



Peace Review
A Journal of Social Justice

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/cper20>

Food Waste in University Spaces

Adesuwa Vanessa Agbedahin & Komlan Agbedahin

To cite this article: Adesuwa Vanessa Agbedahin & Komlan Agbedahin (2019) Food Waste in University Spaces, *Peace Review*, 31:4, 532-538, DOI: [10.1080/10402659.2019.1800944](https://doi.org/10.1080/10402659.2019.1800944)

To link to this article: <https://doi.org/10.1080/10402659.2019.1800944>



Published online: 09 Nov 2020.



Submit your article to this journal [↗](#)



Article views: 75



View related articles [↗](#)



View Crossmark data [↗](#)



Food Waste in University Spaces

ADESUWA VANESSA AGBEDAHIN AND KOMLAN AGBEDAHIN

The Covid-19 pandemic has been commonly experienced and popularly described as a hunger pandemic locally and internationally. Little Wonder OXFAM called it "the hunger virus." Shockingly, this pandemic has been characterized by a food waste that may contribute to worsening climate emergency. Actually, food waste is not a new phenomenon.

The *State of Food Security and Nutrition in the World* (FAO, IFAD, UNICEF, WFP, and WHO) has revealed that for the third year in a row, there has been a rise in world hunger. The number of undernourished people in the world has been on the rise since 2014, reaching an estimated 821 million in 2017. According to the 2016 *Global Hunger Index report*, hunger has decreased in developing countries by 29 percent since the beginning of the twenty-first century. Despite this progress, on a global scale, about 795 million people go hungry. Paradoxically, in recent years, approximately 1.3 billion tons of food produced for human consumption has been globally lost and wasted in the Food Supply Chain (FSC) annually. As of 2018, 1.6 billion tons of food is wasted, which is worth about \$1.2 trillion annually.

On a global scale, food production is on the increase, yet a significant challenge remains to provide enough food for an estimated human population of nine billion by 2050. In various regions of the world implications of failure are already evident: food riots, food rebellions, nutritional justice, and other forms of food justice movements. Extrapolating from the Open Working Group, sustainable Development Goal (SDG) 12 stipulates that we should ensure sustainable consumption and production patterns. Target 12.3, specifically, highlights that by 2030, we should 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. Target 12.5 also emphasizes that by 2030, we should substantially reduce waste generation through prevention, reduction, recycling, and reuse. SDG 2 also aims to end hunger and achieve food security, with Target 2.1 stipulating that by 2030, we should 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. Unfortunately, almost 6 years after this global allegiance to end hunger, food insecurity and all forms of malnutrition, “we are still off track to achieve this objective by 2030.” Data shows that “the world is progressing neither towards SDG target 2.1, of ensuring access to safe, nutritious and sufficient food for all people all year round, nor towards target 2.2, of eradicating all forms of malnutrition [and] there are many threats to progress.” In 2018, Thomson Reuters Foundation warned that due to the increase in the world population and changing habits in developing nations, food waste could rise by almost a third by 2030 when more than 2 billion tons of food will be thrown away.

Food waste occurs at various levels of the food chain, and in various sectors and institutions of society. Yet, this phenomenon in higher education institutions, seemingly, has not been in the spotlight. Food waste in institutions of higher learning, particularly universities, occurs in very complicated circumstances and signifies different things to different people. The discussion in this essay revolves around the definition of food waste, the nexus between food waste and food economy, food waste from a global perspective, food waste in South Africa, and related conflicts of interests and rationalities. The essay draws on the case study of Rhodes University (South Africa) to examine food waste in higher education institutions. It seeks to show how universities, through their praxis, can still be unintentionally lagging behind, despite their explicit commitments to environmental sustainability, community engagement and social justice.

Parfitt, Barthel, and Macnaughton defined food waste as “wholesome edible material intended for human consumption, arising at any point in the FSC [Food Supply Chain] that is instead discarded, lost, degraded, or consumed by pests.” Food waste is also edible material that is fed intentionally to animals or is a by-product of food processing diverted away from human food.

The concepts of food waste and food economy are indivisible. The management of food economy of any nation, society, or institution has a considerable impact on food waste production or reduction. Kinsey defined food economy as “the entire food chain, from the laboratories that slice, dice, and splice genes to crop seeds, pharmaceuticals, and animals, to the cream cheese we spread on our bagels—it is a flow of product from farm to fork.” This definition suggests that the food economy covers all the processes and stages involved in producing edible food. Kinsey further explained that the food economy includes the “two main streams of activities in manufacturing plants, namely food for retail stores and food for food service establishments.” Food services, establishments, food retailers, and consumers, therefore, are embedded in and therefore

implicated in the food economy. In the food economy, consumers are the end game of the supply chain. Adopting these propositions implies that food accessed by consumers is within the food economy. The understanding and analysis of causes and solutions to food waste within the food services, therefore, must include consumers too. This approach is appropriate to the situation in the food services sector at Rhodes University.

Furthermore, the food economy is a vast and complex concept, often related at a macro level to the national or global economy. The food economy in the context of a higher education institution such as a university is a food economy on a micro level. Within the food services, the food economy will incorporate everything that goes into the procurement of the raw agricultural materials from food retailers to food preservation, food preparation, food serving, food consumption, and, eventually, food waste disposal. According to Kinsey, the food economy operates within the culture of its community, the economy of its nation, and a market that extends around this. It includes natural resources and environmental issues, labor and marketing practices, waste disposal, recycling practices, public policies that impact participating firms, human resources, transportation, consumers, and citizens. It also includes the industries that service the food chain like the financial sectors, labor unions, government agencies, and the educational institutions, as well as a complex transportation and distribution system that operates between food manufacturers and retail outlets.

The current food waste in the global food supply chain with regard to prospects for feeding the estimated population of nine billion by 2050 is alarming. There have been attempts to quantify global food waste over several decades. Such attempts were motivated partly by the need to highlight the great potential in the quantity of food waste generated and in relation to global hunger and malnutrition. But, the consensus is there is more than enough food products made possible by struggling farmers to ensure a healthy life for the world population (although humans' wasteful habits and the political economic of food production have negatively affected such products).

According to the Food and Agriculture Organization (FAO), in industrialized countries, food waste generated at the consumer level is about 222 million tons. This figure is almost as high as the total net food production in sub-Saharan Africa, which is 230 million tons. Therefore, the amount of food that consumers in Europe and North America waste is significant, whereas much less is wasted in Africa because of the continent's political, social, and economic predicaments. As of 2018, most of these countries and many more are facing the challenge of hunger, food insecurity, and heightened poverty levels.

South Africa is also affected by the food waste phenomenon. Statistics on food waste in South Africa are scant. Estimates claim that about 14

percent of food purchased by households is thrown away. According to Tamir Kahn, a considerable amount of food is wasted annually and disposed of in the landfill, but losses in the Food Supply Chain is unknown. A study conducted by the South African Department of Environmental Affairs and Development Planning in 2006 revealed that a significant volume of edible food waste is generated in the Western Cape Province, owing to its support for flourishing catering and restaurant trades.

Despite this lack of exact quantification of food waste in South Africa, there are studies underway to assist policymakers in planning and implementing measures to curb food waste. Hall, Guo, Dore, and Chow observed that it is challenging to quantify food waste at the national and international levels. If, however, 14 percent or one-third of the food purchased in South Africa is wasted when over 50 percent of South Africans are living below the poverty line, then food waste should be considered an issue. For instance, rural households in the Eastern Cape Province live in extreme poverty, spending most of their low-level income on food. Besides, child malnutrition and food insecurity constitute a serious threat to families living in the Eastern Cape, Limpopo, and KwaZulu-Natal Provinces.

Food services and food retail operations, which are components of the food economy, generate two main categories of solid waste, namely food waste, and packaging materials, both of which constitute a significant amount of the overall solid waste stream. From the foregoing analysis, no adequate improvement in food waste related issues is achievable if the entire food economy of an organization, nation, or world is not factored in. This comprehensive approach to tackling food waste is advocated by the Food and Agriculture Organization (FAO): actions should not only be directed toward isolated parts of the [food supply] chain, since what is done (or not done) in one part has effects in others.

Globally, there have been attempts to find appropriate strategies to address food waste. The urgent need for more sustainable food production and consumption is gaining momentum. For example, in the U.S., the Environmental Protection Agency (EPA) commenced a "Food Recovery Challenge," which is an initiative toward sustainable materials management. The initiative aims at challenging people to reduce their food waste as much as possible by recommending the implementation of the food recovery hierarchy as a sustainable option for food resource management. The hierarchy in the order of preference includes the reduction of food waste from the source, feeding hungry people, feeding animals, industrial uses, composting, and finally, landfill deposits.

According to the *2018 Global Food Policy Report* of the International Food Policy Research Institute (IFPRI), global models

forecast that the combination of shifting toward healthy diets, increasing production efficiency, and reducing food waste and loss has the potential to provide healthy diets for 9.5 billion people in 2050 while reducing food's land and climate footprints. Another way of dealing with this phenomenon is through education and particularly Education for Sustainable Development. Education is potent in the sustainable preservation of food resources and the shaping of society at large. What is taught at all levels of education is as important as how it is taught, according to Eisner.

Consequently, FAO proposed education in schools as a possible starting point to help change consumers' attitudes toward the current massive food waste. Food producers and food retailers are not exempt from this form of education. It cannot be emphasized enough that Environmental Education practices require a more reflexive and critical approach. In addition, FAO categorically stated that further research in the area of global food losses and waste is urgently needed. Higher education institutions, particularly universities, should become the primary site for teaching about food waste and its implications. Paradoxically, the university, through its food sector, tends to abdicate this responsibility.

At Rhodes University, for instance, and specifically as at the time of conducting this research between 2010 and 2012, the food waste generated is sold to pig farmers at a minimum administrative fee to feed pigs, while a mere 100 meters from the unfenced university, people were scavenging for food in public trash bins. Students and staff contemplated this historical practice of at least staff not being allowed to eat or take away leftovers, irrespective of the quality and quantity. Stringent institutional rules and regulations that guided this practice have constituted major sources of tensions between food services management and dining hall staff and students. To community members, the university policy of giving food to pigs instead of humans was incomprehensible.

Research findings show that food waste cannot be addressed and appropriately curtailed without an intensive and intentional consideration of all the stages of the food economy. Multiple contradictions and sources of tensions are found embedded in the Food Services Sector, which constitutes significant causes of food waste. Additionally, insufficient food waste related teaching and learning activities, the presence of disputed rules, institutional structure, and traditional practices within the Food Services Sector all exacerbates the tensions.

Furthermore, the research findings also show that it is unproductive to relegate some contradictions and tensions, hindering a more sustainable food economy as unimportant or non-urgent. The lack of facilitated deliberation, consultation, dialogue, a collaboration between food producers and

food consumers are obstacles to learning and institutional change, thus leading to food waste. Re-visiting and revising rules and regulations guiding the conduct of food producers and food consumers in any food industry, as well as revising existing learning support materials and mediating tools, is needed to tackle food waste. Recognition and consideration of the concerns and interests of food producers and food consumers are also essential strategies. Finally, there is a need to continually address the tensions and contradictions prevailing in any other institutional food services, if a more sustainable food economy is to be achieved.

The food waste phenomenon in the university space symbolizes different things to different people. It is an expression of the paradox between community engagement, one of the pillars of the university, and the university's quest for protection. One would expect that through its community engagement programs, the food services sector of the university could give the remaining food from dining halls to hungry community members. Surprisingly, leftover food was then sold to farmers to feed pigs. Through this move, which appears to be an abdication of its humanitarian duty, the university sought to protect their liability against possible occurrence and the resultant accusations of food poisoning. Views on these protective measures are not shared with community members and even some dining hall staff members, and regardless of this, such a position possibly exposes the uncompassionate nature and the capitalism-driven project of institutions of higher learning. One would expect that universities are institutions where social justice is upheld, and such practices should be absent.

Is it lack of concern that makes universities waste food? Who calls it food waste? Possibly, those who are hungry, food waste activists, and scholars. To the university, how they dispose of food waste is possibly a social justice protective measure, embedded in the context where the food has already been paid for by students; besides, a bit more money can be generated from the small administrative fees paid by the pig farmers. The symbolic meaning of food waste varies with interpretation. While the hungry and the kitchen staff members as at the time of conducting this research were prohibited from eating or taking leftovers out of the dining halls, it can signify social injustice; but to the university, it is the safer move. It questions the canons of social justice with regard to food issues. In such circumstances, there is no shared understanding of what social justice could mean in the face of hunger, food insecurity, and food waste in university spaces. Without such basic understanding and increased intentional efforts, there is a risk of falling far short of achieving the SDG of hunger and malnutrition eradication by 2030. It is arguable that when we wage war against the practice of food waste at

individual, collective, institutional, national, and global levels, we directly or indirectly also wage war against hunger, poverty, malnutrition, global warming, climate change, and food security.

RECOMMENDED READINGS

- Agbedahin, Adesuwa V. 2012. "Identifying Expansive Learning Opportunities to Foster a More Sustainable Food Economy: A Case Study of Rhodes University Dining Halls." Unpublished Masters Thesis, Rhodes University, Grahamstown.
- Department of Environmental Affairs and Development Planning. 2006. *Assessment for the Best Practicable Environmental Options for Managing Priority Hazardous Waste Streams for the Western Cape*. Cape Town, SA: WSP Environmental.
- FAO, IFAD, UNICEF, WFP, and WHO. 2018. *The State of Food Security and Nutrition in the World 2018: Building Climate Resilience for Food Security and Nutrition*. Rome: FAO.
- Friedmann, Harriet. 1998. "A Sustainable World Food Economy," in Roger Keil, David Bell, Peter Penz, and Leesa Fawcett (eds.), *Political Ecology: Global and Local*. New York: Routledge.
- Hall, Kevin, Juen Guo, Michael Dore, and Carson C. Chow. 2009. "The Progressive Increase of Food Waste in America and Its Environmental Impact." *PLoS One* 4 (11): e7940. doi: [10.1371/journal.pone.0007940](https://doi.org/10.1371/journal.pone.0007940).
- Holt-Gimenez, Eric Raj Patel. 2009. *Food Rebellions: Crisis and the Hunger for Justice*. Oxford: Pambazuka Press.
- International Food Policy Research Institute (IFPRI). 2018. *2018 Global Food Policy Report*. Washington, DC: International Food Policy Research Institute.
- Kahn, Tamar. 2010. "South Africa: Waste not, Want not is a Lesson Still to be Learnt." September 20. <http://allafrica.com/stories/201009201320.html>.
- Kinsey, Jean. 2001. "The New Food Economy: Consumers, Farms, Pharms and Science." *American Journal of Agricultural Economics* 83 (5):1113–1130. doi: [10.1111/0002-9092.00259](https://doi.org/10.1111/0002-9092.00259).
- Open Working Group. 2014. "Open Working Group Proposal for Sustainable Development Goals." United Nations. <https://sustainabledevelopment.un.org/content/documents/1579SDGs%20Proposal.pdf>.
- Parfitt, Julian, Mark Barthel, and Sarah Macnaughton. 2010. "Food Waste within Food Supply Chains: Quantification and Potential for Change to 2050." *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 365 (1554): 3065–3081. doi: [10.1098/rstb.2010.0126](https://doi.org/10.1098/rstb.2010.0126).
- Patel, Raj. 2007. *Stuffed and Starved – Markets, Power and the Hidden Battle Foe the World Food System*. London: Portobello Books.
- Stuart, Tristram. 2009. *Waste: Uncovering the Global Food Scandal*. London: Penguin.

Adesuwa Vanessa Agbedahin is the Programme Manager: Academic Career Path Development at the Center for Teaching, Learning and Programme Development of Sol Plaatje University (South Africa). She holds a PhD in Environment and Sustainability (Higher) Education from Rhodes University (South Africa). E-mail: advanagbedahin@gmail.com

Komlan Agbedahin is currently a postdoctoral research fellow at the Unit for Institutional Change and Social Justice at the University of the Free State (South Africa). He holds a PhD in Sociology from Rhodes University (South Africa). E-mail: agbekomlan@gmail.com