

Changing the world, one fridge at a time: Food waste, and what to do about it

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To help change the world, have a look inside your fridge—this is one of the messages contained in an article published in the most recent issue of the authoritative academic journal *Science*. Food waste has attained monumental proportions in both the developed and developing worlds, and the sum of individual consumer's actions can have major impacts on a global scale, according to the article's author, Jessica Aschemann-Witzel, an associate professor at Aarhus BSS, the business school of Aarhus University, Denmark.

The article, titled "Waste not, want not, emit less," points out that overall, one third of the world's food is lost or wasted, and that food waste has serious environmental implications while contributing directly to global warming. Carbon is emitted to no avail in the production of the food, while disposal and decomposition in landfills of discarded food cause additional impacts to the environment. But something can be done, both at the societal and individual levels. This is where social science comes in.

"We know more or less the extent of the problem, and what are the causes of food waste - the next step is action, and here research is needed to help identify what is most effective, so that policy makers know what to focus on," said Aschemann-Witzel, who works at Aarhus BSS' MAPP Centre, which conducts research on value creation in the food sector.

Food waste has different causes in different parts of the world. In

relatively poor countries, it is an upstream problem, and most waste takes place in the production phase due to, for example, sub-optimal methods of harvesting and transportation. The solution in these cases includes building better infrastructure through transfer of knowledge and technology.

In the developed countries, downstream factors are more relevant, and consumer choices are much more important. Up to 30 percent of household food ends in the bin, often due to factors such as cultural norms that prescribe offering plenty of food to guests, misperceptions about food safety and exaggerated disgust. At the same time, however, there is a widespread feeling that throwing away food is wrong, giving cause for hope.

"The fact that consumers and stakeholders alike perceive food waste as obviously unethical makes it a good starting point for individual consumers to become engaged in sustainability," Aschemann-Witzel argues in her article for *Science*.

There is no single solution to the problem of food waste in the developed world, but a variety of practically feasible steps at the micro-level can go a long way towards ensuring greater sustainability. For example, something as simple as checking the fridge prior to shopping can have a large impact in the aggregate.

In addition, governments can contribute by changing overly strict [food safety](#) laws, while producers can introduce innovative packaging solutions that allow the withdrawal of small amounts of food while the rest remains fresh. Retailers should refine their pricing policies, such as "pay 1 for 2" offers, in order to discourage consumers from buying products they don't really need.

Changes designed for the developed world are likely to have an even

bigger impact in future, as countries such as Brazil, India and China become more urbanized and dietary preferences change. In such countries, the article argues, [food waste](#) volumes are likely to increasingly shift to the consumption stage.

"A broad range of efforts are needed to move towards sustainable [food](#) security for all," Aschemann-Witzel writes, "and each individual consumer contributes both to the problem and the solution."

More information: J. Aschemann-Witzel, Waste not, want not, emit less, *Science* (2016). [DOI: 10.1126/science.aaf2978](https://doi.org/10.1126/science.aaf2978)

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