



2017

Discussion Paper

Food Waste in Canada

FOOD
SYSTEMS
LAB



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Introduction



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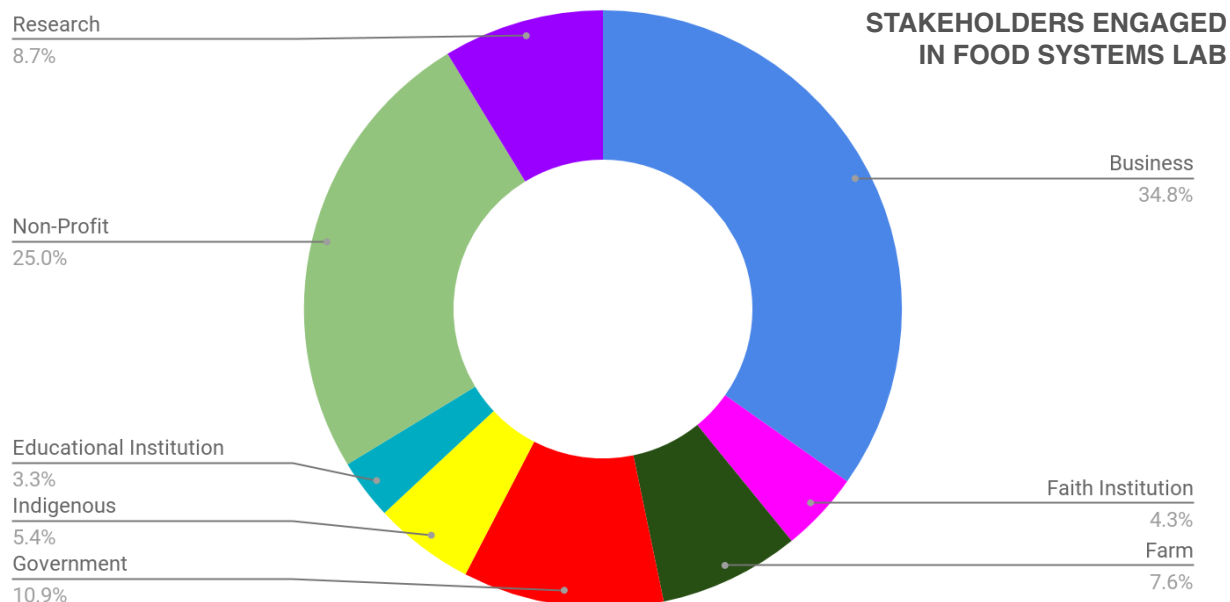
In recent years, food waste has become a hot topic, garnering attention in mainstream media internationally. Globally, about one-third of all food produced is wasted¹. In Canada, this amount is closer to 40%, of which nearly half is from consumers. High levels of food waste negatively impact the environment, contributing to greenhouse gas emissions, nutrient loss, and the inefficient use of resources for food production.

In September 2015, the United Nations announced a target of halving global food waste per capita by 2030 as part of the Sustainable Development Goals, which almost all countries in the world, including Canada, have committed to. With such an ambitious target, all levels of government, industry associations, businesses, non-profit organizations and citizens are talking about the issue and looking for solutions to reduce food waste.

In this frenzy of activity, most solutions are being developed in a hurry by individual entities or special interest groups, without careful consideration of root causes or all of the stakeholders that are affected, especially marginalized groups. Without a systems approach to addressing food waste, deeply held assumptions may not be challenged, critical features of the broader system may go unnoticed, and opportunities for innovation and collaboration may be missed.

The Food Systems Lab is a one-year pilot Social Innovation Lab working on solutions to address the issue of food waste and food insecurity in the Greater Toronto Area (GTA). Through this collaborative process we aim to contribute towards a resilient, sustainable and just food system in Toronto and beyond.

¹ Gustavsson, J., Cederberg, C., Sonesson, U., Otterdijk, R., Meybeck, A. (2011). Global Food Losses and Food Waste. Food and Agriculture Organization, Rome, Italy.



Social Innovation Labs are multi-stakeholder platforms created to address complex system challenges. We bring together individuals and organizations from diverse parts of the food system in the GTA. Our stakeholders include farmers, food businesses, Indigenous leaders, retailers, food processors, consumers, schools, industry associations, civil society groups, faith organizations, charitable foundations, and local government (municipal and provincial).

The Lab brought together stakeholders through a series of three workshops to gain a deep understanding of the food system, identify and

prototype innovations and opportunities that can address the root causes of food waste.

The Lab process also includes ongoing qualitative and quantitative research such as interviews with stakeholders and experts to harvest current knowledge about food waste, analysis of archival records, and modelling food waste data. From September 2016 to June 2017 we conducted interviews with 47 key informants as well as engaged in a collaborative social innovation process with a total of 92 stakeholders across the food system.

Policy Approaches to Reduce Food Waste

Based on input from stakeholder engagement and ongoing research conducted by the Food Systems Lab, we developed key considerations for food waste reduction policy for local, provincial and federal governments. Policies should:

1. **Be Systems-Based**
2. **Use Circular Thinking: Next Best Use +**
3. **Support Reconciliation with Indigenous Communities**
4. **Promote Innovation and Inclusive Cross-Sectoral Collaboration**

1. Be Systems-Based

Most recently, food waste reduction strategies in Canada have focused primarily on four main policy solutions:

1. Federal tax incentive to promote corporate donation of surplus food to charities;
2. Landfill ban on food waste;
3. Addressing the confusion around “best before dates” labeling; and
4. Identifying a national food waste reduction target.

Approaches such as taxes, targets and incentives act as leverage points in a system, and while tangible and easier to implement, are considered the least effective because they do not address the root causes of problems in a system². They can, however, be used as stop-gaps in the short-term. Leverage points such as changing paradigms is the most effective, yet also more challenging to achieve as it requires coordinated efforts to shift norms in the dominant and wasteful food system.

Examples of Systemic Approaches

- Investing in diverse farms, community food hubs and community composting to provide food as a human right while keeping nutrients close to the source of food production. A smaller radius of activity will reduce greenhouse gas emissions from transport of food and organic waste.
- Rather than promoting short-term food waste awareness campaigns, national food programs at schools can be mandated to increase knowledge of how to grow, cook, preserve and properly manage food and organic waste from an early age.



PHOTO: UNIVERSITY OF TORONTO SUSTAINABILITY OFFICE

One example of potential shortcomings of current food waste reduction strategies is the reliance on food charities to “process food waste”. Studies have shown that despite 30 years of relying on food donations through food banks, a growing number of Canadians are food insecure³. Therefore, there is a need for a more nuanced and a critical approach to the proposed policy of financially incentivizing corporate food donations to charities. Firstly, there is no guarantee that food accepted by charities can be fully used and do not end up in the landfill. Secondly, said charities may bear the burden of disposing the unwanted foods. If food waste is banned from landfill, then these charities will pay for costly services such as depackaging and composting. Finally, the sheer scale of food waste at the retail level means that much needed financial and infrastructural investments in the food system will be pushed towards developing industrial-scale charities, rather than developing long-term training, employment opportunities and more sustainable food systems that will allow Canadians to climb out of poverty and access food with choice, equity and dignity.

It is critical that policymakers consider both incremental and systemic approaches that is premised on evidence and social justice in the development of a food waste strategy.

² Meadows, D. (2008). *Thinking in Systems: A Primer*. Chelsea Green Publishing, White River Junction, United States.

³ Riches, G. and Tarasuk, V. (2014). Canada: Thirty Years of Food Charity and Public Policy Neglect. In Riches, G. and Silvasti, T. *First World Hunger Revisited: Food Charity of the Right to Food*.

2. Use Circular Thinking: Next Best Use +

“We are all brothers and sisters and we have a sacred responsibility to take care of and make an alliance with Mother Earth.”

The Great Binding Law (Written at Turtle Lodge, Assembly of Manitoba Chiefs)⁴

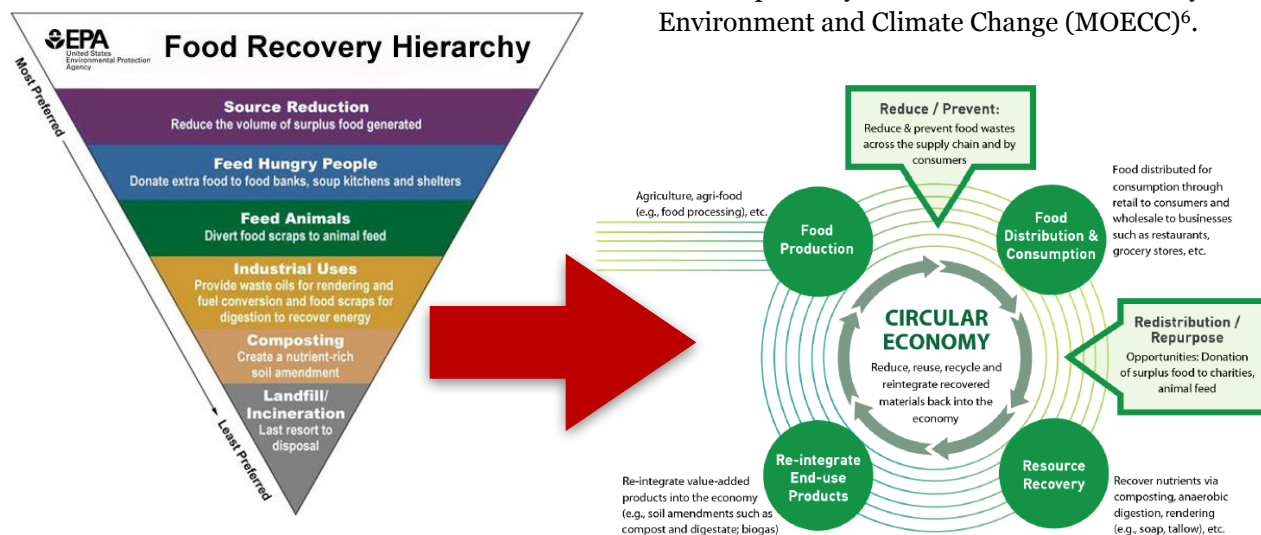
Currently, the dominant paradigm for managing food waste is based on the waste management hierarchy, such as the United States Environmental Protection Agency’s Food Recovery Hierarchy. This hierarchy prioritizes solutions with a ‘reduce, reuse, recycle’ mentality, with some adaptations (e.g. feeding people and animals instead of reuse).

While the hierarchy has helped raise awareness and advance efforts in reducing food waste, it is based on a paradigm of food as a commodity or material resource. This paradigm relies on a linear and industrial food system. It does not necessarily promote innovation or consider the cultural and spiritual value of food.

Examples of how this hierarchy may create negative unintended consequences include:

- Institutionalizing food insecurity as a core part of the food system to divert surplus food to ‘Hungry People’, which creates further dependency on food assistance.
- Exacerbating poor health conditions through feeding humans and animals food that does not match their nutritional needs as a way to divert food waste.
- Diverting food scraps away from home or community composting towards centralized digester facilities that have an apparent increase in efficiency due to the larger scale but require longer-distance trucking (more greenhouse gas emissions) and more formalized procedures to mitigate contamination of compost⁵.

We propose to shift the governing paradigm from a food recovery hierarchy to a circular food system. One example of a circular food system framework is Food in a Circular Economy, developed by the Ontario Ministry of Environment and Climate Change (MOECC)⁶.



⁴ Oshoshko Bineshiikwe – Blue Thunderbird Woman et al. (n.d.). Ogichi Tibakonigaywin, Kihche Othasowewin, Tako Wakan: The Great Binding Law. Retrieved from: http://www.turtlelodge.org/wp-content/uploads/2015/11/ScrollBanner_TheGreatBindingLaw_24x36-PROOFV03.pdf

⁵ Mourad, M. (2016). Recycling, recovering and preventing “food waste”: competing solutions for food systems sustainability in the United States and France. *Journal of Cleaner Production*, 126: 461-477.

⁶ Ontario Ministry of Environment and Climate Change. (2017). Discussion Paper: Addressing Food and Organic Waste in Ontario.

Similar to the concept of a circular economy, a circular food system has no waste and is regenerative in nature. To achieve a circular food system, we need to change how we think about food and consider how the food system affects the environment. All materials have intrinsic value such that the outputs from one process become the input to another.

The notion of a circular food system is not a new idea. For generations, the Indigenous teachings of “All My Relations” have been practiced, passed on, and taught by Indigenous peoples. This principle will promote the circular thinking that will enable individuals and organizations to shift their relationship to food from a mere commodity to one based on respect. The “All My Relations” principle promotes a circular philosophy based on respect and balance for all relations (both human and non-human).

While frameworks such as the one presented by MOECC help move the conversation forward to change the paradigm from a linear to circular economy, food is still presented as a material commodity. We propose to build on this framework with a set of values that combines modern circular economy principles⁷ with indigenous principles of respect for food, a paradigm of “Next Best Use +”.

What is “Next Best Use+”?

- **Take only what you need.** Produce, purchase, and/or consume only what you need to sustain yourself, your family, community or business/organization. Ensure there is adequate food and resources for your relations (both human and non-human) to nourish themselves and thrive.
- **Find the next best use.** Continue to ask the question: “What is the next best use for this remaining food item?”. Save/preserve/re-purpose food to eat later, to create a new product/ new food item or to share with your relations. Once food has been consumed or is inedible, return the remaining nutrients to the earth so food can be grown again, used to generate energy, etc.
- **Remember, we are all related.** When deciding on actions to take to reduce food waste (Next Best Use), consider the impact on all your relations and the next seven generations.



PHOTO: FOOD SYSTEMS LAB

⁷ Ellen MacArthur Foundation. (n.d). Outline of a Circular Economy. Retrieved from: https://www.ellenmacarthurfoundation.org/assets/images/circular-economy/_bigImage/System_diagram_cropped.jpg

3. Support Reconciliation with Indigenous Communities

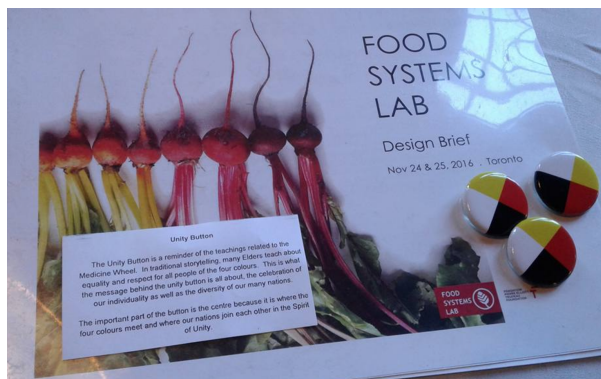


PHOTO: FOOD SYSTEMS LAB

“Food is nurturing and in our traditional teaching, food is medicine...”

Melanie Goodchild (Anishinaabe), Indigenous Advisor Food Systems Lab

“We keep the survivors at the heart of our story...”

Marie Wilson, Commissioner, Truth and Reconciliation Commission, Special Advisor Food Systems Lab

While food is not specifically mentioned in the Truth and Reconciliation Commission’s (TRC) Call to Action, issues of Indigenous justice, child welfare, health, education, culture and language are all connected to food. Studies have shown that diet-related health issues and food insecurity affect Indigenous communities more more than other communities in Canada⁸.

This fact cannot be separated from the legacy of colonization which resulted in forced removal of Indigenous communities from their land into reserves (or in the case of Métis people, on road allowance)⁹, sixties scoop, and denial in the rights to hunt and fish.

The structure of the current food system where massive food waste occurs along with massive

food insecurity has played a part in Indigenous community members being separated from their traditional food, land, spirituality, language and culture. The impact of residential schools on reducing traditional food knowledge, on nutrition transition towards more processed foods and the negative impact of nutrition experimentation on Indigenous children have all been well documented¹⁰.

By integrating reconciliation in Canada’s food waste reduction agenda, the government can act upon its commitment to Reconciliation and honour Treaties.

Ways to Support Reconciliation

- Deeply engage with Indigenous communities (elders, youths and leaders).
- Recognize the value of Indigenous traditional ecological knowledge and laws in promoting food waste reduction and closed loop food system.
- Invest in Indigenous-led innovation and initiatives that promote a circular economy, food waste reduction and a sustainable food system.
- Develop food policy and food waste reduction strategies based on equitable relationships between diverse stakeholders and respect for Indigenous food practices.

⁸ Power, E. (2008). Conceptualizing food security for Aboriginal people in Canada. Can J Public Health. 99: 95-97.

⁹ Thistle, J. (2015). Vicarious Trauma: Collecting the herd. Retrieved from: <http://activehistory.ca/2015/11/vicarious-trauma-collecting-the-herd/>

¹⁰ Mosby, I. (2013). Administering Colonial Science: Nutrition Research and Human Biomedical Experimentation in Aboriginal Communities and Residential Schools, 1942–1952, Social History, 41(91): 145-172.

4. Promote Innovation & Inclusive Cross Sectoral Collaboration



“The participants were such a highlight for me- all walks of life, varying sectors and viewpoints- the conversations were rich!”

Food Systems Lab Participant

PHOTO: UNIVERSITY OF TORONTO
SUSTAINABILITY OFFICE

Food waste is a complex systems problem and the importance of inclusive cross-sectoral collaboration across different scales cannot be understated. Our workshops and social innovation method integrates the voices and leadership of communities that are often underrepresented in food-related consultation processes or discussions. Driving innovation requires deep engagement and collaboration, not just “check the box” consultation to show that stakeholders have been reached.

Thus far, the term “multi-sectoral collaboration” in tackling the issue of food waste have mostly referred to collaboration between different players at one scale of the food supply chain (e.g. collaboration between large associations or collaboration within groups of non-profit organizations). In addressing the issue of food waste in policy, governments should include the expertise of stakeholders from across scales (e.g. beneficiaries as well as service providers).

Ideas to Spark Inclusive Innovation

- Engaging stakeholders such as small-medium scale farmers, migrant farm workers, food-service workers, community service agencies, food bank recipients, faith-based communities and community members of diverse backgrounds to hear their perspectives on food waste.
- Valuing input from a diversity of voices and investing in solutions at different scales of the food system.
- Focusing on deep engagement and collaboration rather than one way consultation by investing in social innovation.
- Supporting an enabling environment (e.g. a lab or accelerator program) for innovators to develop new ideas, prototype, and incubate solutions.