Food and Organic Waste Framework

Meeting #2: Current State and Priority Issues

Background Material – Overview of Leading Jurisdictions

March 3, 2017

Resource Recovery Policy Branch
Ministry of the Environment and Climate Change

Jurisdictional Scan:
Description of Policy Tools

Food Waste Reduction/ Prevention

Regulatory:

- Donor protection: Laws that protect donors from liability if donations are done in good faith

Non-Regulatory:

- **Funding / grants:** Incentives to support redistribution of excess food (e.g. food rescue incentive, tax credit)
- **Food recovery & rescue initiatives:** food recovery and rescue initiatives (e.g. food banks, Second Harvest)
- **Promotion & education activities:** Campaigns, partnerships, guidance materials for targeted audiences

Food and Organic Waste Diversion

Regulatory:

- **Disposal ban:** Prohibit the disposal of a material in landfill and/or for incineration (e.g. with or without energy recovery)
- **Green bin (mandatory):** Require source separation and diversion of a material, either from residential sources (i.e. by municipalities) or from industrial, commercial and institutional (IC&I) sources (e.g. grocery stores, restaurants)

Non-Regulatory:

- **Municipal green bin (voluntary):** Voluntary green bin programs/ initiatives
- **Funding programs:** Programs dedicated to support the development of green bin programs (e.g. municipal) or organic waste processing capacity (e.g. composting, anaerobic digestion)
- **Educational programs and/ or initiatives:** Initiatives to support proper public participation in green bin programs

Leading Jurisdictions on Food Waste Prevention/ Reduction

		ON	BC	QC	US	CALI	FRA	UK	NSW
Per Capita Food Waste Value (CAD$/year)		868 (Canada-wide)			505 (US-wide)		275 - 440	561	331
Tools/ Approaches									
Regulatory	*Donor protection*	✓	✓		✓	✓			✓
Non-Regulatory	*Funding / grants*				✓	✓	✓		✓
Non-Regulatory	*Food recovery & rescue initiatives*	✓ e.g. Second Harvest	✓	✓	✓	✓	✓	✓	✓
Non-Regulatory	*Promotion & education*	✓ Municipal/ industry	✓	✓	✓	✓	✓	✓	✓

Case Study – United Kingdom

- United Kingdom has programs in place to reduce food waste that are based on EU legislation, as well as voluntary commitments and educational programs to further reduce food waste

Per Capita Food Waste Value	• $561/ year/ capita of disposed food
Current Framework/ Overview	• Committed to reducing half per capita food waste at retail and consumer level by 2030 (EU development goals) • WRAP estimates value of food waste at $2,220/ tonne
Tools/Approaches:	
Regulatory	• *EU Hygiene Package:* governs the conditions that allow food to be sold or donated to others • *UK Waste Hierarchy:* states the preferred order to manage waste and encourage donation of foods before all other options, followed by its use in animal feed
Non-regulatory	**Voluntary Agreements:** • *Courtauld Commitment (2005-present):* voluntary agreement, signed by 40+ major businesses to reduce post-consumer food waste by guiding ideal product volumes/sizes and consumer campaigns (670,000 tonne reduction in food waste between 2005-2009) • *Hospitality and Food Service Voluntary Agreement (2013):* flexible agreement for any organization to join, encouraging all levels of food waste reduction from IC&I sector
	Promotion and education: • *Love Food Hate Waste (2007):* provides educational information to households, businesses and municipalities on how to reduce food waste (21% reduction in household food waste since 2007) • *Food Donation Checklist:* assists IC&I in determining if they are in a good position to donate food

Case Study – New South Wales (Australia)

- New South Wales has implemented voluntary food waste reduction programs in conjunction with food donor protection

Per Capita Food Waste Value	• $331/ year/ capita of disposed food
Current Framework/ Overview	• National Food Plan advises the redistribution of food waste towards animal feed production • 361 kg/person of food waste generated annually • Food waste is estimated at $2.41 billion CAD across NSW • 10% of greenhouse gas (GHG) emissions are from growing food that is never consumed
Tools/Approaches:	
Regulatory	• *Civil Liability Amendment (Food Donations) Act (2002):* limits the liability of individuals and businesses that donate food, providing certain food safety conditions have been met (Good Samaritan Law)
Non-regulatory	• *National Waste Policy – Less Waste, More Resources (2009):* identifies strategies for IC&I sector to reduce food waste and biodegradable materials in the waste stream
	Promotion and education: • *Love Food, Hate Waste:* education and awareness for businesses and households to reduce food waste
	Funding: • *Organics Infrastructure Fund:* offers community groups and not-for-profit's funding through Food Donation Grants (for equipment to store and transport donated food), under the banner of the Love Food, Hate Waste campaign • *Loving Food:* informational event run by NSW EPA and Environmental Trust for community groups and not for profit's to reduce food waste and educate people about food waste

Case Study –France

- France has implemented the most stringent and progressive legislations through its mandatory food donation program alongside tax credits and funding to support food waste rescue/ reduction

Per Capita Food Waste Value	• $275 – 440/ year/ capita of disposed food
Current Framework/ Overview	• Committed to reducing half per capita food waste at retail and consumer level by 2030 (EU development goals); France's own target is a 50% reduction by 2025 • About 10 million tonnes of food is waste annually, with an estimated value of $23 billion CAD, emitting 15.3 million tonnes of CO_2e
Tools/Approaches:	
Regulatory	• *Legislation Against the Disposal of Food:* prohibits supermarkets from disposing edible foods, requiring them to donate any foods that will not be sold but are still safe to consume to a charity; fines will be imposed otherwise • Tax credit of 75% of the value of the donation is available for food donations to charities for people in need
Non-regulatory	• *National Pact Against Food Waste:* provides educational material and training on food waste reduction, and is replacing the best before labelling system
	• *National Waste Prevention Plan (2014-2020):* includes action to fight food waste
	• **Promotion and education:** National campaign to reduce food waste using public service announcements (e.g. TV and radio ads), and a new website for individuals, municipalities and businesses to use. National industry associations have launched awareness campaigns • **Funding:** Environment Agency provides up to $292,000 CAD per project that assists in the reduction of food waste, while reducing environmental impacts and create jobs

Leading Jurisdictions – Organic Waste Diversion

		ON	BC	QC	CALI	MAS	AUT	GER	SCT
Per Capita Diversion (kg/ year)		101	98	48	155 (Composting Only)	99 (Composting Only)	194	113	134
Tools/ Approaches									
Regulatory	*Disposal levy*			✓					
Regulatory	*Disposal ban*		Victoria, Nanaimo, Metro Vancouver	Proposed by 2020		✓	✓	✓ allows incineration	✓ allows incineration
Regulatory	*Green bin (mandatory)*				✓ (IC&I only), except Alameda & San Francisco	✓ (IC&I only)	✓	✓	✓
Non-Regulatory	*Municipal green bin (voluntary)*	✓	✓	✓	✓	✓			
Non-Regulatory	*Funding programs*			✓	✓	✓	✓	✓	✓
Non-Regulatory	*Educational programs and/ or initiatives*	✓ municipal	✓	✓	✓	✓	✓		✓

Ontario

Case Study - Quebec

- Quebec uses a variety of tools to achieve its waste diversion and GHG reduction objectives, including: residual materials management policy, landfill levy, targets, and has proposed a disposal ban by 2020 on organic materials, including food waste

Per Capita Diversion Rate	• 48 kg/ capita of organic waste diverted (2012)
Current Framework/ Overview	• Proposes to implement disposal ban on organic materials by 2020 and developing a strategy to support the implementation of the proposed disposal ban • Currently developing capacity to process organic waste before implementing disposal ban. • Some municipalities have SSO collection (e.g. Gatineau, Montreal-in full by 2019, Laval in-full by 2020, Quebec City by 2022) • Portion of disposal levy & cap and trade proceeds dedicated to funding program for composting and anaerobic digestion facilities. $377 million in funding allocated since 2010, over 14 projects
Tools/Approaches:	
Regulatory	• *Quebec Residual Materials Management Policy (2011)*: proposed disposal ban on organic materials by 2020, including cardboard, paper and wood (by 2015 - not completed) • Landfill levy on waste disposal at landfills (two levies combined - $21.93 / tonne; $10.07/ tonne funds a program for organic waste processing facilities)
Non-regulatory	• Roundtable on organic materials led by Recyc-Quebec, developed an action plan (2013-2015) and a $4 million annual budget
	• **Funding:** programs dedicated to 1) large scale composting and anaerobic digestion facilities, and 2) domestic & community composting projects.
	• **Promotion and education:** included as part of the Recyc-Quebec's roundtable's action plan

Case Study - Massachusetts

- Massachusetts developed a 2010-2020 Solid Waste Master Plan which sets out short and long term disposal reduction goals (e.g. reduce waste disposal 30% by 2020), using a range of tools

Per Capita Diversion	• 99 kg/ capita organic waste (compost only) is diverted (2012); includes yard waste, food scraps, biosolids and some agricultural wastes
Current Framework/ Overview	• Some 1,700 businesses now diverting organic waste via service providers • Target to reduce GHG emissions by 25% below 1990 levels by 2020 • Divert at least 35% of food waste from disposal by 2020
Tools/Approaches:	
Regulatory	• *Solid Waste Management Facility Regulations*: leaf and yard waste landfill ban (1991 and 1992); commercial food waste disposal ban – landfill & incineration (2014); mandatory organic diversion for IC&I sectors (2014) – if they generate >1 tonne/ week of organic waste • Haulers are required to provide recycling services for commercial organic waste generators
Non-regulatory	• *Massachusetts 2010-2020 Solid Waste Master Plan (2013):* overarching plan governing waste management in residential and IC&I sectors, including organic waste
	• *Mass DEP Organics Study and Action Plan* created to support diversion; include data collection, guidance/best practices, studies and waste audits
	• **Funding:** MassDEP offers technical assistance and grants (up to $1 million) to support new diversion facilities.
	• **Promotion and education:** *RecyclingWorks in Massachusetts* program developed to assist residents and businesses to comply with waste disposal bans, including organics, and encourage adherence to the 3R's through education

Case Study - Germany

- Germany views waste as a useful source of raw materials and energy
- Germany's Federal Ministry for the Environment claims to have highest waste recovery rates in the world

Per Capita Diversion Rate	• 113 kg/ capita organic waste diverted (2012)
Current Framework/ Overview	• *Solid Household Waste Act (1993):* ban on non-pretreated household waste to landfill (i.e. waste to be processed via mechanical biological treatment or incinerated). Act was amended in 2001 and 2002, introducing carbon content restrictions on waste going to landfills • EU has a number of legislations in place for member-states: Landfill Directive, Waste Framework Directive, Industrial Emissions Directive, Waste incineration Directive, etc. • *EU Landfill Directive*: by 2020, Germany must reach a target of less than 35% of the amount of organic municipal waste disposed in 1995
Tools/Approaches:	
Regulatory	• *Landfill ban (2005):* on untreated household wastes and general waste from industry; includes organics without pre-treatment • *Commercial Waste Ordinance (2002):* requires source separation and recovery of organic materials • *Municipal Organic Waste Collection (2012*): collection of residential organic waste is mandatory • *Waste Disposal Ordinance (2001):* requires waste pre-treatment before final disposal
Non-regulatory	• Restructuring of feed-in tariff program to increase anaerobic digestion facility installations (decrease funds for anaerobic digestion facilities of a certain age to fund newer facilities; incentive for newer facilities)

Lessons Learned from Leading Jurisdictions

- **Key Observations:**
  - Food waste prevention and reduction requires tools to enable decision makers (e.g. guidance, planning tools, education and awareness)

  - Regulatory tools to increase organic waste diversion are successful especially when accompanied by other actions that support food and organic waste diversion. These other tools include:
    - Promotion and education awareness
    - Clear roles and responsibilities
    - Regular reporting
    - Compliance and enforcement
    - Incentives/funding to support development of organic waste processing capacity