



SDG 2: Zero Hunger - The Business Case for Sustainable Food Systems

Topic Overview	Learning Objectives
<p>The second UN Sustainable Development Goal is to “[End] hunger, achieve food security and improved nutrition and promote sustainable agriculture.”</p> <p>Food insecurity is an issue that plagues millions of Canadians, yet simultaneously we struggle with vast amounts of food loss and waste. We are producing enough food for our population, but people are still going hungry. Evidentially the problem lies not with the supply, but the unsustainable system. This lesson outlines the current food system and identifies key areas of change required to adapt to our growing population and changing climate.</p>	<ul style="list-style-type: none"> • Understand the business case for reducing food loss and waste. • Describe the current global situation of food scarcity and waste, and the effect it has on climate change. • Describe the financial and economic cost of food waste. • Identify market opportunities and areas for innovation available in the food industry.
Resource Summary	
<p>EAT. (2017, October 31). <i>Feeding our brave new geopolitical world Dr. Jason Clay (WWF) at #EATapac</i> [Video]. YouTube. https://www.youtube.com/watch?v=18VogR0uFLI</p> <p><u>Summary:</u> Dr. Clay discusses the key issues and opportunities around food, and the exponential increase of global food production required to feed our growing population in the future. He discusses the effect of global politics, climate change, migration, food price volatility, and inefficiencies of production as factors in supplying food for our future.</p>	
<p>Hanson, C. & Mitchell, P. (2017, March). <i>The Business Case for Reducing Food Loss and Waste. Champions 12.3</i> https://champions123.org/publication/business-case-reducing-food-loss-and-waste</p> <p><u>Summary:</u> This report focuses on Sustainable Development Goal 12, target 12.3: <i>By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.</i> The report defines food waste and food loss, and argues a business case for reducing food loss and waste. They provide a cost-benefit analysis of reducing food waste at the country, city, and company level. Lastly, the report discusses the financial and ethical case for changing the food systems.</p>	
<p>Doane, M. & Molnar, J. (2018, October 16). <i>Investing in a Sustainable Food System: Four Ways to Unlock the Value of Nature in Agriculture.</i> The Nature Conservancy. https://www.nature.org/en-us/what-we-do/our-insights/perspectives/investing-in-a-sustainable-food-system/</p> <p><u>Summary:</u> Doane and Molnar discuss the four ways to achieve sustainable food systems: working at scale, financing change, disruptive innovation, and empowering consumers.</p>	



Discussion and Exam Questions
<ol style="list-style-type: none"> 1. Discuss the role of consumers, businesses, and government in reducing food waste and increasing food security. 2. Explain the difference between food waste and food loss, and the roles businesses play in each one. 3. Describe the effects of climate change on the future of our food systems.
Additional Resources
<p>Too Good to Go</p> <p>Love Food Hate Waste</p> <p>15 Emerging Technologies Helping Reduce Food Waste</p> <p>Food loss and waste must be reduced for greater food security and environmental sustainability</p> <p>Five Innovative Companies That Promote Sustainable Food Systems</p> <p>The Basics of Food Security</p>
Related Business Topics
<ul style="list-style-type: none"> • Sustainable and resilient agriculture • Disruptive innovation • Sustainable food systems • Supply chain management
Related Sustainable Development Goals Targets
<p>SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p> <p>2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.</p> <p>2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.</p> <p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p> <p>2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.</p> <p>2.A Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in</p>



order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

Suggested In-Class Activities

Divide students into groups and have each group do an in-class web search for food waste along the supply chain. Specifically students could examine:

- Private homes (food spoilage)
- Restaurants
- Food transport companies
- Grocery stores
- Farms

Each group should be able to answer the following questions:

1. Where specifically along the supply chain does food waste occur?
2. How much (per year or measured in mass (kg)) food waste is estimated to occur?
3. What is the financial cost of waste to the business?
4. What are some preventative practices that business operators (chefs, farmers, grocery store operators) can put in place to prevent food waste?

Have the groups report out on their findings. Summarize the importance of preventative practices and encourage students to find ways to reduce waste at home (first in – first out inventory, freezing food to avoid spoilage, making soups and stews of older vegetables, using “ugly” fruit in baking products where their looks are not noticeable).