

Minimizing food waste could have significant impact on global resources, study finds

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Credit: Aalto University

New research from Europe suggests that it would be possible to give people's lives a boost and to maintain the planet's natural resources if we reduce food waste and make the food production chain more efficient.

Presented in the journal *Science of the Total Environment*, the findings indicate that reducing loss and waste percentages could result in a 50 % cut in [food supply](#) losses, and in turn help feed another one billion people. This would lead to heightened food security.

For the first time ever, researchers led by Aalto University in Finland have proved a valid estimation for the number of people that could be fed if [food waste](#) is reduced. Slashing losses by half would provide food

from natural resources for an additional one billion in a world whose population is around seven billion. The researchers say this is possible if the lowest loss percentage achieved in any region could be reached on a global level.

'There isn't enough clean water everywhere on Earth,' said Dr Matti Kummu at Aalto University. 'Significantly more [agricultural land](#) cannot be cleared as well as certain raw material minerals for [fertilisers](#) are running low. At the same time, a quarter of the amount of calories in produced food is lost or wasted at different stages of food production chain, which results in unnecessary resources loss.'

The researchers analysed the effect of food losses and its relationship to resources globally. Each year, food losses amount to 27 cubic metres of clean water, 0.031 hectares of agricultural land and 4.3 kilos of fertilisers per inhabitant.

'Agriculture uses over 90% of the [fresh water](#) consumed by humans and most of the [raw materials](#) used in fertilisers,' Dr Kummu said. 'More efficient food production and the reduction of food losses are very important matters for the environment as well as future [food security](#).'

The team found that 614 kilocalories per every person are lost every day, triggered by the loss of food in the food production chain. If the waste was not an issue, global food production would provide 2,609 kilocalories of edible food for every person, every day. The upshot? Cutting back waste would result in viable food resources for eight billion people.

More information: Kummua, M., et al. 'Lost food, wasted resources: global food supply chain losses and their impacts on freshwater, cropland and fertiliser use', *Science of the Total Environment*, 2012.

Provided by CORDIS

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