

Reducing Global Food Waste

Topic Background

Food Waste is defined as the loss of food product throughout the food chain and food production cycle, including every level from large-scale farms to household mismanagement of food products. The scale of food waste globally is alarmingly high- the United Nations reports that over 1.3 Billion *tons* of food each year are lost due to wasteful management. The cost of this waste is staggering- this lost food represents over \$750 Billion in economic losses¹, making this an economic issue as well as a humanitarian issue. This lost food to some simply represents a massive inefficiency in the global food industry, however to the 800 million individuals worldwide suffering from Extreme Hunger every year, this statistic represents critical food that they need to survive and grow.

There are two major lenses through which to view the issue of food waste: through an environmental lens and a food security lens, though of course this issue can be viewed through the lens of economics as well. From an environmental viewpoint, Food Waste has a staggering impact. Beginning at food production, dedicating so much land to agricultural production and the use of chemicals and other unnatural compounds can seriously impact the surrounding biota. After production, the food must be transported to distribution facilities, using valuable fuel resources. Then, it may be packaged in materials that will eventually become garbage, shipped again using more fuel, and get stocked in grocery stores using massive amounts of energy to refrigerate, house, and sell all the food. At every stage of this process, food is wasted- whether it's destroying imperfect crops, decay and spoiling of food during transportation, and damaging and trashing food along the way.² This wasted food represents massive amounts of wasted resources in producing, shipping, and preparing the food, an environmentalist nightmare. This represents a 28% waste of global agricultural area, and adds 3.3 billion tons of greenhouse gasses to the atmosphere annually.

The other, and most obvious, negative impact of food waste is of course the impact it has on global food security. There are three central ways that food security is impacted by food waste. The first, that lost food represents less available food worldwide, which hurts the accessible dimension of food security. Secondly, inefficiencies and economic losses along the supply chain drive up food prices, which can make it harder for in-need populations to afford critically needed food resources. Lastly, and overlapping with the environmental dimension of this issue, the improper use of natural resources and agricultural areas can cause future food insecurity due to depleted agricultural productiveness of their environment.³ It should also be noted that food waste can include nutritional losses in food throughout the food system, which can impact food security as well.

¹ UN agencies launch new joint initiative targeting elimination of global food waste- <http://www.un.org/apps/news/story.asp?NewsID=49159#.Vgf2gFUViko>

² UN report: one-third of world's food wasted annually, at great economic, environmental cost <http://www.un.org/apps/news/story.asp?NewsID=45816#.VgsfalUVikp>

³ UN report: Global Food Waste http://www.un.org/en/zerohunger/pdfs/HLPE_FLW_Report-8_EN.pdf

Past International Actions

The United Nations has been actively mainstreaming food waste as a critical component of both environmental and food security discussions, as evidenced by Secretary General Ban Ki-Moon's when he stated "One way to narrow the hunger gap and improve the wellbeing of the most vulnerable is to address the massive loss and waste inherent in today's food systems. Currently at least one third of all food produced fails to make it from farm to table. This is foremost an affront to the hungry, but it also represents a massive environmental cost in terms of energy, land and water."⁴ Global Food Waste is a new arrival to high-level discourse on these topics, but a critical piece of the discussion.

The discourse on food waste reached its highest summit yet when the United Nations Environment Program announced its theme for World Environment Day 2013: "Think. Eat. Save. Reduce Your Blueprint".⁵ This event was framed around reducing food waste at all points in the food system, and served as a central point for harmonizing between the relevant United Nations agencies: the International Fund for Agricultural Development (IFAD), the World Food Program (WFP), the Food and Agriculture Organization (FAO), and the United Nations Environment Program (UNEP).

In 2014, the General Assembly adopted A/Res/69/177, "The Right to Food".⁶ In this resolution, the General Assembly underlines the need for all Member States to ensure proper access to nutritious food by any means necessary, while bearing in mind the environmental impact of agricultural development. More specifically, A/Res/66/220 calls upon Member States to adopt sustainable practices to maximize food and nutritional output in the pre-harvest, harvest, and post-harvest stages of production.⁷ However, a clear international framework adopted by the General Assembly has not yet been adopted.

The International Fund for Agricultural Development has worked closely with Member States to help reduce the rate of food waste globally. For example, IFAD has partnered with the East Timor Government and an Australian NGO "Seeds of Life" to work to increase efficiency of their food system, including expanding storage capabilities and using higher-yield seeds to guarantee higher crop output.⁸ In Ethiopia, IFAD finances marketing efforts for smallholder farms, in aim of reducing the amount of time between harvest, market, and consumer to prevent losses due to spoilage and

⁴ Secretary General's Message on World Environment Day
<http://www.un.org/sg/STATEMENTS/index.asp?nid=6871>

⁵ World Environment Day 2013: Cutting food waste to conserve resources and fight hunger
<http://www.ifad.org/media/events/2013/wed.htm>

⁶ A/Res/69/177 "The Right to Food"
<http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N14/707/93/PDF/N1470793.pdf?OpenElement>

⁷ A/Res/66/220 <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/472/02/PDF/N1147202.pdf?OpenElement>

⁸ IFAD Partnership with Seeds of Life <http://www.ifad.org/media/press/2013/11.htm>

reduce transportation costs.⁹ Efforts like these demonstrate a clear effort by the United Nations to implement policies globally to reduce food waste.

The United Nations and its various agencies, programs, and funds have taken pains to properly track and document global food waste, and efforts to combat it. As part of the Zero Hunger Initiative, the High Level Panel of Experts on Food Security and Nutrition released their report “Food losses and waste in the context of sustainable food systems” to highlight food losses at each specific stage of the food production process, and issue recommendations for reducing these losses.¹⁰ The Food and Agriculture Organization also released their report “Global Food Losses and Food Waste”, which highlighted the largest sources of food waste to prescribe solutions, and determined that food waste in economically developed countries can be nearly 16 times the rate as in economically developing countries.¹¹

Possible Solutions

With the recent adoption of the Sustainable Development Goals, the United Nations General Assembly named goal number two to be “End hunger, achieve food security and improved nutrition, and promote sustainable agriculture”. To meet this goal and its targets, food loss must be set as a high priority and be integrated into both food security and environmental policy. This can be done at multiple stages of the food production, distribution, and use process.

During the production phase, the United Nations could work to facilitate the Agricultural Extension process. By tasking agents with supplying up to date information about meteorological forecasts, agricultural science, and market rates for food supplies, the United Nations can help reduce inefficiencies in the production process. This also helps facilitate market access for smallholder farmers, reducing the time from production to consumption.

During the handling, storage, and processing phases, Member States and UN Agencies can seek to find solutions that keep food fresher for longer, and with the use of fewer resources to do so. Existing technologies to do this are already available, however making them accessible for smallholder farms means reducing costs and distribution of these technologies across rural areas in developing countries, and encouraging large firms to adopt these policies through proper regulatory controls.

During the sale phase, many local governments seek to reduce food waste by encouraging and assisting stores to donate unsold goods that are near their marketable expiration date. This both aids those suffering from extreme hunger by giving them access to food, while reducing waste by supplying that food in a way that it would otherwise be wasted. This could also be paired with advertising and promotions in stores to move old products before their expiration, even if that means selling them at a lower price.

⁹ Agricultural Marketing Improvement Program

http://operations.ifad.org/web/ifad/operations/country/project/tags/ethiopia/1292/project_overview

¹⁰ *idem*

¹¹ Global Food Losses and Food Waste <http://www.fao.org/docrep/014/mb060e/mb060e00.pdf>

Lastly, Member States can seek to decrease waste at the consumer level through public education campaigns about proper food handling, storage, and usage, to reduce common causes of waste such as lack of refrigeration, or purchasing too large of product sizes for the time span they plan to use this food product. Encouraging smaller portion sizes in meals can also help decrease food waste in the form of leftover food being thrown away after a meal has completed.¹²

Through all of these frames, and many more, Member States can seek to reduce food waste and simultaneously address environmental and food security concerns.

Further Research

[UNEP Recommendations for Reducing Food Waste](#)

[FAO Report on Global Food Losses](#)

[UN Report on Environmental, Food Security Impacts of Food Waste](#)

Worksheet Questions

1. How many people worldwide suffer from Extreme Hunger?
2. How many tons of food are wasted annually?

¹² Reducing Food Loss and Waste http://www.unep.org/pdf/WRI-reducing_food_loss_and_waste.pdf
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3. What is the environmental impact (in Greenhouse Gas Emissions) of global food waste and losses?
4. What is the economic impact of global food waste and losses?
5. What percentage of agricultural land worldwide can be represented by food waste?

Answer Key

1. 800 Million
2. 1.3 Billion
3. 3.3 Billion Tons
4. 750 Billion Dollars Annually
5. 28%