



Reducing food waste in APEC: Implications for retailers and consumers

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Format

- Key issues
- Current trends
- Assessment of the problem
- Policy directions and strategies

Key issues

- Clarify terminology/definition: food losses and food waste
- Food loss/waste reduction is more efficient than increasing food supply to increase food availability
- Retailers and consumers can reduce food losses/waste significantly
- Public Sector roles: data and analysis; provide guidance; create an enabling environment
- Food loss/waste have to be tackled along the whole food supply chains, in the context of sustainable food systems

What is food waste?

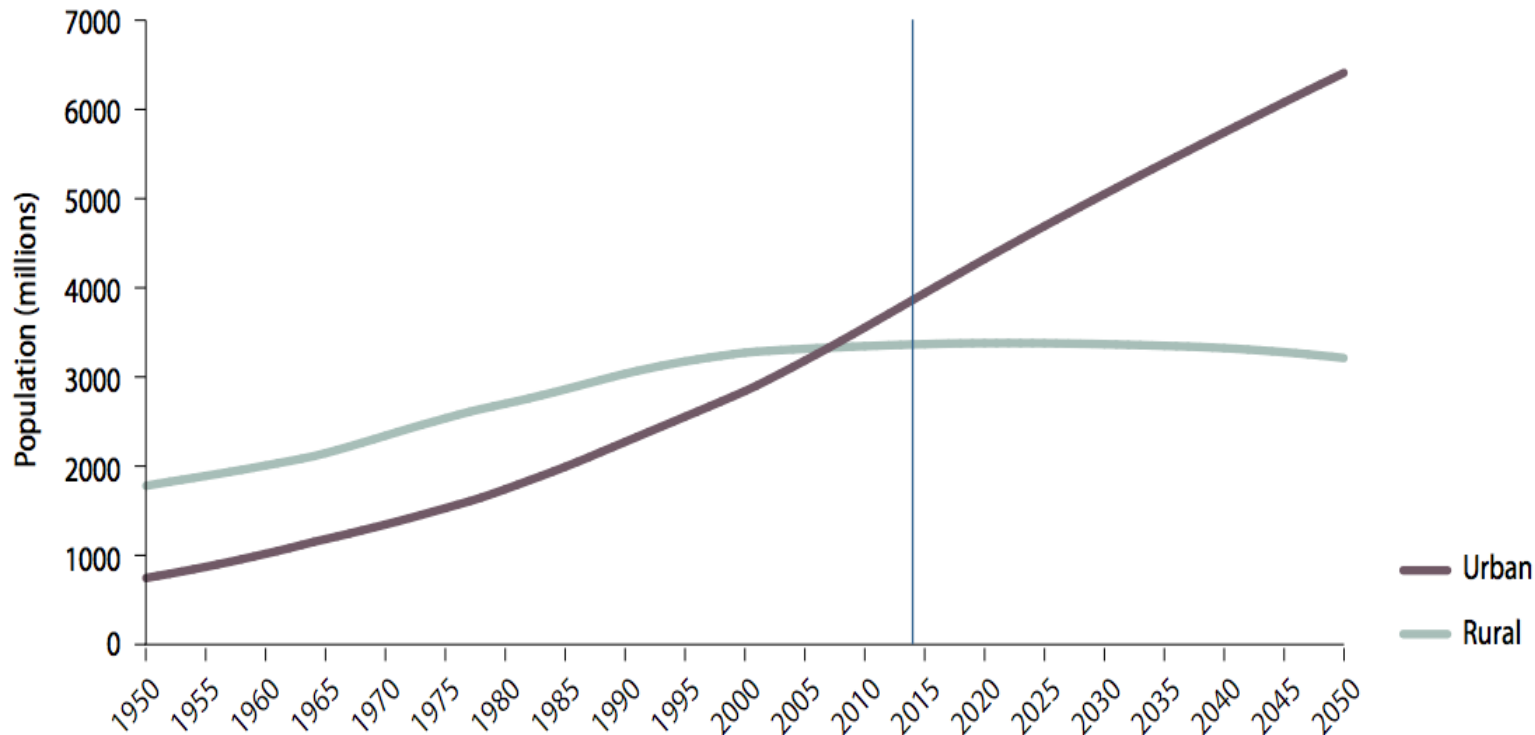
- Food waste is any food, and inedible parts of food, removed from the *food supply chain* to be recovered or disposed
 - (including composted, crops ploughed in/not harvested, anaerobic digestion, bio-energy production, co-generation, incineration, disposal to sewer, landfill or discarded to sea).

Source: EU FUSIONS Definitional Framework for Food Waste (2014)

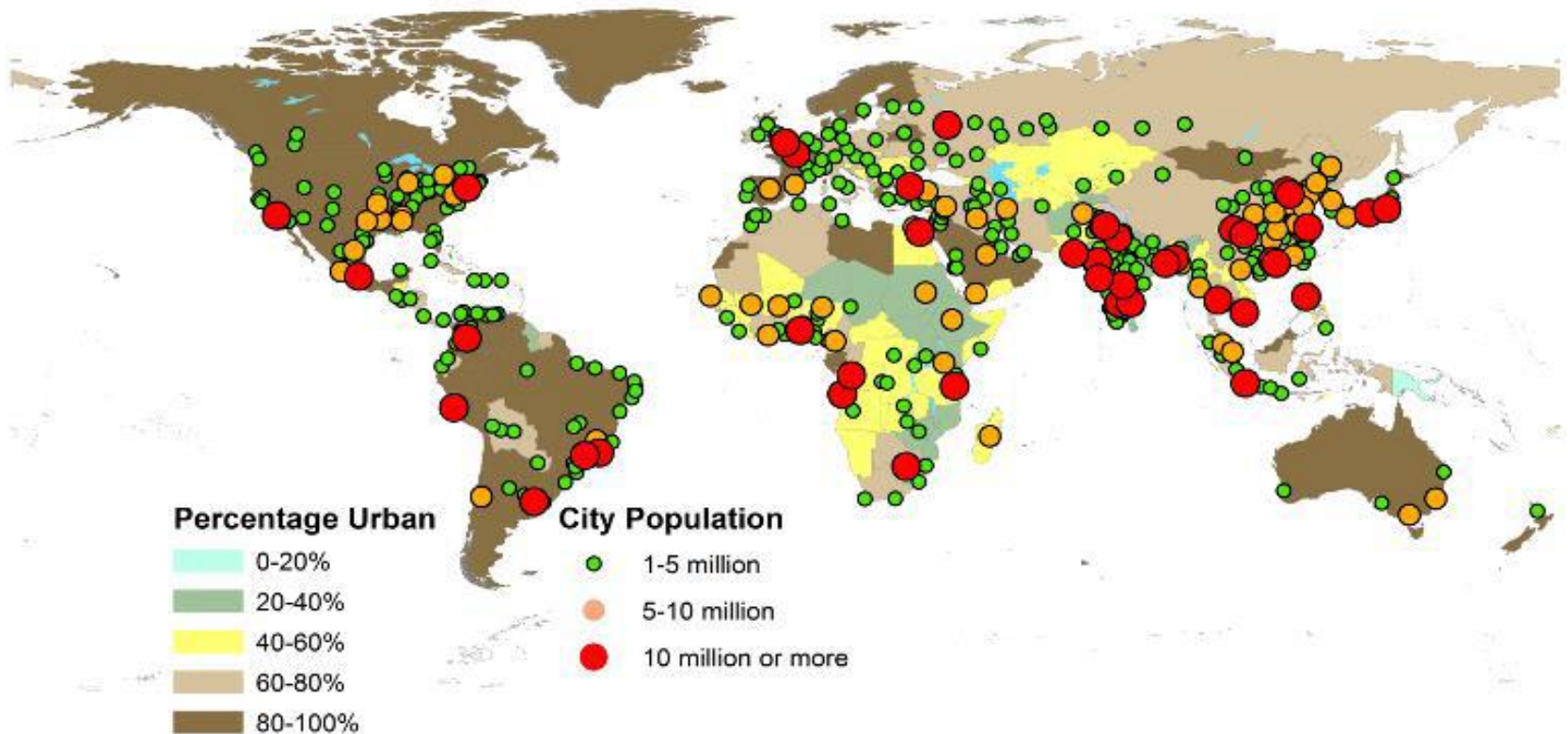
Urban and rural population

Figure 2.
Urban and rural population of the world, 1950–2050

A majority of the world's population lives in urban areas

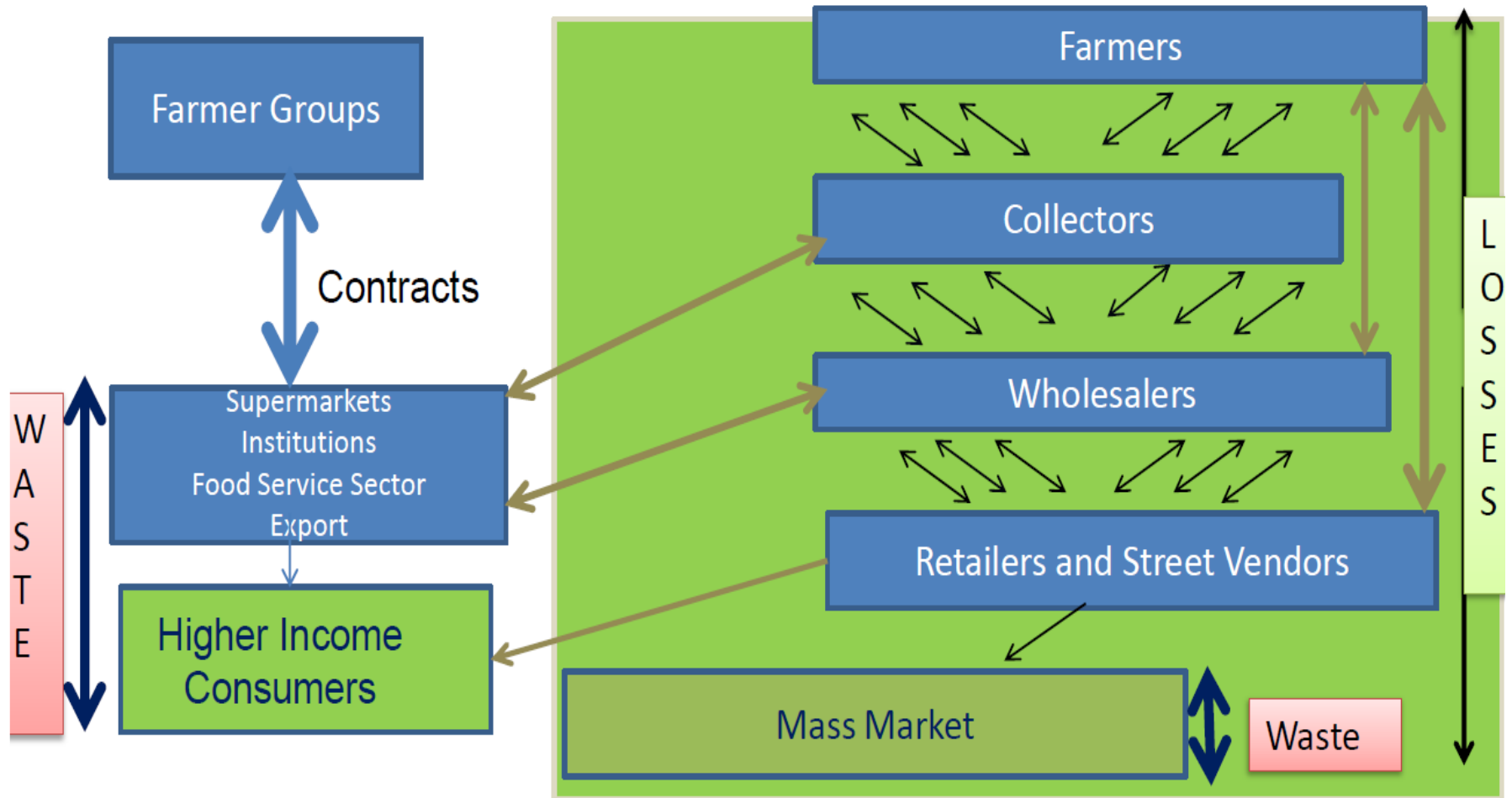


Urbanisation projections to 2030

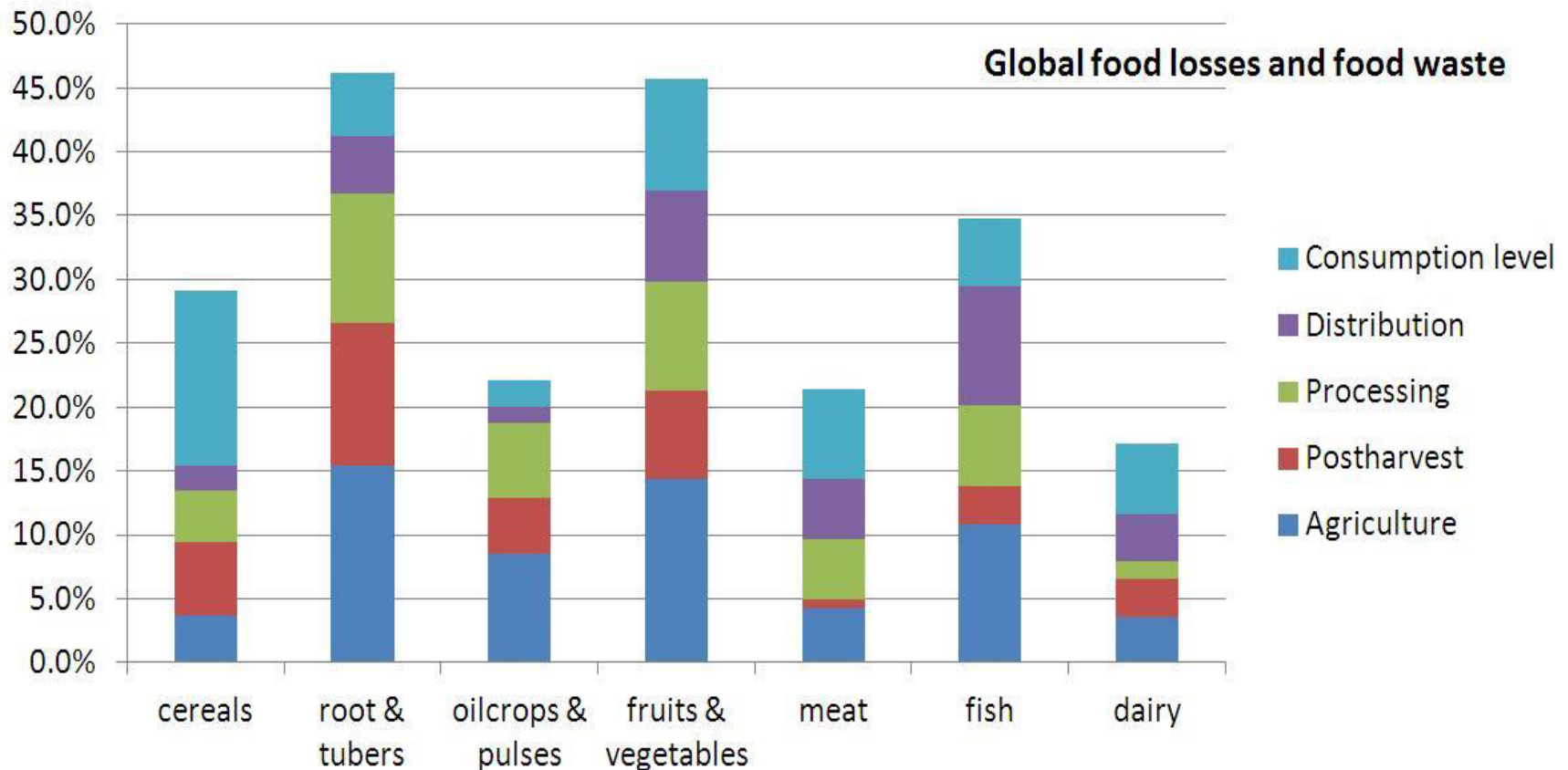


Note: Designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

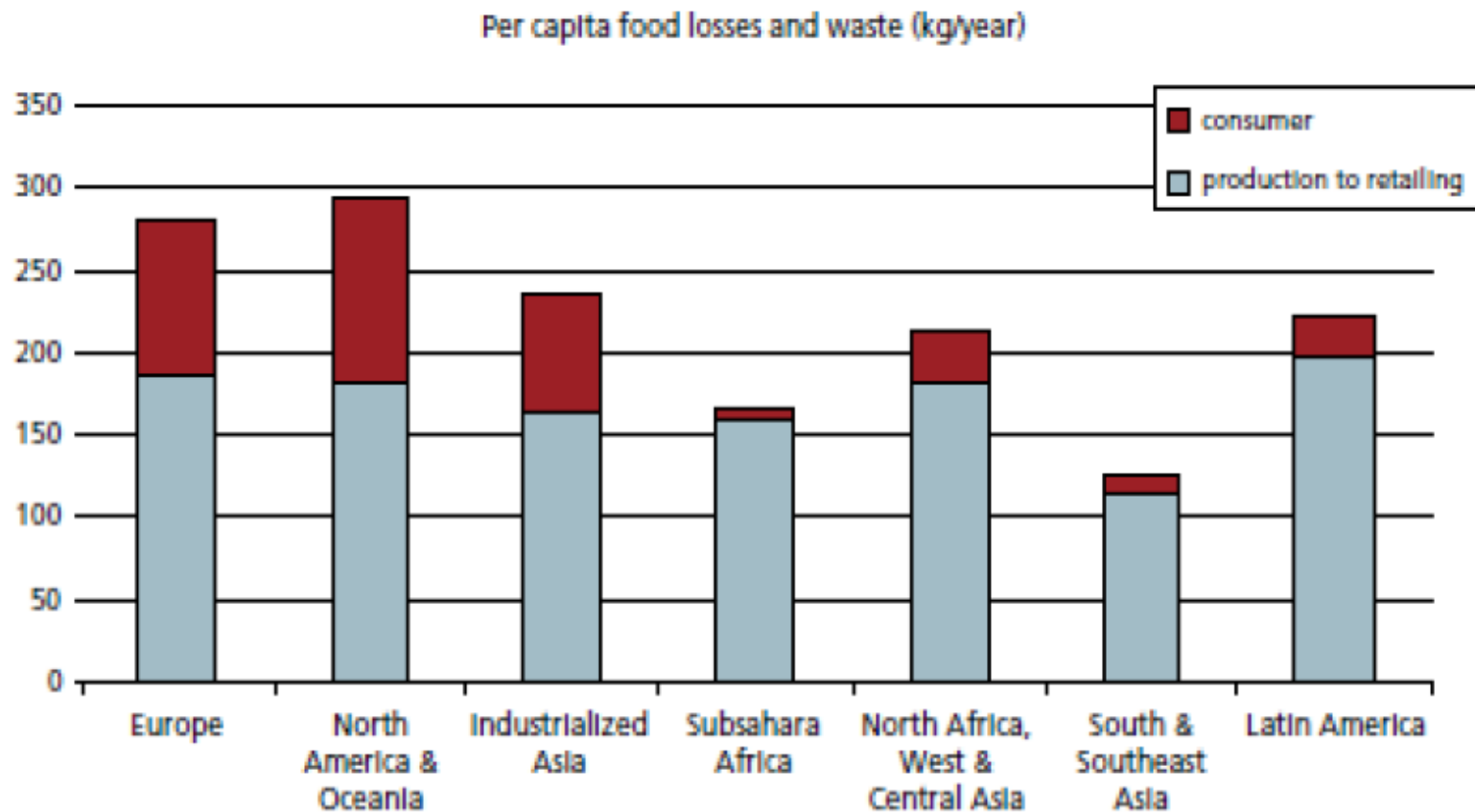
Food losses/waste along supply chains



Global food losses/waste



Extent of food losses/waste

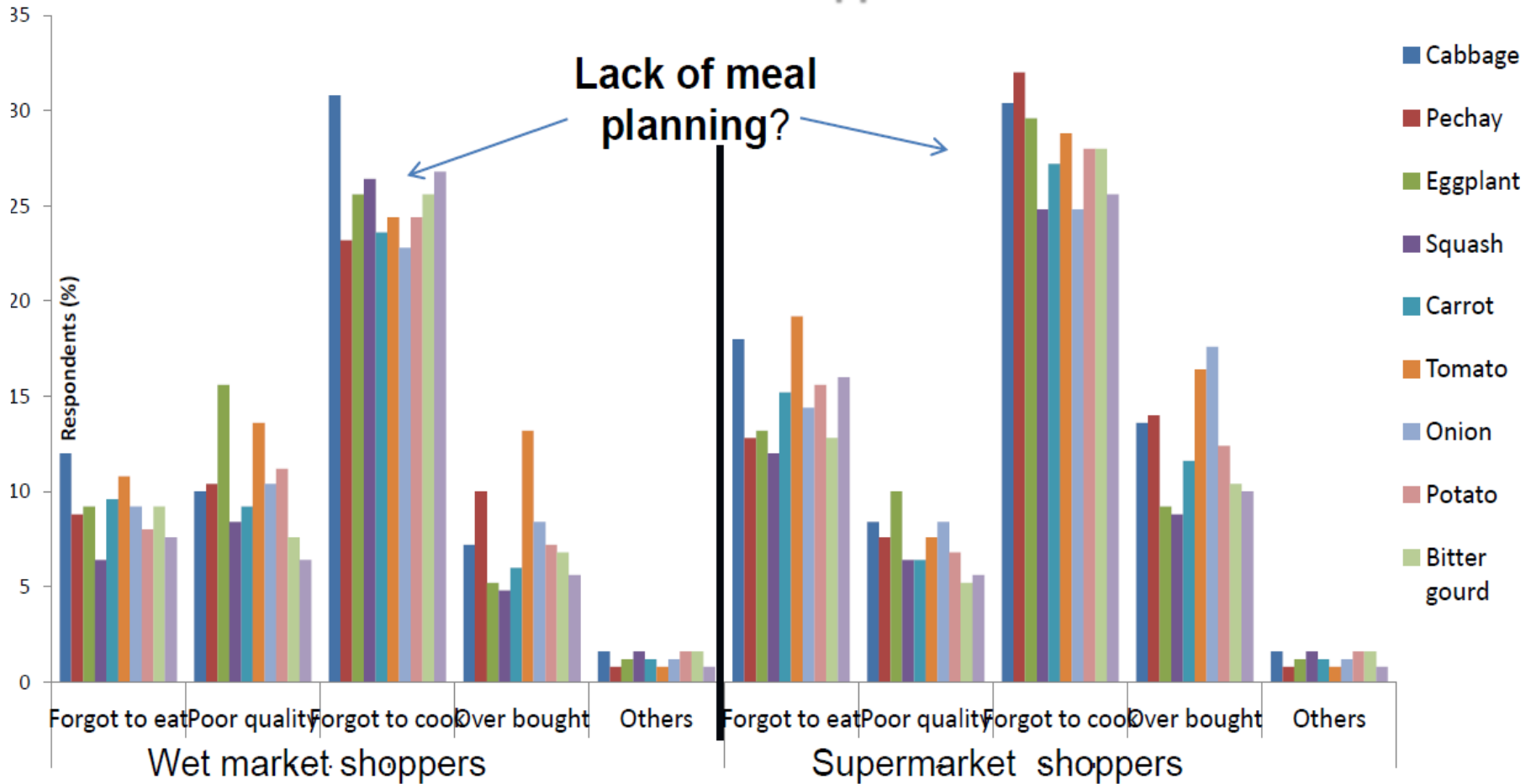


Causes of food waste

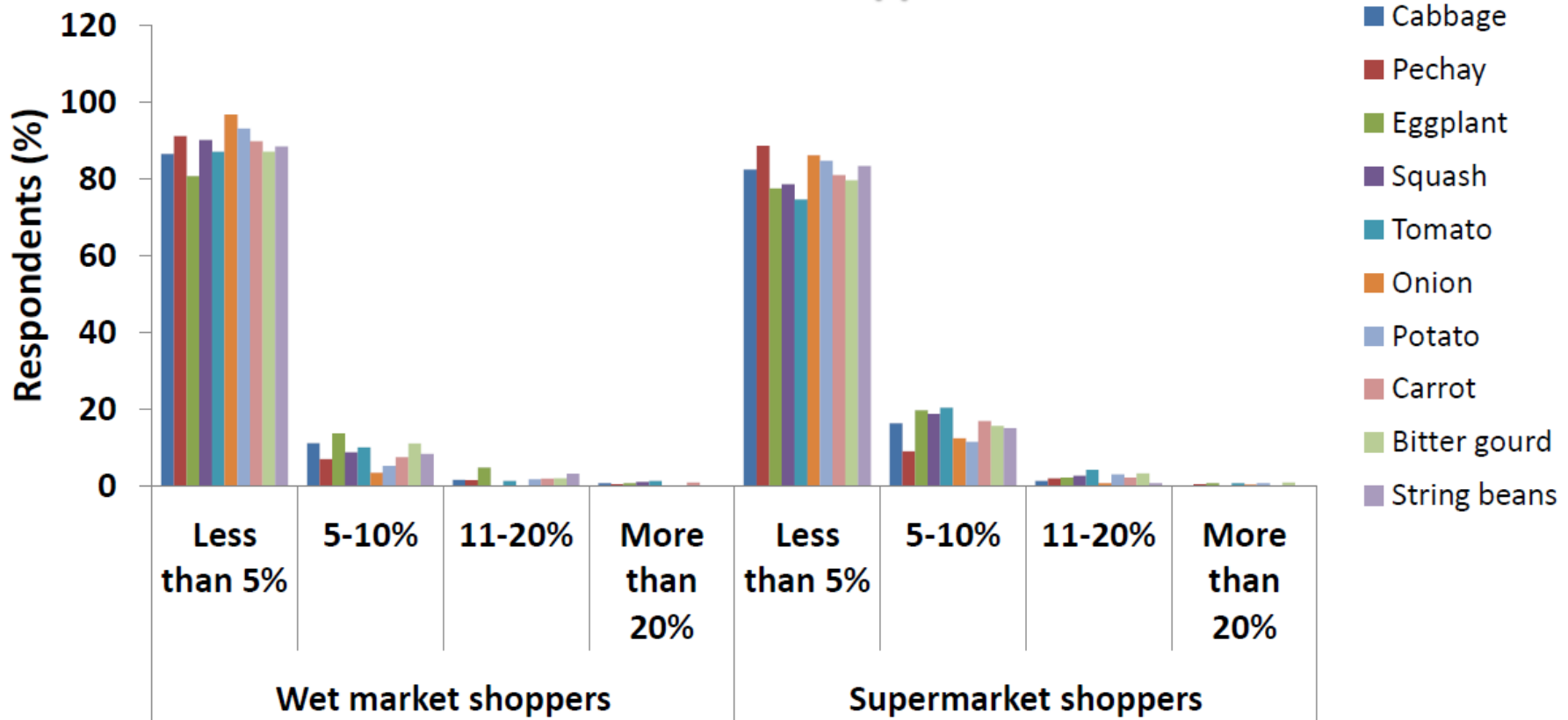
- Inherent features of food products (perishability)
- Social factors, consumer habits and lifestyles (single-person HHs, increased consumption of meals out-home)
- Consumer behaviours and expectations (freshness)
- Other priorities of stakeholders (sales increase, product safety, quality standards)
- Limited/no use of available technologies, inefficiencies of supply chain operators, inefficient legislation, and poor consumer behaviour (unawareness, poor food skills)

Source: EU FUSIONS (2014)

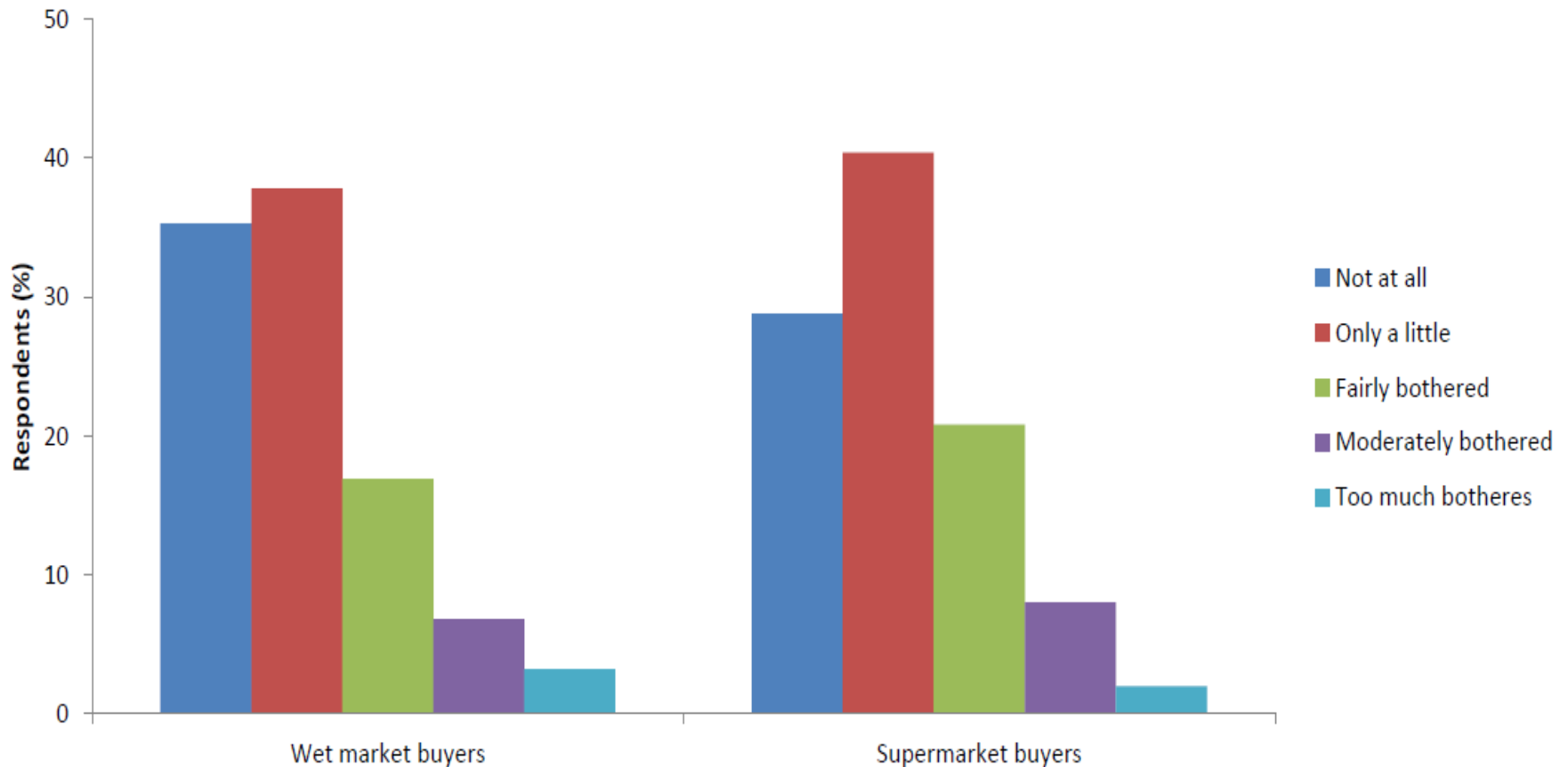
Consumer waste: reasons (Philippines)



Extent of consumer waste (Philippines)



Veg/fruit waste: consumer attitude (Philippines)



Strategies

- **Awareness raising** on the impact of, and solutions for food loss/waste.
- **Collaboration** and coordination of global/regional initiatives on food loss/waste reduction.
- **Policy, strategy and program development** for food loss/waste reduction.
- Support to **investment programs and projects**, implemented by private and public sectors.

Awareness raising and advocacy

- Development of Save Food Networks (national and regional)
- Education and awareness in schools/universities
- Public sector announcements
- Development and distribution of promotional materials in local languages across the region
- www.savefood.net

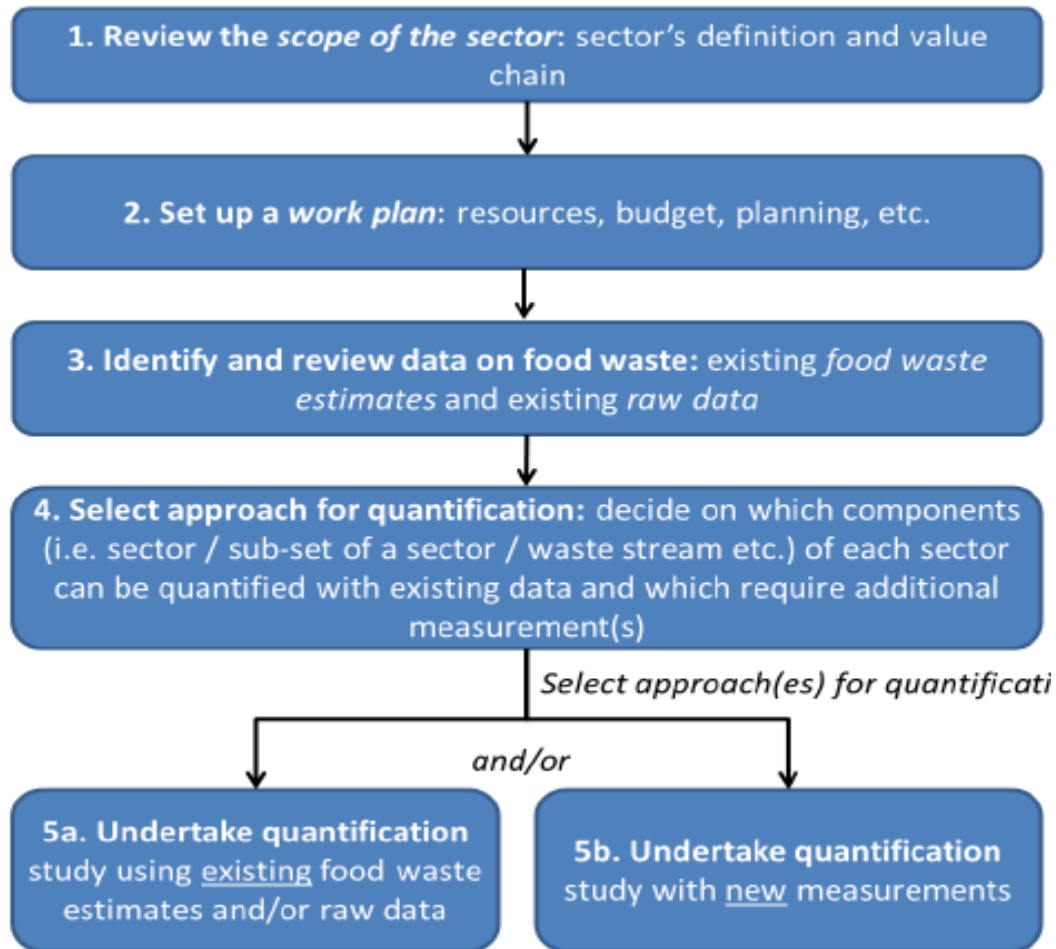
Source: Rosa Rolle (FAO)

<http://www.savefood.net/wordpress/wp-content/uploads/2014/12/SAVE-FOOD-duss-rolle.pdf>

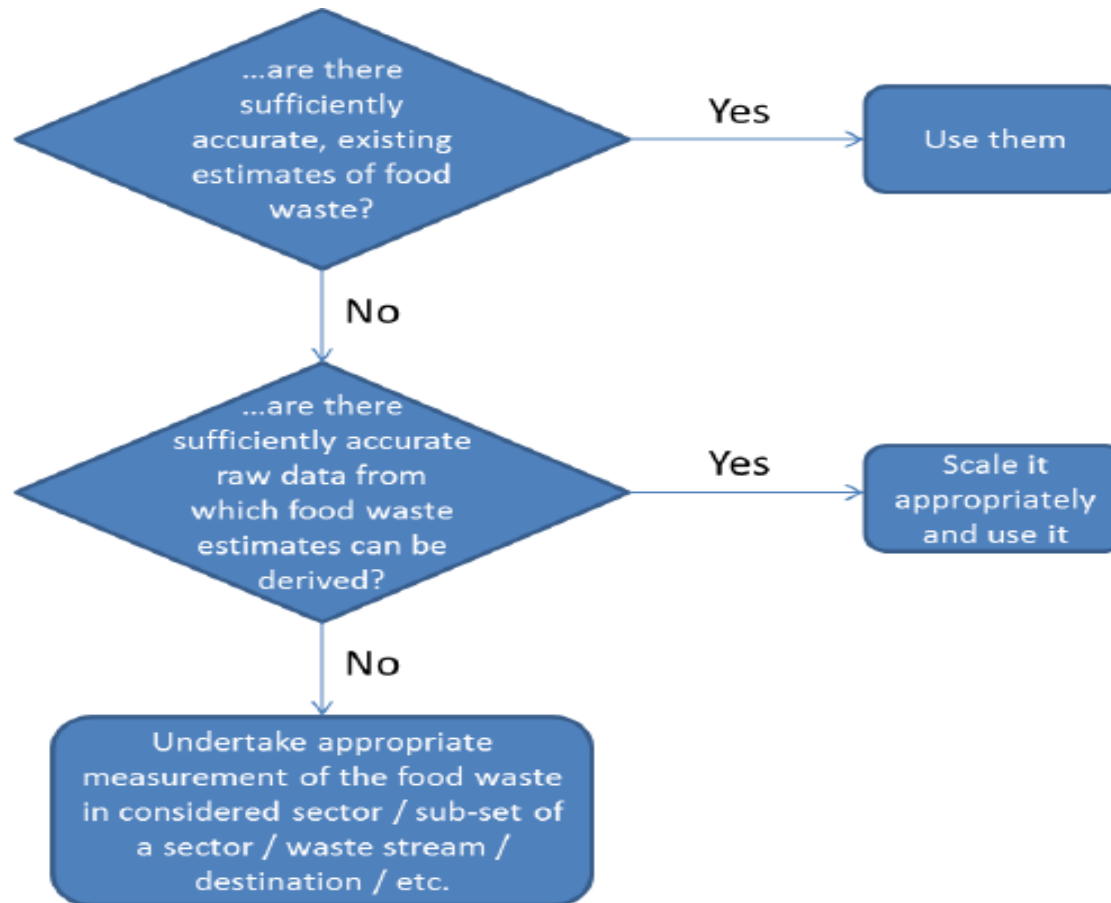
Assessment methods

- Developing and emerging economies:
 - Field case studies to identify critical loss points and feasible and sustainable solutions
 - Global/Regional Strategy to Improve Agriculture and Rural Development Statistics.
- Industrialized economies (potential knowledge transfer):
 - EU FP7 FUSIONS: i.e. quantification manual, indicators for the policy framework in the EU.

Food waste quantification



Decision tree for types of approach for food waste quantification



Retailers

- Supermarkets, discount shops, wet markets
 - Assessment of relative market shares
 - Types of food waste
 - Unsold food and edible parts → charities
 - Unsold food and inedible parts → animal feed, land fill
 - Identification of existing food waste estimates
 - Stakeholders to contact (distribution centres, producers/processors)
 - Review identified data and estimates
 - Methods of measuring food waste
 - Direct weighing, counting & scanning, mass balance

Consumers-households

- Types of HHs (mapping the HHs)
- Types of food waste and destinations
 - Waste collected by local authorities (kerbside, recycling centers, food waste collections, dry recycling)
 - Sewer waste (via kitchen sink and dishwashers)
 - Home composting
- Local authority/municipality waste streams
- HH surveys/case studies
- Scaling the estimates

Food waste management: Australia 1



1 Supporting efficiency and innovation in agriculture

Key players: Australian Government, state and territory governments, primary producers, academic institutions.



2 Assessing food ordering, transport and storage practices

Key players: food and grocery retailers, primary producers.



3 Using packaging effectively and sustainably

Key players: food processing and manufacturing industries, state and territory governments, Standards Australia,

Food waste management: Australia 2



- 4 Encouraging partnerships between food and grocery retailers and charitable organisations**

Key players: food and grocery retailers, food rescue organisations.



- 5 Conducting household education and community initiatives**

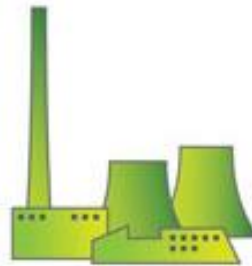
Key players: state and territory governments, local governments, not-for-profit organisations

Food waste management: Australia 3



6 Diverting food waste from the commercial food sector

Key players: state and territory governments, commercial food sector, academic institutions, not-for-profit organisations.



7 Investing in alternative treatment technology and infrastructure

Key players: state and territory governments, private sector, Australian Government.



8 Finding incentives for alternatives to disposing of food waste in landfill

Key players: state and territory governments, waste management sector, private sector.

Food waste management: Australia 4



9 Creating value from food waste

Key players: academic institutions, Australian Government research institutions, private sector.

A number of research and development activities are taking place to find the best value uses for food waste. Research organisations, including the CSIRO's Food and Nutrition group, are supporting the development and commercialisation of new bio-products.

Food waste management: Australia 5

10 **Standardising data to measure food waste and track its reduction**

Key players: waste management sector, state and territory governments, private sector, Australian Government.

Standardising waste data will allow more consistency between the states and territories and is supported by the food industry. The Australian Government can assess where national standards will make a difference, for example, where standards can be used to reduce the costs associated with meeting different state and territory requirements.

References

- EU FUSIONS Definitional Framework for Food Waste (2014)
- Source: FAO (2011)
<http://www.fao.org/docrep/014/mb060e/mb060e00.pdf>
- Olaf Thieme (FAO Working Group on Food Losses and Waste)
- Opportunities for Local and Regional Authorities in facilitating food waste prevention and reduction, Committee of the Regions, Brussels, Belgium, 01/03/2016 (FAO Global Initiative on Food Loss and Waste Reduction)
- Rosa Rolle (FAO) <http://www.savefood.net/wordpress/wp-content/uploads/2014/12/SAVE-FOOD-duss-rolle.pdf>
- <https://www.environment.gov.au/protection/national-waste-policy/food-waste>



Thank You

<https://www.vu.edu.au/institute-for-supply-chain-and-logistics-iscl>