GOVERNANCE INTEGRATION

Aligning FLAW policies with climate agendas, as seen in Indonesia's Convergence Initiative.



APEC's Trujillo Principles

Endorsed in 2024, the Trujillo Principles emphasize:

• INSTITUTIONAL STRENGTHENING:

Establishing dedicated FLAW units in agriculture ministries.

• CROSS-SECTOR PARTNERSHIPS:

Replicating Japan's Eco-Town Program, where industrial clusters repurpose food byproducts into animal feed and biogas.

• SUSTAINABLE TRADE PRACTICES

Reducing phytosanitary-related losses through harmonized regional standards for produce quality.

Current Policy Frameworks in some Asia-Pacific Countries

Some countries in the Asia-Pacific region have implemented policies that directly or indirectly aims to combat FLAW.

JAPAN

Japan's "Food Waste Recycling Act" (2001) mandates businesses to reduce and recycle food waste into fertilizer or feed. The "Food Loss Act" (2019) aims to halve household food waste by 2030, aligning with SDG 12.3, and includes consumer education, NGO support, and local government frameworks. Japan's Food Recycling Law mandates a 50% recycling rate for food manufacturers, driving innovations such as microalgae cultivation for biofuel and municipal composting programs.

CHINA

China's Anti-Food Waste Law (AFWL) curbs excessive consumption in hospitality and households, mandates fines for businesses that encourage overordering, and requires municipal waste reduction plans. The "Clean Your Plate" campaign has reduced household waste by 22% in pilot cities.

The government also supports AI-driven supply chain platforms to minimize spoilage, especially for perishables.

AUSTRALIA

Australia aims to halve food waste by 2030 under its National Food Waste Strategy, targeting the 7.6 million tons discarded annually. Initiatives include a \$1.3 billion Recycling Modernization Fund, voluntary agreements with supermarkets, and partnerships with nonprofits like OzHarvest, which redirects 25,000 tons of food annually.

SINGAPORE, INDIA, THAILAND, MALAYSIA, NEPAL

- Singapore: Targets 70% food waste recycling by 2030 through innovative technologies and partnerships.
- India: The Indian Food Sharing Alliance (IFSA) connects food recovery agencies for surplus redistribution.
- Thailand, Malaysia, Nepal: Following SDG 12.3 targets, these countries invest in cold chain infrastructure, awareness campaigns, and improved supply chain management. Nepal's adoption of metal silos reduced grain storage losses from 9% to 3% in pilot districts.



Technical Challenges and Initiatives to Combat FAW

SCALING COLD CHAIN INFRASTRUCTURE

Post-harvest losses of fruits and vegetables exceed 40% in countries like India and Vietnam due to inadequate refrigeration. Solar-powered cold storage and blockchain-enabled traceability projects are being piloted to reduce such losses.

DATA-DRIVEN DECISION-MAKING

Only 12 Asia-Pacific nations currently report FAW data to SDG indices. Regional working groups supported by UNEP are developing standardized metrics and integrating FAW reduction into climate commitments.

CIRCULAR ECONOMY INTEGRATION

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BEHAVIORAL CHANGE AND COMMUNITY ENGAGEMENT

School-based composting programs in the Philippines and faith-based food banks in Indonesia are diverting significant amounts of organic waste and redistributing surplus food to low-income households.



Innovative Practices

COLD CHAIN MANAGEMENT:

Controlled atmosphere storage extends shelf life of agrifood products in India.

FOOD RECYCLING:

Japan, South Korea, and Singapore convert food waste into fertilizers or energy.

REDISTRIBUTION NETWORKS:

Nonprofits like Second Harvest (Japan) and OzHarvest (Australia) redistribute surplus food to vulnerable populations.



Conclusion: Toward a Resilient Food System

Addressing FLAW in Asia-Pacific requires a multifaceted approach combining policy innovation, technological advancements, consumer education, and regional cooperation. By adopting circular economy principles and robust data systems, the region can transform its agrifood systems into more sustainable, inclusive, and resilient models-ensuring food security while mitigating environmental impacts.

It may be noted that the Asia-Pacific Economic Cooperation (APEC) is working on principles to reduce FLAW through collective actions among member economies. These principles emphasize technology adoption, governance frameworks, education programs, and capacity-building initiatives. Such regional collaboration can also amplify efforts at national levels while fostering shared learning.

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