



WHO'S WHO OF FOOD WASTE REDUCTION INITIATIVES

VERSION 2.0

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Disclaimer

The conclusions and views expressed in this report do not necessarily reflect the views of every PAC Food Waste Member Company or Affiliate.

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INTRODUCTION

In September 2014, PAC Food Waste published a *Who's Who* of companies, organizations and associations engaged in food waste reduction initiatives, including packaging solutions that protect and preserve food. Over the past two and a half years, the momentum to address the global food waste issue continues to build. In this updated version of the *Who's Who of Food Waste Reduction Initiatives*, the same objective remains to provide a fundamental resource to understand current food waste reduction initiatives and,

- Provide a helpful reference/inventory document that identifies companies, organizations and associations currently engaged in packaging and food waste reduction and includes details of their initiatives or objectives
- Develop a shareholder map and/or value model to understand organizational positioning of packaging-related initiatives
- Distribute as an educational resource and reference for other food waste projects.

What's new in this version

Upon receiving feedback on the first edition from our members, this updated version provides additional features:

- More user-friendly format with an index
- 15 additional initiatives
- Highlights key developments over the past two and a half years

Note that the selection criteria for the initiatives in this document are based upon their influence and scale, relevance to industry (especially packaging), as well as recommendations from membership. There are a growing number of local grassroots initiatives that are making considerable efforts in addressing food waste, but due to the large volume across many regions, only a select few were chosen.

At PAC Food Waste, we hope this document will be a resource to our members to facilitate networking and collaboration across the packaging and food supply value chains to help reduce and prevent food waste.

EXECUTIVE SUMMARY

This PAC Food Waste report identifies 77 food waste reduction initiatives from across the globe, expanding from the original 62 that were listed in the first edition. The initiatives included demonstrate impactful efforts on food waste reduction based upon their respective focus areas:

Packaging Solutions	<i>Promotes packaging solutions as a means to prevent and reduce food waste</i>
Best Practices	<i>Works to provide recommendations on most effective procedures to reduce food waste</i>
Consumer Awareness	<i>Targets communication directly to consumers to build awareness</i>
Policy	<i>Informs or advocates policy decisions concerning food recovery and waste prevention</i>
R&D	<i>Conducts research and development on food waste related topics</i>
Social Responsibility	<i>Addresses social equity aspects of food waste such as food security</i>

Companies, organizations and associations could have either a single approach or a combination of these focus areas.

Growing Collaboration

There are a growing number of collaborative partnerships and coalitions that span across organizations. This promising trend indicates recognition that finding solutions to address food waste takes collective willpower to drive change that would not be possible through efforts of one organization alone. Initiatives like ReFED, Champions 12.3 and the furtherwithfood.org website funded by the Rockefeller Foundation are some recent examples of this collaborative movement.

Whereas focus areas generally depend on the stakeholder group – for example, consumer awareness initiatives are likely driven by the public sector and the private sector tends to be focused on best practices – there are also cross-sector approaches to food waste that address the interdisciplinary nature of the topic. Furthermore, there is increased attention on policy and regulatory tools, such as organics disposal bans and food donation tax credits, to understand how legislative frameworks can work effectively to divert more food from landfill.

Expanding Geographic Reach

Another promising trend is the growth of some initiatives that were first established as a small, local grassroots movement. Examples include Second Bite in Australia, Stop Wasting Food in Denmark and the Food Recovery Network in the United States. The focus on social responsibility, which has traditionally been addressed on a local basis to manage food insecurity and hunger, has expanded to national or even global efforts.

Worldwide sharing and promoting of successful food waste reduction initiatives are becoming more commonplace. The Love Food Hate Waste campaign by the Waste and Resources Action Programme (WRAP) is a recognized leader in effective food waste prevention communication to consumers and has been adopted outside the United Kingdom to Vancouver, Canada, for example. With thanks to social networking and the willingness to collaborate, the geographic reach of initiatives is expanding and its global effects on the food waste dialogue are promising.

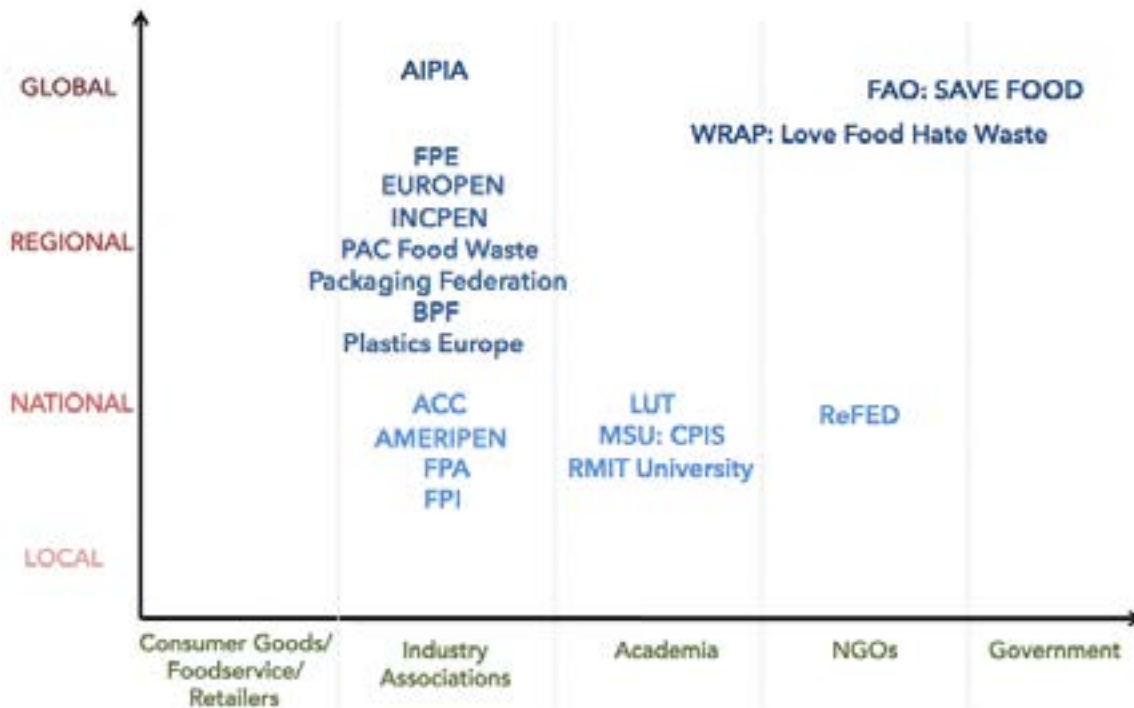


Figure 1 - Mapping of food waste reduction initiatives with focus on packaging solutions

Packaging as a Solution to Prevent and Reduce Food Waste




Out of the 77 initiatives identified, 18 of them address packaging solutions that prevent and help reduce food waste (see organizational map above). Education and knowledge sharing is essential to promote efforts that acknowledge packaging as a key solution to protect food, extend shelf life, provide portion control and communicate with consumers on-pack on how to improve food storage in the home. The 2016 ReFED report, “A Roadmap to Reduce U.S. Food Waste by 20%”, highlights 27 solutions to prevent, recover and recycle food waste where packaging adjustments is listed as one of the top three solutions with the greatest economic value.




PAC Food Waste continues to expand our work to build awareness on the value of packaging, to solicit and promote packaging case studies and to continue collaborative work with partner organizations such as AMERIPEN, Provision Coalition and the National Zero Waste Council. With the circular economy gaining momentum, we strive to engage, educate and connect stakeholders throughout the value chain to help industry realize their packaging and food waste reduction and recovery goals.





This project report is living document as there are a growing number of new initiatives and activities underway. We welcome and appreciate your feedback. Please submit your questions and comments to Rachel Morier, Director of Sustainability at rmorier@pac.ca.




WHO'S WHO OF FOOD WASTE REDUCTION INITIATIVES




GLOBAL

	<u>Active & Intelligent Packaging Industry Association (AIPIA)</u> <i>Focus: Packaging Solutions</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Global industry association that brings together world's largest companies interested in active & intelligent packaging (A&IP) • Promotes A&IP solutions for food, beverage, pharmaceutical, & cosmetic supply chains • Formed in 2012 	<ul style="list-style-type: none"> • Decimate supply chain costs & improve supply chain management & control • Reduce waste • Increase members' profitability • Increase understanding of benefits of using A&IP technologies • Accelerate implementation of A&IP technologies 	<ol style="list-style-type: none"> <u>1. Supports implementation of A&IP technologies through initiatives & programs</u> <u>2. Provides standardization platforms & communication forums</u> <u>3. Hosts commercial events & annual Congress</u> <i>Cover latest A&IP market developments & topics</i> <ul style="list-style-type: none"> • Reducing food waste & extending shelf life was major theme of Congress 2013 - Several solutions were offered • Co-hosted Interpack exhibition 2014 with ITENE - Conducted major road-mapping exercise that revealed broad support for active & intelligent packaging solutions as major tool to reduce food waste & helped develop clear map of critical technologies <u>4. Attends conferences & exhibitions to lecture about A&IP developments</u> <u>5. Lobbies governments</u> <u>6. Partnered with Canadian Printable Electronics Industry Association (CPEIA)</u> Aim: Explore ways to enable A&IP with printable & organic electronics (POE), radio-frequency identification (RFID), & active/nano/anti-microbial technologies <ul style="list-style-type: none"> ◦ <i>Future work: Explore how these technologies can drive development of new packaging that will reduce waste & supply chain costs</i>
	<u>Champions 12.3</u> <i>Focus: Best Practices</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Global coalition of executives from governments, businesses, international organizations, research institutions, farmer groups, & civil society • Members include Consumer Goods Forum, World Business Council for Sustainable Development (WBCSD), & World Resources Institute (WRI) • Launched in 2016 	<ul style="list-style-type: none"> • Inspire ambition, mobilize action, & accelerate progress toward achieving Sustainable Development Goal (SDG) Target 12.3 - Target 12.3: cut in half per capita global food waste at retail & consumer level & reduce food losses along production & supply chains by 2030 	<ol style="list-style-type: none"> <u>1. Assesses world progress toward achieving Target 12.3</u> <u>2. Shares how leaders are pursuing food loss & waste reduction</u> <u>3. Publicizes in global & national media new analyses on food loss & waste, success stories of effective food loss & waste reduction, & remaining barriers</u> <u>4. Identifies windows of opportunity to advance improvements in enabling conditions</u> <u>5. Contributes to achieving other international aspirations</u> <ol style="list-style-type: none"> a) Zero Hunger Challenge b) UN Framework Convention on Climate Change
	<u>Consumer Goods Forum (CGF)</u> <i>Focus: Best Practices</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Global, parity-based industry network • Driven by members of more than 400 retailers, manufacturers, & service providers across 70 countries • Founded in 2009 	<ul style="list-style-type: none"> • Drive efficiency & positive change in consumer goods industry by helping manufacturers & retailers work together to set & achieve shared global goals - Focus: 4 pillars <ol style="list-style-type: none"> a) Product safety b) Sustainability: food waste reduction c) Health & wellness d) End-to-end value chain 	<ol style="list-style-type: none"> <u>1. Hosts global conferences & events</u> <ol style="list-style-type: none"> a) CGF Global Summit: Manufacturers & retailers discuss current challenges in consumer goods industry <ul style="list-style-type: none"> • 2015 edition attracted more than 1,000 delegates; 2016 edition attracted more than 800 delegates • First edition of Sustainable Retail Summit was held this year (2016) in Paris, France from October 27th to 28th - Involved presentations, roundtable discussions, & workshops about socially & environmentally sustainable business solutions & how to implement them - Food waste reduction was one topic <u>2. Runs working groups</u> <ol style="list-style-type: none"> a) Food Waste Working Group: Develops toolkits, guidelines, & reports, & offers opportunities to share best practices <ul style="list-style-type: none"> ◦ <i>Future work: Expand Working Group to engage more members & gain & share additional best practices</i> <u>3. Undertakes Food Waste Resolution</u>

		<p>Aim: Accomplish 3 food waste reduction goals through individual company initiatives, by engaging with supply chains & end consumers, & collectively in partnership with governments & NGOs:</p> <p>a) Prevent food waste</p> <p>b) Halve food wasted within operations of manufacturer & retailer members by 2025, versus 2016 baseline</p> <p>c) Contribute to SDGs by 2030</p> <p>i) Halve per capita global food waste at consumer level</p> <p>ii) Reduce food losses along production & supply chains</p> <p>iii) Maximize value of remaining waste</p> <p>o Future work: Measure baselines & progress using Food Loss & Waste Accounting & Reporting Standard (FLW Standard) (first global standard to measure food loss & waste)</p> <p>4. Joined Champions 12.3</p> <p>o Future work: Work toward accelerating progress toward achieving SDG Target 12.3 by 2030</p>
	<p><u>Food & Agriculture Organization of the United Nations (FAO): SAVE FOOD</u></p> <p>Focus: Packaging Solutions, Best Practices, Consumer Awareness, Policy, R&D, Social Responsibility</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Joint global initiative of FAO, UNEP, Messe Düsseldorf, & interpack Platform for activities & promotion of other initiatives to reduce food waste Members include Flexible Packaging Europe (FPE) & PAC Food Waste Developed in 2011 	<ul style="list-style-type: none"> Encourage dialogue between industry, research, politics, & civil society on food loss & waste Generate solutions to reduce food loss & waste Create awareness of food loss & waste impacts & solutions 	<p>1. Coordinates worldwide initiatives on food waste reduction</p> <p>2. Participates in World Food Day (WFD) & World Environment Day (WED)</p> <p>3. Hosts annual SAVE FOOD Congress</p> <p>Congress that serves as gathering point for members to present & discuss solutions</p> <p>4. Hosts SAVE FOOD Exhibition</p> <p>Exhibition that represents center of future solution projects</p> <p>- Supported by virtual world map</p> <ul style="list-style-type: none"> Shown at interpack Congress 2011, WFD 2011, & German Sustainability Day 2011 <p>5. Conducted research & published studies</p> <p>a) "Global Food Losses & Food Waste" (2011): Revealed key facts & figures about food loss & waste</p> <p>b) "Appropriate Packaging Solutions" (2011): Explored potential of packaging industry in fighting food waste in developing countries</p> <ul style="list-style-type: none"> Presented at SAVE FOOD Congress 2011 Used as discussion papers for roundtables with key representatives of supply chain in food sector <p>6. Undertakes SAVE FOOD Mango Project</p> <p>Project that reduces food loss in mango value chain in Kenya using new product ideas & packaging technologies</p> <p>Goal: Reduce food loss in mango value chain by 30,000 t by 2017</p>
	<p><u>Food Tank</u></p> <p>Focus: Best Practices, Consumer Awareness, R&D, Social Responsibility</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> NPO Launched January 2013 in Chicago, Illinois 	<ul style="list-style-type: none"> Focused on building a global community for safe, healthy, nourished eaters Spotlight environmentally, socially, and economically sustainable ways of alleviating hunger, obesity, and poverty Create networks of people, organizations, and content to push for food system change 	<p>1. Hosts numerous Food Tank Summits in U.S. and Brazil</p> <p>Brings together large number of stakeholders in various cities and features world's most impactful food system leaders</p> <ul style="list-style-type: none"> Locations include Washington, DC, Sacramento, CA, Chicago, IL, New York City, NY and Sao Paulo, Brazil Think tank for food with sponsorship from organizations such as Oxfam and World Resources Institute <p>2. Continue active news posts and social media presence on sustainable food</p> <ul style="list-style-type: none"> Releases weekly newsletter with thousands of subscribers and fans on Facebook, Twitter, Instagram and Pinterest
	<p><u>Global Green Growth Forum (3GF)</u></p> <p>Focus: Best Practices</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Launched by governments of Denmark, China, Kenya, Korea, Mexico, Qatar, & Ethiopia in 2011 	<ul style="list-style-type: none"> Develop new or enhance existing public-private partnerships to accelerate transition to green economy 	<p>1. Provides annual 3GF Summit</p> <p>Meeting in which top leaders from private sector, government, & civil society take leadership & promote concrete solutions</p> <ul style="list-style-type: none"> Food Loss & Waste Protocol (FLW Protocol) (multi-stakeholder partnership) was initiated at 2013 Summit FLW Standard was introduced by FLW Protocol at 2016 Summit <p>2. Identifies new & endorses existing public-private partnerships</p> <p>3. Conducted research & published report</p> <p>a) "Improving Resource Efficiencies in the Value Chain" (2013): Considered how to ensure efficient & sustainable use of resources while minimizing or reusing waste</p> <p>- Addressed 4 themes (energy, water, food, & value chain greening) & specific public-private partnerships for each</p>



	<u>Global FoodBanking Network (GFN)</u> <i>Focus: Social Responsibility</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • NPO • Formed in 2007 	<ul style="list-style-type: none"> • Alleviate global hunger & reduce food waste by creating & supporting food banks around world 	<ol style="list-style-type: none"> 1. Hosts annual Food Bank Leadership Institute (FBLI) <i>Global forum for education, technical training, & best practice sharing for those involved in food banking</i> <ul style="list-style-type: none"> • Hosted nearly 400 individuals from 55 countries since 2007 • Attracted almost 130 professionals representing 33 countries since 2007 2. Establishes & maintains strong partnerships with global grocery products industry 3. Leverages resources <ul style="list-style-type: none"> • Works in more than 30 countries now • Created first food bank in Bangalore, India & new food banks in China, Dominican Republic, Panama, Peru, & Uruguay • Saved 1.2 billion lbs of food in 2015
	<u>Global Food Security Program</u> <i>Focus: R&D, Social Responsibility</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Multi-agency programme • Brings together main UK funders of food-related research & training • Launched in 2011 	<ul style="list-style-type: none"> • Integrate, coordinate, & disseminate research that will be influential in informing policy & practice & will support food security goals • Provide growing world population with secure supply of nutritious food in sustainable way 	<ol style="list-style-type: none"> 1. Provides blog through website Publishes posts that touch on food waste problem across world <ol style="list-style-type: none"> a) "Waste not, want not" (2014) b) "How secure is India's National Food Security Act?" (2015) c) "Where was food in the COP21 Paris Agreement?" (2016) <ul style="list-style-type: none"> • Attracted more than 80,000 page views since 2011 2. Conducted research & published report "Food Waste within Global Food Systems" (2013): Considered food waste problem & possible solutions <ul style="list-style-type: none"> - Explored active & intelligent packaging technologies as one solution • Reached more than 22 million people through radio, newsprint, social media, & TV by 2014 ○ <i>Future work: Build on findings of report & explore multidisciplinary approaches to addressing evidence gaps</i> 3. Undertakes Working on Waste campaign with Institute of Grocery Distribution (IGD) & Waste & Resources Action Programme (WRAP) <ul style="list-style-type: none"> • Influenced retailers & manufacturers to engage with consumers on food waste
	<u>Institution of Mechanical Engineers (IMECHE)</u> <i>Focus: R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Professional global engineering institution • Headquartered in London • Has over 100,000 members in more than 140 countries • Founded in 1847 	<ul style="list-style-type: none"> • Improve world through engineering by inspiring next generation, developing professional engineers, & setting agenda 	<ol style="list-style-type: none"> 1. Conducts research & produces reports for governments Outline policy recommendations on major issues concerning population & climate change <ol style="list-style-type: none"> a) "Global Food: Waste Not, Want Not" (2013): Considered key factors contributing to current level of food waste across world & implications for sustainably supporting projected population growth; provided policy recommendations
	<u>OCED Food Chain Analysis Network (FCAN)</u> <i>Focus: R&D, Best Practices, Policy</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Global network launched by OECD Working Party on Agricultural Policies & Markets in 2010 • Platform for dialogue on issues concerning food chain between government officials, private sector stakeholders, NGOs, & academic experts 	<ul style="list-style-type: none"> • Convene experts in agro-food system analysis, with an emphasis on the potential to gather and exploit data on consumer food expenditures 	<ol style="list-style-type: none"> 1. Hosts annual OECD FCAN Meeting <ul style="list-style-type: none"> • 2013 Meeting considered issue of reducing food waste along supply chain & 2016 Meeting examined reducing food waste in retail & processing sectors in particular - Discussions revolved around issues of definition & measurement, possible causes & solutions, & policy responses • Helped improve data & policy information on food waste, allowed exchange of analysis & best practices, & identified appropriate policy & industry responses to food waste





	<p><u>Say No to Food Waste</u> Focus: <i>Consumer Awareness, R&D</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Global NPO • Founded in 2012 	<ul style="list-style-type: none"> • Make food waste problem known & understood worldwide by raising awareness 	<p>1. Provides blog through website Publishes posts that analyze individual countries' food waste problem & their solutions to problem a) "National Spotlight: Italy" (2016) b) "National Spotlight: Japan" (2016) c) "National Spotlight: South Korea" (2016)</p> <p>2. Creates videos a) "Food Waste – A Global Problem" (2012): Demonstrated current level of awareness about food waste among people from various countries</p> <p>3. Campaigns "EU! Bring back Good Food!": Aim is to help Europe reduce its food waste problem by changing EU Regulation 543/2011 - EU Regulation 543/2011: Sets specific marketing standards on 10 fruits & vegetables sold in Europe & results in edible food being wasted because it does not meet specific aesthetic standards • Petition has gathered 451 signatures from 38 different countries (requires 100,000 signatures) ◦ Future work: Encourage all national European standards to loosen their marketing standards to reduce food waste & increase variety of food available on grocery store shelves</p> <p>4. Conducted research & published study "Food Waste – An Analysis of the Retail Sector" (2012): Revealed main reasons for food waste in developed countries & proposed approaches for reducing it</p>
	<p><u>United Nations Environment Programme (UNEP): Think.Eat.Save.</u> Focus: <i>Consumer Awareness, R&D</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Global programme launched by partnership between UNEP, FAO, & Messe Düsseldorf in 2013 • In support of Zero Hunger Challenge 	<ul style="list-style-type: none"> • Galvanize global, national, & regional action to reduce food loss & waste • Targets food wasted by consumers, retailers, & hospitality industry 	<p>1. Provides Think.Eat.Save website Showcases resources concerning food waste & its reduction</p> <p>2. Provides Think.Eat.Save Guidance Version 1.0 document tool Tool that provides guidance to governments, local authorities, & businesses on designing effective food waste prevention programmes</p> <p>Future work: ◦ Recruit pilot countries & cities without existing frameworks for food waste prevention to test tool ◦ Enrich tool as more countries begin to take on challenge & reap benefits of food waste reduction</p> <ul style="list-style-type: none"> • Think.Eat.Save was theme for 2013 WED • Engaged more than a million participants in awareness-raising activities in its first year
	<p><u>World Business Council for Sustainable Development (WBCSD)</u> Focus: <i>Best Practices</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Global CEO-led organization of forward-thinking companies • Founded in 1995 	<ul style="list-style-type: none"> • Encourage global business community to create sustainable future for business, society, & environment 	<p>1. Runs Clusters a) Sustainable Lifestyles Cluster: Identifies transformative combinations of products & services that enable more sustainable lifestyles - Food loss & waste reduction is one theme</p> <p>2. Undertakes Action2020 project Project that sets agenda for business action on sustainability to 2020 - Food loss & waste reduction is one action Goal: Halve food loss & waste, versus 2009 baseline</p> <p>Future work: ◦ Establish multi-stakeholder group on food loss & waste reduction comprising companies & key organizations ◦ Help companies or coalitions of companies implement programs to identify primary nodes of food loss & waste among supply chains, define food loss & waste reduction targets, & implement solutions</p> <p>3. Developed FLW Standard in partnership with World Resources Institute (WRI), Food & Agriculture Organization of the United Nations (FAO), & United Nations Environment Programme (UNEP) at Global Green Growth Forum (3GF) 2016 Summit</p> <p>4. Joined Champions 12.3 ◦ Future work: Work toward accelerating progress toward achieving SDG Target 12.3</p>



 <p>WORLD RESOURCES INSTITUTE</p>	<p><u>World Resources Institute (WRI)</u> Focus: R&D</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Global research organization Formed in 1982 	<ul style="list-style-type: none"> Create world where actions of government, businesses, & communities combine to eliminate poverty & sustain natural environment 	<p>1. Undertakes World Resources Report Project <i>Project that considers & develops solutions to world's food production problems</i></p> <ul style="list-style-type: none"> Food loss & waste problem is one topic a) "Reducing Food Loss & Waste" (2013): Identified food loss & waste causes & reduction solutions Discussed inadequate packaging as one cause & improved packaging technologies as one solution <p>2. Organized Food Loss & Waste (FLW) Protocol Multi-stakeholder effort to develop global accounting and reporting standard (known as <i>FLW Standard</i>) for quantifying food and associated inedible parts removed from the food supply chain</p> <ul style="list-style-type: none"> Partners include Consumer Goods Forum (CGF), Food & Agriculture Organization of the United Nations (FAO), FUSIONS, United Nations Environment Programme (UNEP), World Business Council for Sustainable Development (WBCSD), & Waste & Resources Action Programme (WRAP) Developed at Global Green Growth Forum (3GF) 2016 Summit Contributes to realizing goals outlined in SDGs Being used by several organizations (including UNEP, FAO, WRAP, & CGF) to measure, report, & reduce food loss & waste <p>3. Joined Champions 12.3 Future work: Work toward accelerating progress toward achieving SDG Target 12.3</p>
	<p><u>World Wildlife Fund (WWF)</u> Focus: Best Practices, Consumer Awareness, R&D</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> World's leading conservation organization Established over 50 years ago to protect the future of nature Works in 100 countries and is supported by more than one million members in the United States and close to five million globally. Combines global reach with a foundation in science, involves action at every level from local to global 	<ul style="list-style-type: none"> Cover a range of conservation areas, including food to double net food availability; freeze its footprint Drive sustainable food systems to conserve nature and feed humanity by increasing supply of more sustainably sourced food, increasing demand of more sustainably sourced food, education and action, and reducing food waste 	<p>1. WWF's Markets Institute works to convene key stakeholders across hospitality, retail and food services sectors <i>Food waste program aims to understand how to accelerate the adoption of strategies to measure and reduce food waste</i></p> <ul style="list-style-type: none"> Promotes data transparency, which will allow companies to benchmark food waste prevention performance with their peers and across industries Focus is measurement and setting baselines Expanded the work to the entire hospitality industry in partnership with the American Hotel and Lodging Association (AHLA) and with support from the Rockefeller Foundation Launched a series of pilot projects designed to test the best techniques, messaging, and engagement strategies for food waste prevention across the industry in early 2017 <p>2. Maximizing Farm Resources Recently launched an effort to determine how much food could be better utilized on farm and post-harvest in partnership with UC Davis and the Global Cold Chain Alliance (GCCA)</p> <ul style="list-style-type: none"> Goal is to better understand the amount and causes of edible and inedible produce that's currently excluded from the value chain Will form baseline measurements for losses and use the WRI Food Loss and Waste Standard for reporting results <p>3. Food Conservation Challenge Works with schools to start grade-level appropriate student food waste audits with School Cafeteria Discards Assessment Project (SCrAP)</p> <ul style="list-style-type: none"> Understand the connection between food choices and wildlife and habitat conservation
	<p><u>Waste and Resources Action Programme (WRAP): Love Food Hate Waste</u> Focus: Packaging Solutions, Consumer Awareness, R&D</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Campaign Based in UK Launched by Waste & Resources Action Programme (WRAP) in 2007 Works with wide range of partners from community organizations, chefs, UK Governments, UK businesses, trade bodies, & local authorities Partners include Food & Drink Federation, Industry Council for Research on Packaging & the Environment (INCPEN), & Packaging Federation 	<ul style="list-style-type: none"> Raise awareness about food waste issue & help individuals take action 	<p>1. Provides informative resources: website, mobile app, newsletter, & social media accounts Offer:</p> <ol style="list-style-type: none"> Tips on how to plan & portion meals & correctly store food Recipes using leftovers <ul style="list-style-type: none"> Helped avoid 670,000 t of food waste across UK since its launch Helped consumers save £1.5 billion worth of food since its launch <p>2. Supports 2 UK high-profile voluntary agreements aimed at reducing food waste</p> <ol style="list-style-type: none"> Courtauld Commitment Voluntary agreement aimed at improving resource efficiency & reducing waste within UK grocery sector <ul style="list-style-type: none"> Completed 3 phases Courtauld Commitment 1 prevented 1.2 million t of packaging & food waste Courtauld Commitment 2 prevented 1.7 million t of packaging & food waste Courtauld Commitment 3 prevented 1.1 million t of packaging & food waste <ul style="list-style-type: none"> Launched Courtauld Commitment 2025




		<p>Voluntary agreement aimed at cutting footprint of UK supply chain by 20% by 2025, versus 2015 baseline</p> <p>b. Hospitality & Food Service Agreement</p> <p>3. Includes initiative “Fresher for Longer”</p> <p>Initiative that highlights important relationship that packaging can play to help reduce food waste</p> <p>- Published work (in partnership with WRAP, INCPEN, & Food & Drink Federation)</p> <p>a) “Consumer Attitudes to Food Waste and Food Packaging” (2013): Report that explored consumers’ attitudes toward food waste & food packaging</p> <p>Findings:</p> <ul style="list-style-type: none"> a. Many consumers do not recognize that packaging protects food in home b. Consumer confidence around storing food is high but can be misplaced - Information on labels & how they are used could both be more effective c. There is noticeable gap between number of consumers who have seen particular packaging innovations & number who say it would be good idea d. There is recognition that food retailers & manufacturers have made progress in recent years to reduce amount of packaging e. Attitudes to packaging shift according to context & mind-set consumers are in f. Consumers’ attitudes to packaging are negative in context of environment g. Concern about packaging reduces in response to more information h. Concern about food waste increases in response to more information i. Concern about packaging does not appear to be compromising action on food waste reduction j. Attitudes toward packaging are linked to ability to recycle <p>• Has been licensed to New Zealand, Canada, & Australia</p>
	<p><u>Value Chain Management International (VCM)</u></p> <p>Focus: <i>Best Practices, R&D</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Food consultancy • Based in Australasia, Europe, & Canada • Pioneer & leader in identifying & reducing food waste along value chain 	<ul style="list-style-type: none"> • Improve profitability & competitiveness of commercial businesses through promoting & enabling management of closely aligned value chains 	<p>1. Detects waste points & finds waste reduction solutions using specialized value chain diagnostic tools</p> <p>2. Participates in waste reduction solution implementation</p> <p>3. Conducts research & publishes reports</p> <p>a) “Food Waste in Canada” (2010): Estimated that food waste in Canada amounts to \$27 billion</p> <p>b) “Cut Waste, GROW PROFIT™” (2012): Explained environmental impacts of food waste & presented examples of how businesses have benefited financially from reducing food waste</p> <p>c) “Cut Waste, GROW PROFIT™ — Food and Associated Wastes” (2013): Expanded on how businesses can benefit financially from reducing food & associated wastes & provided framework that businesses can use to identify & capture opportunities</p> <p>d) “Cut Waste, GROW PROFIT™ — \$27B Revisited” (2014): Revealed that food waste in Canada amounts to \$31 billion</p> <p>e) “Developing an Industry Led Approach to Addressing Food Waste in Canada” (2014) (co-authored with Network for Business Sustainability [NBS] & Provision Coalition): Outlined food loss & waste causes in Canada & identified reduction solutions</p> <ul style="list-style-type: none"> - Discussed inadequate packaging as one cause of food waste (it is responsible for 18% of total food waste in Canada) - Discussed improved packaging technologies as one solution to food waste & how this solution should be integrated into value chain approach to food waste reduction <p>f) “Food Waste: Aligning Government and Industry within Value Chain Solutions” (2016): Revealed how reducing food loss & waste to aid creation of sustainable food industry will rely on significant changes occurring in how industry & government interact</p>

REGIONAL

EUROPE		
	European Commission Focus: Consumer Awareness, Policy, R&D	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none">• Executive body of EU• Responsible for proposing legislation, implementing decisions, upholding EU treaties, & managing day-to-day business of EU• Established in 1958	<ul style="list-style-type: none">• Protect both human & animal health through food safety policy• Look for opportunity to prevent food waste & strengthen sustainability of food system in co-operation with Member States & stakeholders• Provide information on EU actions to tackle food waste	<p><u>1. Cooperates with Member States & stakeholders</u> Analyzes in close cooperation with Member State policy experts, food sector experts, & NGOs how to reduce food waste without compromising food safety & discusses options for possible EU actions</p> <ul style="list-style-type: none">- Expert Group facilitates cooperation with Member States- Working Group on Food Losses & FoodWaste facilitates cooperation with stakeholders <p><u>2. Implemented Resource Efficiency Flagship Initiative of Europe 2020 Strategy</u> Strategy that supports shift toward resource-efficient, low-carbon economy to achieve sustainable growth</p> <ul style="list-style-type: none">- Initiative roadmap sets targets- One target: Halve disposal of edible food waste in EU by 2020- Calls on Member States to improve packaging to reduce edible food waste <p><u>3. Adopted Circular Economy Package</u> Aim: Stimulate Europe's transition toward circular economy that will boost global competitiveness, foster sustainable economic growth, & generate new jobs</p> <ul style="list-style-type: none">- Includes revised legislative proposals on waste- Requires Member States to measure & report on their country's national food waste statistics & to work towards SDG Target 12.3 <p><u>4. Adopted Council Conclusions on food losses & food waste</u> <i>Future work:</i></p> <ul style="list-style-type: none">◦ <i>Elaborate common EU methodology to measure food waste consistently in co-operation with Member States & stakeholders</i>◦ <i>Create EU Platform on Food Losses & Food Waste involving both Member States & actors in food chain to help define measures needed to achieve food waste SDG, facilitate inter-sector co-operation, & share best practices & results</i>◦ <i>Clarify EU legislation related to food waste</i>◦ <i>Facilitate food donation & use of former foodstuffs & by-products from food chain for feed production</i>◦ <i>Examine ways to improve use of date marking by actors in food chain & its understanding by consumers</i> <p><u>5. Conducted research & published studies, reports, & policy statements</u></p> <p><u>6. Raises awareness of food waste prevention</u> Produced communication materials:</p> <p>a) "10 Tips: What can I do in my Daily Life to limit Food Waste?": Article that provided tips to help reduce food waste</p> <p>b) "Better Understanding of Best Before/Use By Dates": Article that explained meanings of "best before" & "use by" dates on food packaging to resolve misunderstanding & prevent household food waste & save money</p> <p>c) "Stop Food Waste" (2012): Video that highlighted large amount of food wasted in EU & inspires EU citizens to take action to prevent food waste</p> <p><u>6. Facilitates exchange of good practice in food waste prevention & reduction</u> Provides webpage compilations of good practice initiatives in food waste prevention & reduction</p> <p><u>7. Funds projects</u> - Generation Awake, FUSIONS, FoRWaRd - Food Recovery & Waste Reduction & REFRESH</p>
	European Commission: FoRWaRd – Food Recovery & Waste Reduction *	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none">• Transnational project• Co-funded by European Commission	<ul style="list-style-type: none">• Reduce food waste & promote unsold food recollection in favour of charities through training plan for representatives of food supply sector• Targets: food suppliers, NGOs, & charitable associations	<p><u>1. Developed training material</u></p> <ul style="list-style-type: none">• Developed free e-learning platform for representatives of food supply sector- Includes brokering platform, e-reading handbooks, & mini-game• Partners tested e-learning platform & results were positive




	<u>European Organization for Packaging and the Environment (EUROPEN)</u> Focus: Packaging Solutions, Policy	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Industry organization presenting the opinion of the European packaging supply chain on topics related to packaging and the environment, without favoring any specific packaging material or system 	<ul style="list-style-type: none"> • Improve environmental performance of packaging & packaged products based on life-cycle thinking • Secure free flow of packaging & packaged goods in Europe • Promote harmonized European & national packaging & packaging waste regulations 	<ol style="list-style-type: none"> 1. Actively contributes to EU policy developments and industry initiatives on food waste reduction. 2. Demonstrate how the packaging supply chain contributes to food waste avoidance and promotes continuous improvement <ul style="list-style-type: none"> - Report "Packaging supply chain's good practices to prevent food waste" (December 2014) - Published "Packaging's contribution to food waste prevention" (July 2013) 3. Worked with other partners to launch the Joint Food Wastage Declaration "Every Crumb Counts"
	<u>Every Crumb Counts</u> Focus: Best Practices, Consumer Awareness, Policy	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Joint declaration involving stakeholders from across Europe's food supply chain • Representatives include European Commission, European Parliament, NGOs, & industry • Signatories include European Organization for Packaging and the Environment (EUROPEN), Flexible Packaging Europe (FPE), Stop Wasting Food, & Plastics Europe • Launched by FoodDrinkEurope (FDE) in 2013 	<ul style="list-style-type: none"> • Prevent edible food waste throughout food chain • Contribute to halving EU edible food waste by 2020 	<ol style="list-style-type: none"> 1. Calls on policymakers to take various actions to prevent edible food waste 2. Raises awareness of food waste & food redistribution channels 3. Contributes to development & dissemination of best practices for food waste prevention 4. Contributes to development of common EU methodology for assessing food waste in EU 5. Encourages food operators to help consumers make better use of information & to provide meanings of "best before" & "use by" dates Relays information provided by European Commission's communication materials to food operators 6. Encourages food & packaging operators to further innovative ways to preserve food quality & safety Promotes operators to examine packaging solutions that increase shelf-life 7. Encourages food operators to explore how to create markets for food & food components that are unusable for quality or cultural reasons but are still edible
	<u>Flexible Packaging Europe (FPE)</u> Focus: Packaging	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Forum for flexible packaging industry • Based in Europe • Partners include European Commission, European Parliament, Council of Europe, European Organization for Packaging and the Environment (EUROPEN), Plastics Europe, & SAVE FOOD 	<ul style="list-style-type: none"> • Promote flexible packaging industry by providing information to authorities about industry to help facilitate legislation - Information revolves around 3 topics: food contact, environment, & sustainability 	<ol style="list-style-type: none"> 1. Communicates & works with relevant EU associations & industry representatives 2. Participates in relevant EU working groups & committees 3. Undertakes Life Cycle Assessments (LCAs) <ol style="list-style-type: none"> a) "LCA of Packed Food Products: The Function of Flexible Packaging" (2008): Conducted life cycle assessment of coffee pouch, frozen spinach bag, & butter pack, & found that flexible packaging can reduce environmental impacts of these products by preventing spoilage & reducing waste
	<u>Food Use for Social Innovation by Optimizing Waste Prevention Strategies (FUSIONS)*</u> Focus: Consumer Awareness, Policy, R&D	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • 4-year project that ran from 2012 to 2016 • Based in Europe • Funded by European Commission • Members included Food & Agriculture Organization of the United Nations (FAO), ForMat, Stop Wasting Food, & Waste & Resources Action Programme (WRAP) 	<ul style="list-style-type: none"> • Harmonize definitions & methods of food waste monitoring in Europe • Improve understanding of how social innovation can reduce food waste • Develop guidelines for common Food Waste Policy for EU-27 - Support European Commission's target to halve disposal of edible food waste in EU by 2020 	<ol style="list-style-type: none"> 1. Assessed food waste quantities & trends in food waste prevention & reduction <ul style="list-style-type: none"> • Developed definitional framework for food waste - Report: "FUSIONS Definitional Framework for Food Waste" (2014) • European Commission will use FUSIONS's definitional choices to enhance comparability, transparency, & reliability of food waste estimates & to harmonize datasets • Identified food waste drivers & opportunities to reduce these - Report: "Drivers of Current Food Waste Generation, Threats of Future Increase and Opportunities for Reduction" (2014) • Established Food Waste Quantification Manual to enable assessment of food waste amounts - Welcomed by Council of European Union in its Council Conclusions 2. Established European FUSIONS Multi-stakeholder Platform <i>Interactive workshops to bring different actors together & facilitate dialogue</i> <ul style="list-style-type: none"> • More than 100 stakeholders were members





		<ul style="list-style-type: none"> • 20 workshops were organized <p>3. Established recommendations for Common EU Policy, with focus on social innovation</p> <ul style="list-style-type: none"> • Conducted extensive literature review on legislation & policy driving food waste generation & reduction • Created database of relevant European & national legislation & policy documents • Held Social Innovation Camp in 2014 - Brought together participants to generate set of new ideas & best practices that could be supported by policies promoting social innovations in food waste prevention & reduction • Delivered Resource Efficiency Flagship Initiative of Europe 2020 Strategy roadmap <p>4. Tested how social innovation can help reduce food waste</p> <ul style="list-style-type: none"> • Examined existing social innovations that help reduce food waste - Report: "Policy Options to Stimulate Social Innovation Initiatives addressing Food Waste Prevention & Reduction" (2016) • Tested new social innovation ideas • Evaluated their impacts on reducing waste - Report: "Social Innovation Projects to reduce Food Waste: Key Recommendations for Policy Makers" (2016) <p>5. Raised awareness of food waste prevention</p> <p>Used website, social media, & live events & presentations across EU</p> <ul style="list-style-type: none"> • Distributed 7 newsletters to ~200 members • Participated at over 100 events • Generated diverse media coverage
	<p>Live Well for Life*</p> <p>Focus: Consumer Awareness, Policy, R&D</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Full project title is LiveWell Plate for Low Impact Food in Europe • €2.07m project occurred from October 2011 – June 2015 • Project partners were WWF-UK and Friends of Europe • Partly financed with contribution of the LIFE programme – the EU's funding instrument for the environment 	<ul style="list-style-type: none"> • Focus is on mitigating greenhouse gas emissions, but it incorporates health, socio-cultural, economic and qualitative elements as well • Project aimed to demonstrate sustainable diets for EU Member States, promote a supportive policy environment, develop tangible pathways for the implementation of sustainable diets, and disseminate this knowledge widely across the EU 	<p>1. Mapped what sustainable diets could look like for each pilot country - France, Spain and Sweden</p> <p>LiveWell Plates were developed for each pilot country as sustainable diet case studies in 2012</p> <ul style="list-style-type: none"> - Consulted with Network of European Food Stakeholders on viability of these as tools to define and communicate sustainable diets in Europe at September 2012 workshop • Presented results in "A balance of healthy and sustainable food choices for France, Spain and Sweden" (February 2013) <p>2. Investigated the barriers and opportunities for sustainable diets</p> <p>Investigated the social and economic challenges and opportunities for the adoption of sustainable diets across the EU</p> <ul style="list-style-type: none"> - Conducted one-to-one interviews with Network members at second workshop in March 2013 • Presented results in "Adopting healthy, sustainable diets: key opportunities and barriers" (May 2013) <p>3. Build policy recommendations and practical pathways to implement sustainable diets</p> <p>Worked with members of the network to build policy options and pathways for practical implementation of LiveWell and sustainable diets</p> <ul style="list-style-type: none"> - Third workshop in June 2014 and presented results in "On our plate today: healthy, sustainable food choices" (December 2014)
	<p>Plastics Europe</p> <p>Focus: Packaging Solutions</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Leading trade association • Based in Europe • Has centers in Brussels, Frankfurt, London, Madrid, Milan, & Paris 	<ul style="list-style-type: none"> • Highlight plastic's beneficial properties & positive contributions to sustainable development • Provide society with educational information • Liaise with European & national institutions in policy matters 	<p>1. Conducts research & publishes reports & position documents</p> <p>a) "Plastic Packaging: Born to Protect" (2012): Explained how plastic packaging prevents & reduces food waste & protects environment</p> <p>b) "Plastics Save Foods" (2013-2016): Highlighted environmental impacts of food waste, explained how plastic packaging helps cut food waste, & offered key recommendations for policy makers</p> <p>Key recommendations provided in 2015 document:</p> <ol style="list-style-type: none"> Support mandatory food waste reduction target in revised proposal on waste in Circular Economy Package Acknowledge role of packaging in strategies to reduce food waste Set ambitious but realistic plastic packaging recycling targets <p>Key recommendations provided in 2016 document:</p> <ol style="list-style-type: none"> Acknowledge role of packaging in strategies to reduce food waste Set ambitious but realistic plastic packaging recycling targets Do not favour recyclability over prevention in Extended Producer Responsibility (EPR) schemes in Circular Economy Package <p>2. Provides education portal through website</p>


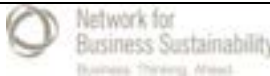

	<u>Zero Waste Europe (ZWE)</u> <i>Focus: Best Practices, Policy</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Independent initiative • Based in Europe • Active since 2011 but formally registered in 2013 	<ul style="list-style-type: none"> • Empower communities to rethink their relationship with resources - Support local groups with independent knowledge & streamlined tools to drive change more efficiently - Structure movement internationally to better represent interests of our communities at EU level & engage policy makers with unified voice 	<ol style="list-style-type: none"> <u>1. Hosts annual General Meeting</u> <i>Space for discussing policy positions & networking amongst other campaigners</i> <u>2. Conducts research & publishes reports & case studies</u> Advocate for culture change, community engagement, & infrastructure change (separate waste collection) to reduce waste, including food waste <u>3. Conducts research & publishes position papers</u> a) <u>"The Circular Economy Package and European Food Waste Policy" (2016):</u> Expressed concern over potential lack of effectiveness of food waste reduction actions outlined in revised Circular Economy Package, & proposed recommendations for implementation of robust actions: <ol style="list-style-type: none"> a. Re-introduction of EU-specific food waste reduction target of at least 30%, & accounting for food waste over full supply chain b. Inclusion of farm-to-fork food waste measurement, including pre-farm gate waste, with roadmap for bringing in targets for pre-farm gate waste by 2020 c. Embedding of Food Waste Hierarchy in all food waste reduction measures & allowing diversion of food waste to livestock feed <u>4. Provides news channel & blog through website</u> <ul style="list-style-type: none"> • Criticized revised Circular Economy Package for eliminating food waste reduction targets & being too weak <u>5. Launched "Zero Waste Cities" map</u> <i>Map of European municipalities committed to moving toward zero waste</i> Aim: Increase visibility & accountability of cities that have committed to moving toward zero waste
NORTH AMERICA		
	<u>Commission for Environmental Cooperation (CEC)</u> <i>Focus: Best Practices, Policy, R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • The North American Agreement on Environmental Cooperation (NAAEC) established the Commission for Environmental Cooperation (CEC) in 1994 to support cooperation among the NAFTA partners to address environmental issues of continental concern • An intergovernmental organization between Canada, Mexico and the United States 	<ul style="list-style-type: none"> • To enhance the capacity in the three countries for reducing the disposal of food waste in landfills by exploring opportunities to achieve food waste reduction and recovery within relevant North American industry, commercial and institutional sectors. 	<ol style="list-style-type: none"> <u>1. Launched North American Initiative on Food Waste Reduction and Recovery in 2015 to gather foundational knowledge and information to better understand the current situation of food waste reduction and recovery in North America</u> <ul style="list-style-type: none"> • Consolidating knowledge and information regarding the amounts, types, sources, and causes of food waste in the food supply chain, and describing relevant North American and international government policies and incentives to support food waste reduction • Establishing a network of experts in food waste reduction and recovery in the three countries <u>2. Encourage food waste reduction and recovery in relevant North American industry, commercial and institutional (IC&I) sectors</u> <ul style="list-style-type: none"> • Identifying approaches to measure, track and report on food waste reduction and recovery in relevant IC&I sectors, based on existing approaches and methodologies • Identifying current practices and processes to achieve food waste reduction and recovery for IC&I <u>3. Identify opportunities to further advance food waste reduction and recovery in North America</u> <ul style="list-style-type: none"> • Identifying gaps, challenges, recommendations and strategies to advance food waste reduction and recovery in North America • In March 2017, hosted a North American Workshop on Food Waste Reduction and Recovery in Toronto, ON to share and discuss relevant approaches and opportunities for reducing food waste, and provide a forum to critique the three draft reports and draft white paper produced <u>4. Share knowledge on food waste reduction</u> <ul style="list-style-type: none"> • Developing a clearinghouse mechanism or online information-sharing platform to communicate knowledge, approaches, tools and opportunities for food waste reduction and recovery • Translating project outputs intended for public dissemination ◦ <i>Future work: Finalization of the draft reports and white paper, based in part on recommendations from the North American Workshop and other stakeholder organizations</i>
	<u>PAC Food Waste</u> <i>Focus: Packaging Solutions, Best Practices</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Initiative of PAC, Packaging Consortium • Covers Canada & U.S. • Member of SAVE FOOD • 50 members across the packaging value chain 	<ul style="list-style-type: none"> • Maximize reduction of food waste through prevention & extension of shelf life utilizing sustainable packaging solutions - Investigate causes of food waste 	<ol style="list-style-type: none"> <u>1. Identifies & builds inventory of global packaging case studies for food waste reduction</u> Covers entire food value chain, beginning with producers & ending with post-consumer disposal of packaging & waste <ul style="list-style-type: none"> • Published executive summary of 19 case studies in January 2017 ◦ <i>Future work: Collaborate with AMERIPEN on expanding and soliciting more case studies</i> <u>2. Provides informative newsletters through website</u>



<ul style="list-style-type: none"> Launched in December 2013 	<ul style="list-style-type: none"> Identify packaging opportunities for innovation Extend product shelf life Inform & educate broader community 	<p>3. Updates Who's Who report of companies, organizations, & associations engaged in packaging & food waste prevention & reduction</p> <p>Aim: Increase understanding of current food waste reduction initiatives & facilitate networking & collaboration across packaging & food supply value chains to help reduce food waste</p> <p>4. Conducted LCA study on single serve coffee</p> <p>"Packaging, Food Waste, and the Environment: A Coffee Case Study" (2015): Determined that using single-serve coffee systems instead of bulk brewing coffee systems reduces coffee waste & offers environmental benefits</p> <p>Aim: Create synergy with PAC NEXT initiative & to develop better understanding of relationships between North American packaging & causes of food waste along food value chain</p> <p>o Future work: Explore opportunities for new LCA studies</p>
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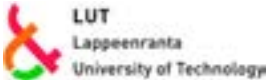

NATIONAL





AUSTRALIA		
 <p>Australia Institute* Focus: R&D</p>		
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Public policy think tank Based in Australia Formed in 1994 	<ul style="list-style-type: none"> Inform public debate on range of economic, social, & environmental issues & bring greater accountability to democratic process through policy research 	<p>1. Conducted research & published report</p> <p>"What a Waste: An Analysis of Household Expenditure on Food" (2009): Examined how much food Australian households are wasting, which households types are wasting largest amount of food, & what are motivations behind behavior</p>
 <p>Australian Food and Grocery Council Focus: Best Practices, Policy</p>		
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Industry association Based in Australia Represents manufacturers & suppliers behind Australia's food, beverage, & grocery brands Founded in 1995 	<ul style="list-style-type: none"> Reduce total waste generated within its operational control Work with retailers & consumers to reduce food waste across supply chain 	<p>1. Conducted research & published reports</p> <p>a) "Towards Sustainability" (2007-8) & "Future of Packaging White Paper" (2012): Acknowledged that food waste has severe environmental impacts & that packaging can play important role in minimizing food waste</p> <p>2. Partner of Love Food Hate Waste program</p> <p>Promotes program</p> <p>o Future work: Partner with Coriolis Consulting Corporation to lead initiative to identify collaborative opportunities to reduce waste between all value chain participants from field to shelf</p> <p>3. Developed Sustainability Commitment</p> <p>10 year strategy that sets clear objectives, targets, metrics, & case studies that will shape future direction of food & grocery manufacturing industry's performance across water, energy & emissions, packaging, & social & sourcing indicators</p> <ul style="list-style-type: none"> Includes target of reducing waste (including food waste) to landfill by 40% by 2020 Reduced waste to landfill by 3.6% by 2012 <p>o Future work: Prepare guide for members on reducing product waste through improved packaging design & procurement</p> <p>- Will include new technologies to minimize food waste in supply chain</p>
 <p>Food Wise Focus: Best Practices, Policy</p>		
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Based in Australia NPO An initiative of Do Something! Partnered with the Government of South Australia 	<ul style="list-style-type: none"> National campaign to reduce the environmental impact of Australia's food consumption Bring together a community of people who love food to create a more sustainable approach to the way food is grown, distributed, consumed and disposed 	<p>1. Create a one-stop food sustainability website where people and organizations can share information</p> <p>Build public understanding of the power of consumers and what can be done to build a better food future</p> <ul style="list-style-type: none"> Includes recipe room, educational tools and helpful information to reduce food waste Developed a series of educational videos on YouTube Shares work on social media



	Royal Melbourne Institute of Technology (RMIT) University <i>Focus: Packaging Solutions, R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Public university Based in Australia Founded in 1887 	<ul style="list-style-type: none"> Examine industry, resource, & lifestyle trends most likely to impact food waste in urban & regional Australia to 2030 Identify primary, secondary, & tertiary packaging insights to help minimize food waste across Australian supply chain 	1. Conducted research & published study "The Role of Packaging in Minimizing Food Waste in the Supply Chain of the Future" (2013): Investigated where waste is being generated in Australia's food supply chains & role of packaging in reducing that waste - Commissioned by CHEP Australia 2. Developed Watch my Waste research project Aim: Measure food waste in hospitality sector & identify why it occurs - Businesses participate through collecting base line data via business operation surveys, conducting regular food waste audits, & taking end of project measurements
CANADA		
	Restaurants Canada <i>Focus: Best Practices, Policy</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> NPO Represents Canada's restaurant & foodservice industry Members comprise 30,000 businesses in every segment of industry Founded in 1944 	<ul style="list-style-type: none"> Unite members to advance full potential of Canada's foodservice industry 	1. Engage with National Restaurant Association in US regarding research methodology Understand challenges associated with understanding sources of food waste in the restaurant industry and how to accurately quantify them. 2. Research and define food donation Research mechanisms to encourage benefits for members (e.g. tax receipts) with FCPC and RCC. 3. Continue to consult with various governments regarding organic waste bans to landfill and proposed IC&I waste management policies, collaborative work with RCC and FCPC on food donation tax credits
	Food & Consumer Products of Canada (FCPC) <i>Focus: Best Practices</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Industry association Represents food, beverage, & consumer products industry Founded in 1959 	<ul style="list-style-type: none"> Further efforts related to products manufactured & sold in Canada Support long-term health of communities across country 	1. Conducted research & published reports a) "Making an Impact: Environmental Sustainability Initiatives in Canada's Food, Beverage, and Consumer Products Industry" (2012): Demonstrated that Canada's food, beverage, & consumer products manufacturers are conserving water & improving energy efficiency while reducing greenhouse gas emissions & encouraging sustainable packaging initiatives - Data was gathered from 32 of Canada's leading food, beverage, & consumer product manufacturers Findings: a. 88% of surveyed companies have environmental strategy in place b. More than 90% have environmental initiatives addressing energy & water reductions c. 88% percent are working to reduce waste b) "FCPC Climate Change Survey Report" (2015): Outlined climate change policies & initiatives to reduce greenhouse gas emissions of Canada's food, beverage, & consumer products industry - Includes food waste initiatives o <i>Future work: Develop Climate Change position, which addresses food waste & responsible packaging</i>
	Food Banks of Canada <i>Focus: Social Responsibility</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Charitable organization Represents & supports food bank network across Canada Network comprises of 550 food banks Founded in 1987 	<ul style="list-style-type: none"> Reduce hunger in Canada by enabling effective food bank community that addresses short-term need for food & longer term solutions 	1. Initiates & runs initiatives a) Global FoodBanking Network b) Capacity Building program Helps to food banks finance acquisition of equipment c) National Food Sharing System Distributes major food donations to provincial centers across Canada • Received & saved more than 12 million lbs of food in 2015 d) Retail Food Program Pairs participating locations of large retailers with local community food banks to ensure that food banks receive regular ongoing supply of food - Part of National Food Sharing system • Received & saved more than 4 million lbs of food in 2015 • Delivered & saved more than 13 million lbs of food to more than 200 local food banks since its inception



		<ul style="list-style-type: none"> Future work: Launch new, multi-faceted initiative that will improve capacity of Canadian food banks by helping them to accept & distribute more food (especially fresh & frozen items), expand partnerships with retail locations, & increase food donations <p>2. Builds partnerships</p> <p>3. Raises awareness through campaigns</p> <p>a) Every Plate Full</p> <p>Runs from May 2 to 8 to raise food & funds required to provide food all summer long</p> <ul style="list-style-type: none"> Raised 718,925 meals in 2015 through online donations & local community funds & food drives <p>4. Conducts research & creates policy recommendations</p>
	<p><u>National Zero Waste Council (NZWC)</u></p> <p>Focus: Consumer Awareness, Policy, Social Responsibility</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Cross-sector leadership initiative Based in Canada Launched in 2013 	<ul style="list-style-type: none"> Act collaboratively with business, government, & community as agent of change for waste prevention & reduction in design, production, & use of goods 	<p>1. Runs working groups including the Food Working Group</p> <p>Brings together representatives of key sectors to collaborate in development of policies, actions, & harmonized approaches that address avoidable food waste</p> <ul style="list-style-type: none"> 22 local governments & Federation of Canadian Municipalities have already indicated their formal support for federal government tax incentive Developed and published the National Food Waste Reduction Strategy, which is built on three pillars <p>a) Policy Change</p> <ul style="list-style-type: none"> Establish a national food waste reduction target Stimulate increased food donations to charities through a tax incentive Reduce confusion over “best before”, “use by”, “sell by” and “expiry” dates Implement local organics disposal bans <p>b) Innovation</p> <ul style="list-style-type: none"> Stimulate innovation in technologies that reduce food waste Support new technologies to recover energy and compost from organics Encourage infrastructure investments to strengthen capacity of charitable sector <p>c) Behaviour Change</p> <ul style="list-style-type: none"> Develop a national food waste reduction consumer campaign Provide educational materials to encourage the separation of food scraps from garbage Provide education and communication materials to support charitable giving of nutritious food <p>Future work:</p> <ul style="list-style-type: none"> Consult with stakeholders on proposed National Food Waste Reduction Strategy Implement elements of strategy
	<p><u>Network for Business Sustainability (NBS)</u></p> <p>Focus: Best Practices, R&D</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> NPO Based in Canada Comprised of international academic experts & business leaders Established in 2005 	<ul style="list-style-type: none"> Enable business sustainability by fostering collaboration between academia & business 	<p>1. Conducts research & publishes reports</p> <p>a) "Developing an Industry Led Approach to Addressing Food Waste in Canada" (2014) (commissioned by Provision Coalition & research managed by Network for Business Sustainability [NBS]): Outlined food loss & waste causes in Canada & identified reduction solutions</p> <ul style="list-style-type: none"> Discussed inadequate packaging as one cause of food waste (it is responsible for 18% of total food waste in Canada) Discussed improved packaging technologies as one solution to food waste & how this solution should be integrated into value chain approach to food waste reduction <p>b) "Industry Lessons on Food Waste" (2014): Provided 5 industry tips to reduce food waste</p> <ul style="list-style-type: none"> Identified packaging optimization by prolonging shelf life of food as one tip to reduce food waste <p>2. Undertook project "Mapping the Food Waste Issue" (in partnership with Provision Coalition)</p> <ul style="list-style-type: none"> Identified key elements of food waste issue in Ontario & nationally: stakeholders, sub-issues, & root causes Co-hosted "Food Waste Working Session" Brought together ~30 key leaders & experts in food waste reduction Supported Provision Coalition in initial phases of setting up Food Waste Working Group
	<p><u>University of Guelph (U of G): Guelph Food Waste Research Project</u></p> <p>Focus: R&D</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Based in Canada Launched in 2014 by group of researchers at U of G who are interested in food waste 	<ul style="list-style-type: none"> Reduce environmental impact of Canadian food system Improve food security 	<p>1. Provides blog through website</p> <p>Publishes posts about food waste problem across world & solutions to problem</p> <ul style="list-style-type: none"> "Copenhagen introduces mandatory separation of household food waste" (2016) "Spain's 'Espigoladors' harvest unwanted crops to feed the hungry" (2016) "Changing our expectations of 'perfect' produce" (2016) <p>2. Hosted workshop on food waste</p>




		<p>Aim: Contribute to research agenda on food waste across value chain in Ontario & contribute to policy conversations on regulation & management of food waste</p> <ul style="list-style-type: none"> • Attended by: <ul style="list-style-type: none"> a. Actors across food value chain who manage food & waste <ul style="list-style-type: none"> - Including producers, processors, transporters, retailers, restaurants, municipal waste managers, & food recovery organizations b. Policy makers who influence decisions about food waste at municipal & provincial scales c. Individuals & organizations who conduct research on food & waste systems • Highlighted 8 priority areas for action: <ul style="list-style-type: none"> a. Reduce consumer & non-consumer food wastes b. Improve household food literacy c. Optimize portion size & packaging (in retail & restaurant sectors) d. Clarify & improve food labeling e. Incorporate imperfect foods f. Increase food diversion for human consumption g. Recover food waste for non-human use h. Coordinate policy & governance <p>3. Partnered with City of Guelph & York Region to study household food waste</p>
	<p><u>Provision Coalition</u> Focus: <i>Best Practices</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Public policy collaboration group • Based in Canada • Comprised of 12 member associations across food & beverage manufacturing sector • Founded in 2010 	<ul style="list-style-type: none"> • Work with members, food & beverage industry, government & industry stakeholders to help Canada's food & beverage manufacturing sector enjoy benefits & opportunities that come with operating in sustainable manner 	<p>1. Conducts research & publishes reports</p> <p>a) "Developing an Industry Led Approach to Addressing Food Waste in Canada" (2014) (commissioned by Provision Coalition & research managed by Network for Business Sustainability [NBS]): Outlined food loss & waste causes in Canada & identified reduction solutions</p> <ul style="list-style-type: none"> - Discussed inadequate packaging as one cause of food waste (it is responsible for 18% of total food waste in Canada) - Discussed improved packaging technologies as one solution to food waste & how this solution should be integrated into value chain approach to food waste reduction <p>2. Undertook project "Mapping the Food Waste Issue" (in partnership with NBS)</p> <ul style="list-style-type: none"> • Identified key elements of food waste issue in Ontario & nationally: stakeholders, sub-issues, & root causes - Co-hosted "Food Waste Working Session" • Brought together ~30 key leaders & experts in food waste reduction <p>3. Provides sustainability portal through website</p> <p>Portal that offers valuable resources & industry tools to help manufacturers increase sustainability of business operations</p> <ul style="list-style-type: none"> • Developed new Food Waste Reduction & Best Practices Tool Kit to help clients understand root cause of food waste within their facilities & help them develop solutions to minimize waste <p>4. Conducting initial research to identify opportunities, solutions, & best practices that will be tabled at Canada's 2017 Food Loss & Waste Forum</p> <ul style="list-style-type: none"> - Research funded by Ivey Business School <p>5. Commissioned 2 groups</p> <p>a) Food Waste Working Group: Consists of food & beverage manufacturers & solution providers</p> <p>b) Food Waste Stakeholders Collaborative: Consists of agricultural producers, distributors, retailers, food service, non-government associations, academia, & policy makers</p> <p>Aim of both: Identify opportunities, solutions, & best practices to decrease amount of food waste sent to landfills or composting from food or beverage facilities</p> <p>6. Facilitate technological innovation pilots through work being done at Ippolito Fruit & Produce with P&P Optica to pilot technology-based food waste reduction solution</p> <p>Aim: Demonstrate business value of solutions & develop Canadian case study example</p> <p>7. Provides mentoring & coaching program for food & beverage manufacturing industry</p> <p>Program that offers sustainability education & awareness</p>
	<p><u>Retail Council of Canada (RCC)</u> Focus: <i>Best Practices, Policy</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • NPO • Funded by industry • Represents more than 45,000 store fronts of all retail formats across Canada • Founded in 1963 	<ul style="list-style-type: none"> • Advance, promote, & protect interests of members through effective advocacy, communications, & education 	<p>1. Assesses inventory of landfill bans & regulatory actions across Canada on organics bans</p> <p>2. Works to prevent unsaleables</p> <p>3. Researches & defines food donation (in partnership with FCPC & CRFA)</p> <p>4. Advocates on a variety of sustainability issues</p> <p>Including:</p> <ul style="list-style-type: none"> - Organic disposal bans - Retailer food donation tax credit

DENMARK		
	Stop Wasting Food Focus: Consumer Awareness	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Private, independent, non-profit consumer movement Based in Denmark Partner of SAVE FOOD, FUSIONS, & Think.Eat.Save - Reduce your Footprint Signatory of Every Crumb Counts Launched in 2008 	<ul style="list-style-type: none"> Increase public awareness of throwaway society to reduce food waste 	<p>1. Campaigns</p> <p>a) "Stop Wasting Food" Educational website campaign</p> <ul style="list-style-type: none"> Provides educational films <p>2. Organizes events</p> <p>a) United Against Food Waste Annual event that brings together food manufacturers, retailers, restaurants, educational institutions, & organizations to raise awareness of food waste as social problem</p> <ul style="list-style-type: none"> Largest event against food waste in Denmark Grown beyond Denmark's borders Repeated in Iceland, Sweden, Finland, & Norway in 2014 <p>3. Mobilizes press & media</p> <ul style="list-style-type: none"> Created extensive media impact in Danish & international media Put food waste reduction on agenda in almost all Danish media <p>4. Contributed to several Danish & International publications</p> <p>a) FUSIONS's "FUSIONS Definitional Framework for Food Waste" (2014)</p> <p>b) FAO's "Definitional Framework of Food Loss" (2014)</p> <p>5. Published Leftovers Cookbook "Stop spild af mad - en kogebog med mere" Cookbook that offers recipes using leftovers to reduce food waste</p> <ul style="list-style-type: none"> Includes recipes by Danish top chefs & celebrity food personalities Published by Denmark's biggest publishing agency, Gyldendal Denmark's largest voluntary movement against food waste Backed by thousands of consumers & several major politicians Contributed to 25% food waste reduction in Denmark between 2010 & 2015 Mentioned in 18 Danish & international books & several Danish & international reports <p>o Future work: Establish world's first international Think Tank against food waste</p>
FINLAND		
	Lappeenranta University of Technology (LUT) Focus: Packaging Solutions, R&D	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Pioneering science university Based in Finland Brings together fields of science & business Founded in 1969 	<ul style="list-style-type: none"> Seek solutions to clean energy & water, circular economy, & sustainable business issues through technology & business 	<p>1. Conducts research & publishes work</p> <p>a) "Importance of Considering Food Waste in the Development of Sustainable Food Packaging Systems" (2013): Thesis that examined life cycle assessment of packaging & its impact on food waste</p> <p>b) "The Role of Household Food Waste in Comparing Environmental Impacts of Packaging Alternatives" (2014): Article that examined environmental impacts of food waste & influence that packaging alternatives can have on causing food waste</p>
FRANCE		
	République Française, ministère de l'agriculture, de l'agroalimentaire Focus: Consumer Awareness, Policy	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Government of France 	<ul style="list-style-type: none"> National Pact to combat food waste for 50% reduction by 2025 	<p>1. National Pact brings together 10 State commitments declared in 19 operational measures. The State partners, representing all the players in the food chain, commit themselves to the implementation of 16 priority actions. The State and its partners seek to address the following:</p> <ul style="list-style-type: none"> Encouraging the management of unsold and donated food Reinforcing innovation and partnerships among actors Deploying new communication tools or even better quantifying waste <p>2. Strengthened governance and the creation of six working groups Give new impetus to the fight against food waste and mobilize all actors around operational roadmaps.</p> <ul style="list-style-type: none"> This new anti-waste pact notably includes a commitment by the State to support in 2017 donations of processed meat to food aid associations following the donation of dairy products in 2013, eggs in 2014, and fruit and vegetables and potatoes in 2016.

GERMANY		
	<u>United Against Waste</u> <i>Focus: Consumer Awareness, Policy, R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Based in Germany Initiative for food industry 	<ul style="list-style-type: none"> Develop practical solutions that show that the reduction of food waste is feasible - and also saves money Help companies in the field of out-of-home catering to make the topic of food waste more comprehensible in the everyday kitchen. Active public relations work to ensure that food is seen as a resource and is further put into the public focus. 	<p>1. Workshop Offers workshops to share ideas and approaches to reduce food waste and optimize sustainable business and to considerable costs while protecting the environment - Aimed at managers, chefs and cooks from all areas of community catering</p> <p>2. Waste analysis tool Project aimed to provide systematic insight into actual volumes of food waste in each area - Identify potential – higher efficiency, yield, cost savings and reduction</p> <p>3. Waste management On-site consultation to provide waste measurements and draw conclusions • Carried out comprehensive measurements with more than 60 member companies and used the waste analysis tool to get a detailed insight into the waste disposal in kitchens • Revealed that over-production (25-40%) was particularly widespread. • Leftovers from guests was also a considerable part of the food in the waste (15-30%) • Over-offer at breakfast buffets caused the bulk of the food waste in hotels</p>
IRELAND		
	<u>Stop Food Waste</u> <i>Focus: Consumer Awareness</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Environmental Protection Agency (EPA) initiative Based in Ireland Funded under EPA's National Waste Prevention Programme (NWPP) Launched in 2009 	<ul style="list-style-type: none"> Help reduce food waste by encouraging individuals & families to rethink how to shop for, store, cook, & reuse food 	<p>1. Provides valuable information through website & social media Provides tips on how to shop for, store, cook, & reuse food to prevent & reduce food waste</p> <p>2. Works in conjunction with national programmes & local community networks</p> <p>a) Local Authority Prevention Network (LAPN) b) Green Hospitality Award (GHA) c) Green Homes</p>
NETHERLANDS		
	<u>Passie Voor Food</u> <i>Focus: Best Practices, Consumer Awareness</i>	
Description	Key Objective(s)	Activities
<p>"Passion for Food" is a campaign by the Dutch Central Bureau of Food Trade (CBL).</p>	<p>Collect initiatives of the supermarket sector in the area of sustainability and health</p>	<p>1. Shares news and education on best before dates and food storage practices</p>
NORWAY		
	<u>ForMat ("For Food") *</u> <i>Focus: Best Practices</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> 5-year project that ran from 2009 to 2014 Based in Norway Collaboration between producers, retailers, & research institutions Funded by Ministry of Agriculture, Ministry of Climate & Environment, Ministry of Children, Equality, & Social Inclusion, & Ministry of Trade, Industry, & Fisheries Member of FUSIONS Established in 2009 	<ul style="list-style-type: none"> Help reduce food waste in Norway by 25% by end of 2015, compared with 2010 	<p>1. Conducted annual studies of food waste • Charted & analyzed volume of food waste between 2009 & 2014 Findings: a) Proportion of waste has been greatly reduced at producer stage, but both wholesale & retail sectors have seen slight increase b) Retailers consider food waste reduction to be important for business & there is ongoing work on several types of reduction measures in retail sector • Data compiled is currently only complete statistics on food waste for food manufacturing, wholesale, & retail sectors • Data will be used by government & food sector to sign binding agreement on food waste reduction in 2016</p> <p>2. Communicated & disseminated results, ideas, & experience relevant to avoiding food waste in Norway Shared via education plans at public day-care & public school education</p> <p>3. Networked along value chain on strategies to reduce volume of wasted food Strategies: a) Change date stamp from "use by" to "best before" where justifiable</p>

		b) Provide sizes of consumer packaging that are suitable for both small & large households c) Create good opening & closing mechanisms on consumer packaging that protect product after first-time opening • Enabled Norwegian food waste efforts to be linked with FUSIONS o Future work: Write summary report and will evaluate project as whole
SINGAPORE		
	<u>Nanyang Technology University (NTU)</u> Focus: <i>R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Autonomous university Based in Singapore Established in 1981 	<ul style="list-style-type: none"> Develop accurate & relevant information on scope & causes of food wastage in Southeast Asia 	1. Hosted Expert Working Group Meeting to address food loss & waste in Southeast Asia Aim: Offer tangible plans of action for increasing knowledge & ultimately produce policy-relevant research outcomes Topics: a) Global food wastage b) Extent of vegetable losses & waste c) Methodologies for quantifying wastage at various points in supply chains d) Overview of current state of technologies for addressing food losses & waste e) Private & public sector food wastage prevention measures - Supported by Singapore's National Security Coordination Secretariat (NSCS) 2. Publishes work a) "Expert Working Group Meeting on Food Wastage in Southeast Asia" (2012): Report that provided overview of gaps in food loss & waste research & interventions that were identified at meeting a) Consumer waste is increasing in newly industrialized countries b) Adoption of modern technologies is low & would be beneficial to prevent food waste c) Food waste prevention is priority goal d) New packaging technologies & consumer & retailer incentives will help reduce food waste 3. Signed Collaboration Agreement with National Environment Agency (NEA) to co-fund development of \$40 million Waste-To-Energy (WTE) Research Facility Aim: Help drive Singapore closer to zero waste - Includes testing technology to turn waste (including food waste from campus) & biomass into synthetic gas, which could be used to generate electricity
SWEDEN		
	<u>Konsumentforeningen Stockholm (Stockholm Consumer Cooperative Society) (Kfs)</u> Focus: <i>Consumer Awareness</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Strong independent voice on consumer matters Based in Sweden Consists of more than 700,000 members Established in 1916 	<ul style="list-style-type: none"> Inform general public about food waste problem & help reduce food waste in food chain 	1. Conducts research & publishes work a) "Report from a Slop Bucket" (2009): Report on survey that examined how large portion of food is thrown away unnecessarily, provided explanations as to why, & proposed measures to prevent & reduce unnecessary food waste Findings: a. More than half of household food waste is unnecessary b. Best before date leads to food being discarded unnecessarily c. Date labels are important when shopping Measures: a. Increase awareness & understanding of impact that discarded food has on environment & global food supply b. Increase knowledge of food shelf life, date label meaning, & food storage c. Increase knowledge of how best to take care of buying food for household, use leftover food, & plan weekly menus d. Replace "best before" date label with "keeps until at least" • Started debate on food waste in media & among consumers, government agencies, & food industry - Put it on agenda b) "Swedish People about Food Waste 2010 vs 2015" (2015): Report on survey that examined how public views food waste & "best before" date label - Based on online interviews with 1019 participants Findings: a. More people have paid attention to food waste debate b. Shops, restaurants, & households throw away less food c. Quarter are still careful not to eat food after "best before" date - Reason is concerns about getting sick c) "How do Municipalities reduce Household Food Waste?" (2015): report that investigated how municipalities are working to manage food waste & how they help reduce unnecessary food waste - Based on survey sent to 290 municipalities

		<p>Findings:</p> <ul style="list-style-type: none"> a. Every third audited municipality lacks measureable targets for reducing food waste in their management plans b. Third of municipalities lack any collection of food waste c. Majority of municipalities have implemented projects in schools to reduce unnecessary food waste <p>2. Organized seminars for consumers & food industry</p> <p>3. Undertakes campaign "Släng inte maten" ("Do Not Throw Away Food")</p> <p>Educational website campaign to inform public about unnecessary food waste problem</p> <p>Offers tips on how to reduce food waste</p> <p>Provides teaching materials on food waste education</p> <p>4. Co-initiator of Collaborative Group for Reducing Food Waste</p> <p>Aim: Facilitate information exchange & help implement food waste reduction actions</p> <ul style="list-style-type: none"> - Consists of national network with actors from entire food waste value chain <p>5. Participates as consumer representative in project "Packaging Systems for Reduced Food Waste"</p> <p>Aims:</p> <ul style="list-style-type: none"> a. Develop innovative packaging solutions that reduce food waste along entire value chain b. Show importance of packaging to prevent waste - Innventia coordinates project <p>6. Stakeholder in FUSIONS</p>
UNITED KINGDOM		
	<p>British Plastics Federation (BPF) (formerly Packaging and Films Association)</p> <p>Focus: Packaging Solutions</p>	
Description	Key Objective(s)	Activities
<p>Trade association for UK flexible films and packaging industry</p> <ul style="list-style-type: none"> • Based in UK 	<p>To correct myths and misinformation about plastics in order to achieve a more balanced view of the crucial importance of plastic in every aspect of modern living.</p>	<p>1. Provided a position statement of shelf life extension as it relates to plastic packaging</p>
	<p>Feedback</p> <p>Focus: Consumer Awareness, Social Responsibility</p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Environmental NPO & charity • Based in UK • Established in 2009 	<ul style="list-style-type: none"> • Change society's attitude toward wasting food • End food waste at every level of food system 	<p>1. Campaigns</p> <p>a) "Feeding the 5000"</p> <p>Event that feeds thousands of members of public with free feast made entirely out of food that would otherwise have been wasted & that brings together coalition of organizations that offer food waste solutions</p> <ul style="list-style-type: none"> a. Aims to shine light on global food waste scandal b. Champion food waste prevention & reduction solutions c. Catalyze global movement against food waste • Grown beyond UK's borders - 2 U.S. cities (New York City & Washington) held their inaugural "Feeding the 5000" events in 2016 <p>b) "Gleaning Network"</p> <p>Coordinates volunteers, farmers, & food redistribution charities to salvage thousands of tonnes of fruit & vegetables that are wasted on farms every year across UK & Europe & direct it to people in need</p> <ul style="list-style-type: none"> a. Aims to raise awareness about causes of food waste on farms b. Change retailer policies & consumer cultures that lead to this waste • Gleaned 188 tonnes of produce with over 1,000 volunteers across 99 gleaning days from 2012 to 2015 • Received widespread media coverage - Including Al Jazeera, The Guardian, & BBC News • Expanding to become nationwide project - Now has hubs in London & Essex, Kent, Sussex, the North West, West England, & East England • Began partnership with FoodCycle in 2016 - Will train & empower young people (18-24) to tackle food waste & address social isolation <p>c) "The Pig Idea"</p> <ul style="list-style-type: none"> a. Aims to restore public confidence in safe, efficient, cost-effective, & environmentally friendly practice of feeding surplus food to pigs b. Encourage more use of already legally permissible food waste as pig feed by raising awareness & understanding of this option amongst supermarkets, food businesses, Animal Health officials, & pig farmers c. Change European law to allow food waste to be diverted for use as pig & chicken feed, introduce robust legal framework for its safe processing & use to prevent outbreak of animal diseases

		- Provides valuable information through website & social media d) "FSE Network" European community connecting food surplus entrepreneurs with organizations that are building solutions to food waste Aim: empower citizens to take action
	<u>Industry Council for Research on Packaging and the Environment (INCPEN)</u> Focus: Packaging Solutions	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • NPO • Based in UK • Launched in 1974 	<ul style="list-style-type: none"> • Understand & improve environmental & social impacts of packaged products 	1. Campaigns a) "Fresher for Longer" Highlights importance of packaging to reduce food waste - Works with Packaging Federation & Waste and Resources Action Programme (WRAP) b) "The Good, the Bad, and the Spudly" Consumer Facing Microsite to help people understand that packaging helps to prevent waste & is positive net benefit to environment 2. Conducts research & publishes studies a) "Checking out Food Waste" (2013): Identified top 20 food types that are dumped or reduced-to-clear between depot & checkout Findings: a. These foods account for 22,000 t of wastage in retail supply chain every year b. They are dumped because of damage or spoilage or sold as reduced-to-clear c. Wastage is greatest in fruit, vegetables (especially bananas, berries, & grapes), meat, poultry, & bakery items
	<u>Sustainable Restaurant Association (SRA)</u> Focus: Best Practices, Consumer Awareness	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • NPO • Based in UK • Launched in 2009 	<ul style="list-style-type: none"> • Help food-service businesses to work towards sustainability in their sector • Guide customers toward more sustainable choices 	1. Undertakes campaign "Too Good to Waste" Aim: Raise consumer & industry awareness of scale of restaurant food waste & offer viable alternatives for restaurants - Supplies "doggy boxes" (recyclable & compostable boxes that allow consumers to take home their leftovers) • Won Climate Week Award's Best Campaign in 2012 2. Completed FoodSave project • Helped small- & medium-sized food businesses in London reduce their food waste, put surplus food to good use, & dispose of unavoidable food waste more responsibly Aims: a. Divert more than 1,000 t of food waste from landfill b. Reduce food waste by more than 150 t c. Save businesses over £350,000 associated with waste reduction & disposal • Nearly 100 London hospitality businesses to make collective annual food waste savings of more than 450 t
	<u>Institute of Grocery Distribution (IGD)</u> Focus: Best Practices	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Research & training charity • Based in UK • Service-provider around market intelligence, supply chain expertise, & customer insight • Founded in 1909 	<ul style="list-style-type: none"> • Help food & grocery industry deliver needs of public 	1. Runs Efficient Consumer Response (ECR) UK forum Forum in which separate workgroups look at sustainable supply chain challenges, such as improving on-shelf availability, preventing waste, & increasing efficiency 2. Undertook IGD ECR (Efficient Consumer Response) UK Product & Packaging Waste Workgroup initiative Aims: a. Encourage manufacturers, wholesalers, & retailers to address waste together between factory in-gate & retail checkout b. Prevent waste at source or redistribute it (rather than recycle or recover it) Goal: Eliminate 200,000 t of product & packaging waste from UK supply chain between 2009 & 2014 • Produced waste prevention guide to help industry reduce waste & save costs - Outlines 6 ways to prevent waste & save costs: measure, engage, design, range, forecast, & process, all underpinned by collaboration • Eliminated 260,000 t of waste 2. Undertakes "Working on Waste" ("WoW") Programme (in collaboration Waste & Resources Action Programme [WRAP]) Household food waste programme Aim: Inspire food & grocery industry employees to reduce food waste in their homes

		<ul style="list-style-type: none"> - Includes online food waste toolkit, leftover recipe challenges, Love Food Hate Waste meal plans, WRAP food waste diaries, & 'Food Waste Soldiers' competitions • Reached more than one million individuals nationwide in 2015 • 97% of companies involved in 2015 felt that toolkit was useful • 86% of employees involved in 2015 felt that they learned about reducing household food waste <p><i>Future work:</i></p> <ul style="list-style-type: none"> ◦ Implement food waste reduction master classes in 2016 ◦ Expand programme with social media, digital, in-store, & PR activity <p>3. Hosted 3 debates on household food waste in 2015</p> <ul style="list-style-type: none"> • Brought together experts from across field to discuss how food & grocery industry could help consumers reduce household food waste <p>Three themes:</p> <ol style="list-style-type: none"> a. Technical solutions vs behaviour change: where should companies focus their efforts? b. Role of information versus education: where should companies support? c. Should reducing household food waste be seen as competitive or collaborative for companies? <p>Findings:</p> <ol style="list-style-type: none"> a. Food has value beyond price b. Food waste reduction can offer big net commercial opportunity for industry by building brands c. Household food waste is better understood as consequence of factors rather than behaviour characteristic d. High-level messages about total amount & cost of food waste are not enough to trigger widespread change <p>Recommendations:</p> <ol style="list-style-type: none"> a. Companies & other stakeholders work together to create overarching framework that celebrates every aspect of food's value b. Use technology to facilitate celebration of food, taking personalized approach c. Tailor messages to occasion, keeping it simple in store d. Create value for consumers by being specific with technical food waste reduction solutions & communication <ul style="list-style-type: none"> • Attracted 173 attendees from 99 companies • 80% of debate attendees felt that debates helped improve their awareness of issues associated with need to reduce household food waste • Insight was used to create new thought leadership paper "Celebrating food: the opportunities surrounding household food waste"
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Packaging Federation
Focus: **Packaging Solutions**




Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Representative body for companies & organizations in UK packaging manufacturing sector & associated activities • Partner of Waste & Resources Action Programme's (WRAP's) Love Food Hate Waste campaign 	<ul style="list-style-type: none"> • Promote the economic importance of the industry, the products that it produces, the considerable benefits that derive from the use of packaging and the industry's responsible concern for both the community and the environment 	<p>1. Supported report "Packaging in Perspective" (2007) written by INCPEN Highlighted function of packaging to protect food & prevent waste</p> <p>2. Works with WRAP, Industry Council for Research on Packaging & the Environment (INCPEN), & Food & Drink Federation on WRAP's Love Food Hate Waste "Fresher for Longer" initiative</p>



UNITED STATES









American Chemistry Council (ACC)
Focus: **Packaging Solutions, R&D**



Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Formerly Manufacturing Chemists' Association & Chemical Manufacturers' Association • Industry trade association • Represents companies engaged in business of chemistry • Partners include Flexible Packaging Association (FPA) • Founded in 1872 	<ul style="list-style-type: none"> • Promote interests of companies engaged in business of chemistry through advocacy, using best-in-class member engagement, political advocacy, communications, & scientific research • Foster progress in economy, environment, & society 	<p>1. Sponsors campaign "Plastics make it Possible" Provides informative website, which offers information on innovations using plastic - Includes information on innovations to reduce food waste</p> <p>2. Sponsored TNS Global survey <i>Survey of 1,000 American adults on attitudes toward food waste & packaging</i></p> <p>Findings</p> <ol style="list-style-type: none"> a. 76% throw away leftovers at least once a month b. 53% throw away leftovers every week c. 51% throw away food they bought but never used d. 70% are bothered by amount of food wasted in U.S. e. 79% cite money lost as leading cause of concern f. Only 15% made link between food waste & adverse environmental impacts g. 96% now take one or more steps to prevent food waste h. Only 46% actively use proper packaging to keep food from spoiling

	<u>American Institute for Packaging & the Environment (AMERIPEN)</u> Focus: Packaging Solutions, Policy	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Industry & trade organization Presents opinion of packaging value chain on topics related to packaging & environment Partners include Flexible Packaging Association (FPA) Founded in 2011 	<ul style="list-style-type: none"> Use facts & sound science to develop positions on issues related to packaging & environment for purposes of stakeholder dialogue & governmental interaction Enhance understanding of role packaging plays in more sustainable society, economy, & environment 	<ol style="list-style-type: none"> 1. Published brochures <ol style="list-style-type: none"> a) “Chicken and Packaging: A Sustainable Partnership” (2013) Findings: <ul style="list-style-type: none"> a. There is ~4% food-related waste in U.S. poultry supply chain b. Low figure is largely due to modern packaging c. Chicken packaging is highly efficient b) “Reducing Fresh Food Waste: The Role of Packaging” (2014) Findings: <ul style="list-style-type: none"> a. ~40% of food in U.S. is not consumed b. Annual amount of this waste is staggering 36 million t worth \$162 billion c. Much of this waste is fresh food purchased for home use d. Packaging can reduce food waste by providing product protection, shelf life extension, freshness, nutrition maintenance, & portion control <p>o <i>Future work: Collaborate with PAC Food Waste on expanding and soliciting more case studies</i></p>
	<u>EndFoodWasteNow.org</u> Focus: Consumer Awareness	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Website project of Diane Hatz Based in US Founded in 2012 	<ul style="list-style-type: none"> Help consumers & general public understand more about issues surrounding food that Americans waste in U.S. 	<ol style="list-style-type: none"> 1. Provides informative website Offers: <ul style="list-style-type: none"> a. Information about issues surrounding food waste - Including restaurants, animals, & water b. Tips to reduce food waste c. Links to food waste reduction campaigns, documents, & digital media resources
	<u>United States Environmental Protection Agency (EPA)</u> Focus: Policy, Social Responsibility	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> U.S. federal government agency Proposed by President Richard Nixon Founded in 1970 	<ul style="list-style-type: none"> Protect human health & environment by writing & enforcing regulations based on laws passed by Congress 	<ol style="list-style-type: none"> 1. Provides informative website Offers reasons & ways to reduce food waste - Includes shopping, storage, preparation, & thriftiness tips 2. Developed food recovery hierarchy <i>Hierarchy of recovery options for mitigating food waste to landfills</i> 3. Produced Food Waste Assessment Guidebook Aim: Help food management establishments learn how to do wasted food assessment to identify what is actually being thrown away 4. Produced food & packaging waste reduction toolkits <ol style="list-style-type: none"> a) “Reducing Wasted Food & Packaging: A Guide for Food Services and Restaurants” Aim: Help food service establishments reduce wasted food & packaging & save money - Includes strategies, templates, & case studies b) “The Food: Too Good to Waste” Aim: Help homeowners & communities understand how much food is going to waste in their homes & what they can do to waste less 5. Produced Food Waste Management Calculator <i>Calculator that estimates cost competitiveness of alternatives to food waste disposal, including source reduction, donation, & composting</i> <ul style="list-style-type: none"> Demonstrates that environmentally & socially responsible food waste management is cost-effective for many facilities & waste streams 6. Undertakes Food Recovery Challenge (FRC) <i>Challenge in which organizations pledge to improve their sustainable food management practices & report their results</i> <ul style="list-style-type: none"> - Part of EPA’s Sustainable Materials Management Program (SMM), which seeks to reduce environmental impact of materials through their entire life cycle • 800 FRC participants prevented & diverted nearly 606,000 tons of wasted food from entering landfills or incinerators in 2014 - Of this amount, participants: <ol style="list-style-type: none"> a. Prevented nearly 86,000 t of wasted food from being created through source reduction activities b. Donated more than 88,500 t of food to people in need c. Donated ~159,000 t of food for use as animal feed d. Anaerobically digested more than 22,000 t of food e. Composted over 218,000 t of food



		<p>7. Hosts webinars on sustainable management of food <i>Webinars through which experts from across U.S. offer technical assistance & insight into various food recovery-related topics & best management practices to support work</i> Aim: Provide useful information to FRC participants & endorsers & to others interested in learning about sustainable management of food</p> <p>8. Undertakes U.S. Food Waste Challenge (in partnership with USDA) <i>Platform for leaders & organizations across food chain to share best practices on ways to reduce, recover, & recycle food loss & waste</i></p> <ul style="list-style-type: none"> • Had more than 4,000 participants by 2014, surpassing initial goal of reaching 1,000 participants by 2020 <p>9. Developed first national U.S. food loss & waste reduction goal (U.S. 2030 Food Loss & Waste Reduction goal) (2015) (in partnership with United States Department of Agriculture [USDA]) Goal: Reduce food waste by 50% by 2030, versus 2015 baseline - In alignment with SDGs Target 12.3</p>
	<p><u>Flexible Packaging Association (FPA)</u> Focus: <i>Packaging Solutions</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Association of manufacturers of flexible packaging • Based in US • Leading advocate & voice for U.S. flexible packaging industry • Partners include American Chemistry Council (ACC) & American Institute for Packaging & the Environment (AMERIPEN) • Established in 1951 	<ul style="list-style-type: none"> • Facilitate advancement of flexible packaging industry 	<p>1. Conducts research & publishes studies a) “The Role of Flexible Packaging in Reducing Food Waste” (2014): Compilation of secondary research on global food waste - Includes case studies of how flexible packaging reduces food waste b) “The Value of Flexible Packaging in Extending Shelf Life and Reducing Food Waste” (2014): Explored role of flexible packaging in reducing food waste & examined peer reviewed literature on extended shelf life with flexible packaging Finding from both studies: Flexible packaging reduces food waste if 'systems approach' (looking at both product & packaging) is developed</p> <p>2. Provides informative online magazine Offers news on flexible packaging industry, including food waste reduction measures using flexible packaging</p>
	<p><u>Food Waste Reduction Alliance (FWRA)</u> Focus: <i>Best Practices</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Cross-industry initiative of Grocery Manufacturers Association (GMA), Food Marketing Institute (FMI), & National Restaurant Association (NRA) • Based in US • Includes more than 30 manufacturing, retailing, & foodservice companies along with expert partners from anti-hunger community & waste management sector • Formed in 2011 	<ul style="list-style-type: none"> • Reduce amount of food waste generated • Increase amount of safe, nutritious food donated to those in need • Recycle unavoidable food waste, diverting it from landfills 	<p>1. Measures food waste & publishes reports a) “Analysis of U.S. Food Waste among Food Manufacturers, Retailers, and Restaurants” (2012-2014) Findings from 2014 report: a. Manufacturing respondents reported donating or recycling 95% of food waste b. Retail & wholesale respondents reported donating or recycling 42% of food waste c. Restaurant respondents reported donating or recycling 15% of food waste d. Retail & wholesale respondents generated smallest volume of food waste Opportunities from 2014 report: a. Food manufacturers have opportunity to reduce amount of food waste they generate & to move up food waste hierarchy to increase percentage of food donated b. Food retailers & wholesalers have opportunity to divert more waste from landfills to higher uses c. Restaurants have opportunity to divert more waste from landfills to higher uses & to reduce amount of food waste they generate</p> <p>2. Supports & endorses EPA’s food recovery hierarchy</p> <p>3. Advocates for a. Educational efforts to increase public awareness around food waste issues - Including date labeling, liability protection for donation, & source reduction b. Policies that support development of food waste recycling & donation infrastructure across U.S. c. Policies designed to economically reduce, recover, & recycle food waste d. Increased federal & state tax incentives to encourage food donation & increased liability protection for donors</p> <p>4. Engages with stakeholders working on food waste reduction & food donation in U.S. 5. Conducted survey (2013) Goal: Better understand how much food is donated, how much food is diverted for other uses, & how much food waste is disposed of from manufacturing & retail sectors in U.S. Findings: a. Manufacturing sector donated 2%, recycled 95%, & disposed of 3% of food b. Retail sector donated 13%, recycled 28%, & disposed of 59% of food</p> <p>6. Developed Best Practices & Emerging Solutions Guides Guides that highlight successful food waste reduction case studies & provide guidance for manufacturers & retailers on how to reduce food waste</p> <p>7. Partner of U.S. Food Waste Challenge 8. Supports & endorses U.S. 2030 Food Loss & Waste Reduction goal</p> <p><i>Future work:</i></p>



		<ul style="list-style-type: none"> ○ Increase food donation ○ Collect food waste data through assessment survey ○ Create tools for waste reduction ○ Streamline date labeling to decrease consumer confusion ○ Share best practices on source reduction, food donation, composting, & anaerobic digestion
	Foodservice Packaging Institute (FPI) <i>Focus: Packaging Solutions</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Trade association • Based in US • Leading authority for North American foodservice packaging industry • Established in 1933 	<ul style="list-style-type: none"> • Encourage responsible use of all foodservice packaging through promotion of its benefits & members' products • Serve as voice of foodservice packaging industry to educate & influence stakeholders • Provide legal forum to address challenges & opportunities facing foodservice packaging industry 	1. Produced Foodservice Packaging Recovery Toolkit (2014) Aim: Help communities, material recovery facilities, & end markets reduce waste & potentially generate new revenue by recovering foodservice packaging Features: <ul style="list-style-type: none"> a. Case studies highlighting successful programs b. Interactive maps spotlighting potential end markets for foodservice packaging materials 2. Studies benefits of collecting & processing compostable foodservice packaging & food scraps 3. Works with stakeholders to expand commercial composting infrastructure 4. Provides input to Food Waste Reduction Alliance (FWRA) on packaging issues
	Michigan State University (MSU): Center for Packaging Innovation and Sustainability (CPIS) <i>Focus: R&D, Packaging Solutions</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Research center in School of Packaging at MSU • Based in US • Brings together university scholars, students, & practitioners to address issues associated with sustainability • Leader in research & outreach related to packaging innovation & sustainable systems • Established in 2010 	<ul style="list-style-type: none"> • Provide cutting-edge research that will create innovative concepts in packaging & distribution & improve environmental impact of both based on scientific criteria 	1. Conducts research 5 main areas: <ul style="list-style-type: none"> a. Role of packaging in promoting sustainability b. Innovation for improved sustainability c. Integrated end-of-life solutions d. Improving lifecycle assessment methodology for validating sustainability of packaging systems e. Enhancing safety of packaging Research projects: <ul style="list-style-type: none"> a) Unsaleables are Unsustainable (2015): Developed means for manufacturers & retailers to collect useful data & to measure how specific packaging & supply chain initiatives impact food waste & unsaleables (such as damaged packages, past-date products, & new product introductions) b) Optimizing the Environmental Performance of Food Product-Packaging Systems (2017): Develop life cycle assessment model capable of evaluating full-system environmental trade-offs between packaging design & food waste 2. Provides outreach materials <ul style="list-style-type: none"> a. Research update seminars b. Bi-annual publication of significant new information & reviews c. Web-based resource center providing broad range of information related to sustainable packaging d. Research database on sustainability 3. Facilitates education in sustainable packaging <ul style="list-style-type: none"> a. Develops undergraduate course materials related to sustainable packaging b. Develops online courses & training materials in sustainable packaging suitable for packaging professionals
	Natural Resources Defense Council (NRDC) <i>Focus: Consumer Awareness, Policy, R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> • Non-profit environmental advocacy group • Based in US • Founded in 1970 	<ul style="list-style-type: none"> • Address threats to health & environment 	1. Conducts research & publishes reports <ul style="list-style-type: none"> a) "Wasted: How America is losing up to 40 Percent of its Food from Farm to Fork to Landfill" (2012): Provided extensive data on food losses through U.S. supply chain b) "The Dating Game: How Confusing Food Date Labels lead to Food Waste in America" (2013): Addressed expiration date myths & regulation issues concerning "sell by," "use by," & "best before" dates 2. Launched "Save the Food" campaign (in partnership with Advertising Council) Major national public service campaign to combat food waste from consumers Aim: Help reduce waste in U.S. & help save money, water, & energy




		Includes print, T.V., & social media advertising Provides informative website, which offers: - Food shopping, meal-planning, & food storage tips - Recipes using leftovers - Information on meanings of “sell by,” “use by,” & “best before” dates
	<u>Rethink Food Waste through Economics and Data (ReFED)</u> <i>Focus: Best Practices, Consumer Awareness, R&D, Packaging Solutions</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Coalition of more than 30 business, non-profit, foundation, & government leaders committed to reducing food waste in U.S. Formed in 2015 	<ul style="list-style-type: none"> Create Roadmap to Reduce U.S. Food Waste First national economic study & action plan driven by multi-stakeholder group committed to tackling food waste at scale Aim: fill gap between awareness & action by creating transparency in waste flows, costs, & opportunities of more efficient food system achieved by preventing, recovering, & recycling food waste 	<p><u>1. Conducted research & published “A Roadmap to Reduce U.S. Food Waste by 20%” (2016) Report that provides guidance & practical solutions for foundations, investors, businesses, governments, & farmers to achieve 20% reduction in food waste in U.S. by 2030</u></p> <ul style="list-style-type: none"> Highlights 27 solutions to prevent, recover, & recycle food waste: Top 3 solutions with the greatest Economic Value per ton all utilize prevention: Standardized Date Labeling, Consumer Education Campaigns, and Packaging Adjustments. <p>Findings:</p> <ol style="list-style-type: none"> Food was is solvable problem Fighting food waste can drive profits, create jobs, relieve hunger, & benefit environment Consumers stand to gain billions every year Number of meals recovered to feed hungry can double Restaurants & foodservice industries will profit from reducing food waste Scaling up food recycling in few large cities can prevent millions of tons of waste Collaboration is necessary <ul style="list-style-type: none"> National Resources Defense Council (NRDC) helped guide research Puts U.S. on target to reach U.S. 2030 Food Loss and Waste Reduction goal <p><u>2. Launched the Food Waste Innovator Database</u></p> <ul style="list-style-type: none"> Living compilation of commercial and nonprofit entities in the food waste innovation sector, broken down by food waste solution type, organizational status, and geographic reach
	<u>Rochester Institute of Technology (RIT)</u> <i>Focus: R&D, Packaging Solutions</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Private doctoral university Based in US Established in 1829 	<ul style="list-style-type: none"> Prepare students to become successful professionals within global society 	<p><u>1. RIT's College of Applied Science & Technology (CAST) offers Packaging Science program</u></p> <p>Provides:</p> <ol style="list-style-type: none"> Significant theoretical foundation coupled with extensive design & project experience throughout curriculum Packaging laboratories <ul style="list-style-type: none"> Offers academic support & commercial package testing services <p><u>2. RIT's Department of Packaging Science hosted 2014 PAC Food Waste Forum</u></p> <p>Forum focused on projects:</p> <ol style="list-style-type: none"> Compiling food waste reduction case studies Developing listing of companies focused on improving sustainable packaging toward decreasing food waste & reviewing best practices
	<u>The Rockefeller Foundation</u> <i>Focus: Best Practices, R&D, Social Responsibility</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Established in 1913 Based in US 	<ul style="list-style-type: none"> To promote the well-being of humanity throughout the world Work at the intersection of four focus areas—advance health, revalue ecosystems, secure livelihoods, and transform cities 	<p><u>1. Launched \$130 million YieldWise initiative in January 2016 to demonstrate how the world can cut food waste and loss by half by 2030</u></p> <p>Reducing post-harvest food loss for African farmers</p> <ul style="list-style-type: none"> Initially focus on fruits, vegetables, and staple crops in Kenya, Nigeria, and Tanzania, where up to half of all food grown is lost <p><u>2. Announced collaboration with private-public partnership to create an online hub titled, “Further With Food: Center for Food Loss and Waste Solutions”</u></p> <p>Furtherwithfood.org provides exchange of information and solutions that can help realize the U.S. national goal of cutting food waste in half by 2030</p> <ul style="list-style-type: none"> Supported by a public-private partnership composed of the Academy of Nutrition and Dietetics, Feeding America, the Food Marketing Institute, the Grocery Manufacturers Association, the Innovation Center for U.S. Dairy, the National Consumers League, the National Restaurant Association, Natural Resources Defense Council, the U.S. Department of Agriculture, the U.S. Environmental Protection Agency, the World Resources Institute, and the World Wildlife Fund. Aimed for stakeholders such as businesses, government entities, investors, NGOs, academics, and individuals Stimulates widespread adoption of proven solutions and enables coordination among stakeholders and will reduce duplication of efforts.

 <p>Center for Sustainable Systems</p>	<u>University of Michigan: Center of Sustainable Systems (CSS)*</u> Focus: <i>R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Formerly National Pollution Prevention Center Research center in School of Natural Resources & Environment at University of Michigan Based in US Established in 1999 	<ul style="list-style-type: none"> Advance concepts of sustainability through interdisciplinary research & education 	<ol style="list-style-type: none"> Developed factsheet on U.S. food system (2013) Factsheet that examined trends of U.S. food system Findings: <ul style="list-style-type: none"> 21% of edible food available is wasted at consumer level 2% of total annual energy use in U.S. is used to produce food that is later wasted Much of household waste is due to spoilage Many foods that are still safe are thrown out due to confusion about “sell-by” & “use-by” dates Recommendations for consumers: <ul style="list-style-type: none"> Buy in smaller sizes Plan meals better Use shopping lists to prevent overbuying Freeze more leftovers
	<u>United States Department of Agriculture (USDA)</u> Focus: <i>Consumer Awareness, R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> U.S. federal government agency Responsible for developing & executing federal laws related to farming, agriculture, forestry, & food Formed in 1862 	<ul style="list-style-type: none"> Meet needs of farmers & ranchers Promote agricultural trade & production Work to assure food safety Protect natural resources Foster rural communities End hunger in U.S. & internationally 	<ol style="list-style-type: none"> Undertakes U.S. Food Waste Challenge (in partnership with United States Environmental Protection Agency [EPA]) Platform for leaders & organizations across food chain to share best practices on ways to reduce, recover, & recycle food loss & waste <ul style="list-style-type: none"> Had more than 4,000 participants by 2014, surpassing initial goal of reaching 1,000 participants by 2020 Developed first national U.S. food waste reduction goal in 2015 (in partnership with EPA) Goal: Reduce food waste by 50% by 2030, versus 2015 baseline <ul style="list-style-type: none"> In alignment with SDGs Target 12.3 Launched FoodKeeper App (in partnership with Food Marketing Institute & Cornell University) App that provides consumers with easy access to clear, scientific information on food storage, proper storage temperatures, food product dating, & expiration dates to reduce food waste <ul style="list-style-type: none"> Also available on FoodSafety.gov for those who do not have access to smart phones or tablets Launched Food Waste section on ChooseMyPlate.gov Section that provides infographic “Let’s Talk Trash” Offers: <ul style="list-style-type: none"> Facts about food waste & loss Tips on ways to reduce food waste at home Researches edible & biodegradable food packaging Creating prototype film samples of edible & biodegradable food packaging made from milk proteins <ul style="list-style-type: none"> Films look similar to plastic wrap but are 500 times better than plastics at keeping oxygen away from food

LOCAL

	<u>FareShare</u> Focus: <i>Social Responsibility</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Charity Based in London, UK Member of Global FoodBanking Network (GFN) Formed in 2004 	<ul style="list-style-type: none"> Relieve food poverty & reduce food waste in UK 	<ol style="list-style-type: none"> Rescues good quality food for charities & community groups <ul style="list-style-type: none"> Saved 9,070 t of food from waste in 2015 Redistributed enough food for 18.3 million meals in 2015 Won "Britain's Most Admired Charity" award in 2010
	<u>FoodCycle</u> Focus: <i>Social Responsibility, Consumer Awareness</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Charity Based in London, UK Formed in 2009 	<ul style="list-style-type: none"> Reduce food poverty & social isolation by serving tasty, nutritious meals to those in need 	<ol style="list-style-type: none"> Rescues surplus food & creates meals using food for people at risk of food poverty & social isolation in London <ul style="list-style-type: none"> Served more than 150,000 meals since 2009 Saved more 178,000 kg of surplus food since 2009 Provides informative website

		<p>Offers:</p> <ol style="list-style-type: none"> Tips on ways to reduce food waste at home Recipes using leftovers Worked with Love Food Hate Waste & Recycle for London to encourage consumers to consider their use of resources more carefully <u>4. Works with all major UK supermarkets to help them minimize food waste & then prioritize human needs above other methods of discarding surplus food</u> <ul style="list-style-type: none"> Supports United States Environmental Protection Agency's (EPA's) food recovery hierarchy Works with FareShare, Waste & Resources Action Programme (WRAP), & Department for Environment, Food, & Rural Affairs (DEFRA) to divert as much food as possible from landfill <u>5. Sits on London Food Board</u> <p>Helps to create new guidance for supermarkets on food waste policy in London</p>
	<p><u>Food Recovery Network</u> Focus: <i>Social Responsibility, Consumer Awareness</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Launched in September 2011 Largest student movement against food waste and hunger in US Founded as a student group at the University of Maryland 	<ul style="list-style-type: none"> Continue to transform the way communities view and handle surplus food with hopes that food recovery will become as commonplace as recycling. 	<p><u>1. Unites students on college campuses to fight food waste and hunger by recovering surplus food from their campus communities and donating it to those in need</u></p> <ul style="list-style-type: none"> More than 3,000 student volunteers who partner with more than 260 hunger-fighting community partners and work with more than 340 food donors in 2016 Recovered and donated more than 1.8 million pounds of food that otherwise would have gone to waste
	<p><u>Found Nova Scotia</u> Focus: <i>Social Responsibility, Consumer Awareness</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Based in Nova Scotia, Canada Currently funded by The Impact Youth Sustainability Fund under the The Co-operators IMPACT! Youth Program for Sustainability Leadership 	<ul style="list-style-type: none"> Strives to reduce food waste by gathering and sharing forgotten fruits and vegetables in Nova Scotia Source food from local producers, farmers' markets, and even homeowner gardens that otherwise wouldn't end up on plates 	<p><u>1. Reduce food waste by collecting food leftover in fields, farmers' markets, and urban gardens and fruit trees</u></p> <ul style="list-style-type: none"> Helps to reduce this food waste by collecting the food and preserving it. This is then re-sold to help generate revenue to support the organization, which in turn helps bring fresher foods to food banks
	<p><u>Ontario Food Collaborative</u> Focus: <i>Best Practices, Consumer Awareness, Policy</i></p>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Organized group of leaders from across food system who are interested in potential for taking joint action to decrease food waste at residential level through public education & shared messaging Based in Ontario, Canada Members consist of health units, municipal & provincial governments, industry groups, NPOs, & academic institutions Include Provision Coalition & University of Guelph (U of G) Launched in 2014 	<ul style="list-style-type: none"> Bring together stakeholders to take holistic food systems approach in supporting individuals & families to eat well & reduce food waste 	<p><u>1. Developed 2016-2018 Strategic Plan</u></p> <ul style="list-style-type: none"> <i>Future work: Implement Strategic Plan</i> <ol style="list-style-type: none"> <i>Develop multi-stakeholder collaborative committed to food waste reduction & healthy eating</i> <ol style="list-style-type: none"> <i>Build relationships & engage key stakeholders</i> <i>Ensure effective internal & external communication</i> <i>Provide planning & operational support</i> <i>Engage with policy makers & identify policy change opportunities</i> <i>Document outcomes & successes</i> <i>Engage value chain stakeholders in partnerships & opportunities that are mutually beneficial & support vision of Collaborative (that all Ontarians eat well & no food is wasted)</i> <ol style="list-style-type: none"> <i>Research & map value chain stakeholders</i> <i>Identify strategic partnerships & pilots across value chain</i> <i>Educate & empower citizens through collaborative cross-promotion of food waste reduction & healthy eating strategies</i> <ol style="list-style-type: none"> <i>Research & document promising practices</i> <i>Share information on promising practices with key audiences</i> <i>Create collaborative messaging opportunities</i> <i>Build consensus around categories & act as clearinghouse for data & methodologies to measure food waste, healthy eating, & contributing factors</i> <ol style="list-style-type: none"> <i>Share information across municipality on food waste & healthy eating metrics</i> <i>Create platform for data hosting</i> <i>Engage in municipal pilot projects for data collection & sharing</i> <i>Identify & capitalize on research partnerships</i>

	<u>University of Northern Iowa (UNI): Iowa Waste Reduction Center (IWRC)</u> <i>Focus: Consumer Awareness, Policy</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Formerly Iowa Waste Reduction Center for Safe & Economic Management of Solid Waste & Hazardous Substances NPO at UNI Based in Iowa, US Devoted to environmental consulting, assistance, training, & education for entities with environmental impact or need Established in 1988 	<ul style="list-style-type: none"> Reduce amount of waste created in Iowa Divert existing waste in Iowa from landfills 	<p>1. Undertakes Iowa Food Waste Reduction Project Provides informative website, which offers:</p> <ol style="list-style-type: none"> Strategies for waste reduction for homes, restaurants, & institutions Regulatory information Case studies <ul style="list-style-type: none"> Connects waste generators with potential food waste recycling options <p>2. Undertook Industrial Commercial & Institutional (ICI) project (in partnership with Strategic Marketing Services [SMS]) Created “Industrial Commercial and Institutional (ICI) Food Waste Generator” study: Identified Iowa’s ICI food waste generators (12,367 of them), documented generation characteristics, & calculated food waste generation rates</p> <ul style="list-style-type: none"> Information was then imported into geographic information system, allowing users to manipulate & analyze data using geographical perspective <p>3. Undertook 2 compost projects</p> <ol style="list-style-type: none"> 2015: Focused on providing technical assistance & on-site training with composting while developing resources for general public in relation to compost 2015-2016: Focused on providing on-site, hands-on technical assistance with composting to rural Iowa food waste generators <ul style="list-style-type: none"> Both were funded by United States Department of Agriculture (USDA) <p>4. Formed Iowa Food Waste Stakeholder Coalition (2015) Aim: Advance Iowa’s efforts in reducing food waste generation & utilizing excess food as valuable resource through education, program implementation, policy, & advocacy</p>
	<u>Second Bite</u> <i>Focus: Social Responsibility, R&D</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Headquarters in Melbourne and works across regions in Australia Established in 2005 by Ian and Simone Carson 	<ul style="list-style-type: none"> To provide access to fresh, nutritious food for people in need across Australia Rescue and redistribute surplus fresh food Build community capacity in food skills and nutrition Advocating for an end to food insecurity 	<p>1. Redistributes surplus fresh food to community food programs around Australia Food is donated by farmers, wholesalers, markets, supermarkets, caterers and events.</p> <ul style="list-style-type: none"> High-quality surplus food is redistributed to community food programs that support people who are homeless, women and families in crisis, youth at risk, indigenous communities, asylum seekers and new arrivals. <p>2. Research team committed to furthering understanding of food insecurity in Australia</p> <ul style="list-style-type: none"> Continue to develop programs that provide long-term preventative solutions to the issue of food insecurity in Australia
	<u>Toronto Food Policy Council (TFPC)</u> <i>Focus: Policy</i>	
Description	Key Objective(s)	Activities
<ul style="list-style-type: none"> Citizen body of food activists & experts Responsible for generating food policy for City of Toronto Acts as professional lobbyist for Torontonians on food & related issues Consists of 30 members Formed in 1991 	<ul style="list-style-type: none"> Ensure equitable access to food, nutrition, community development, & environmental health 	<p>1. Provides informative website Offers:</p> <ol style="list-style-type: none"> Facts about food waste & loss Tips on ways to reduce food waste at home Links to campaigns, books, reports, videos, & documentaries on food waste & food waste reduction <p>2. Co-Sponsored screening of food waste documentary Just Eat It: A Food Waste Story, at New College, University of Toronto (2014) Organized panel of experts to discuss film</p> <p>3. Co-Sponsored food waste education event “The Mindful Plate” (2014)</p> <p>4. Organized expert panel on food waste, “Appetite for Change,” at Green Living Show (2015)</p> <p>5. Helped include food waste as priority in City of Toronto’s Long Term Waste Management Strategy</p> <ul style="list-style-type: none"> Strategy will guide waste management in Toronto for next 30-50 years Puts priority on reducing waste & minimizing amount sent to landfill

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