



Multi-actor design of low-waste food value chains through the demonstration of innovative solutions to reduce food loss and waste



PRACTICE ABSTRACT No: 19

Save Food, Save Resources and Emissions

Food waste has a big impact on the environment, mainly because of the emissions from producing food. If we can prevent food waste or redistribute surplus food, the whole food supply chain becomes more efficient. This leads to big savings in emissions and environmental costs. The environmental benefits of these actions are much greater than the effort it takes to implement them.

Producing food uses a lot of resources like fuel, land, water and raw materials, which harms the environment and costs a lot. For example, farming cattle releases methane, and using fertilizers releases nitrous oxides, both of which contribute to climate change. Emissions from transporting, storing, and cooking food also add to the problem. If we wasted less food, we could cut down on these harmful emissions.

The best way to help the environment is to prevent food waste in the first place. This is especially true for animal-based products, which have a big impact on climate change, and citrus products or almonds, which use a lot of water during production. If we can't prevent food waste, the next best thing is to redistribute or donate it so people can eat it. Recycling comes after that. The last resort should always be sending food to the landfill.

Measures to reduce food waste are for example better forecasting with the help of a software or turning surplus food into products like bread crumbs or vegetable chutneys. Those efforts, such as the energy used for the computer to run the software or to cook the chutney, have a small environmental impact. The environmental benefits from preventing food waste are much bigger. Therefore, these actions can save resources and cut emissions.

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Additional information

The benefits of preventing food waste are measured by the impacts saved per kilogram of food. Preventing 1 kg of food waste at the household level saves more (about 3 kg Carbon dioxide equivalents) compared to surplus fruits and vegetables from primary production (about 1 kg Carbon dioxide equivalents). This is because household food waste often includes animal-based products, which have higher environmental impacts than plant-based products.

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ABOUT LOWINFOOD

The LOWINFOOD project, launched in 2020 and coordinated by the University of Tuscia, Italy, is working to deploy and improve a set of 14 innovative solutions to the food waste problem, by demonstrating their effectiveness and market potential. The core activities of the project are all focused on the evaluation of the efficacy of these innovations in reducing food losses and waste, in terms of the amount of food waste avoided as well as their environmental and socio-economic impact.

CONSORTIUM



COORDINATOR



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Lebensmittel sparen, Ressourcen und Emissionen sparen

Lebensmittelverschwendung hat große Auswirkungen auf die Umwelt, hauptsächlich wegen der Emissionen, die bei der Produktion von Lebensmitteln entstehen. Wenn wir Lebensmittelverschwendung verhindern oder überschüssige Lebensmittel umverteilen können, wird die gesamte Lebensmittelversorgungskette effizienter. Dies führt zu erheblichen Einsparungen bei Emissionen und Umweltkosten. Die ökologischen Vorteile dieser Maßnahmen sind viel größer als der Aufwand, sie umzusetzen.

Die Produktion von Lebensmitteln verbraucht viele Ressourcen wie Treibstoff, Land, Wasser und Rohstoffe, was die Umwelt schädigt und hohe Umweltkosten verursacht. Zum Beispiel setzt die Viehzucht Methan frei, und der Einsatz von Düngemitteln setzt Stickoxide frei, die beide zum Klimawandel beitragen. Emissionen aus dem Transport, der Lagerung und dem Kochen von Lebensmitteln verschärfen das Problem zusätzlich. Wenn wir weniger Lebensmittel verschwenden würden, könnten wir diese schädlichen Emissionen reduzieren.

Der beste Weg, der Umwelt zu helfen, ist, Lebensmittelverschwendung von vornherein zu verhindern. Dies gilt besonders für tierische Produkte, die einen großen Einfluss auf den Klimawandel haben, sowie für Zitrusfrüchte oder Mandeln, die bei der Produktion viel Wasser verbrauchen. Wenn wir Lebensmittelverschwendung nicht verhindern können, ist die nächstbeste Option, sie umzuverteilen oder zu spenden, damit Menschen sie essen können. Recycling kommt danach. Die letzte Option sollte immer sein, Lebensmittel auf der Deponie zu entsorgen.

Maßnahmen sind zum Beispiel eine bessere Prognose mit Hilfe einer Software oder die Umwandlung von überschüssigen Lebensmitteln in Produkte wie Semmelbrösel oder Chutneys. Der Aufwand, die für den Betrieb der Software oder das Kochen des Chutneys benötigt wird, hat nur geringe Auswirkungen auf die Umwelt. Die ökologischen Vorteile der Vermeidung von Lebensmittelverschwendung überwiegen.

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