

# Transforming food systems could create trillions of dollars of economic benefits every year

January 29 2024

---



Credit: CC0 Public Domain

Transforming food systems around the world would lead to socio-economic benefits summing up to US \$5–10 trillion a year, shows a new

global policy report produced by leading economists and scientists of the Food System Economics Commission (FSEC).

The most ambitious and comprehensive study of food system economics so far underlines that [food systems](#) are currently destroying more value than they create and that an overhaul of food system policies is urgently needed. On the other hand, the cost of transformation would be much lower than the [potential benefits](#), offering a better life to hundreds of millions of people.

"The costs of inaction to transform the broken food system will probably exceed the estimates in this assessment, given that the world continues to rapidly move along an extremely dangerous path. It is likely that we will not only breach the 1.5°C limit, but also face decades of overshoot," states Johan Rockström, Director of the Potsdam Institute for Climate Impact Research (PIK) and FSEC Principal.

"The only way to return back to 1.5°C is to phase out fossil fuels, keep nature intact and transform food systems from source to sink of greenhouse gases. The global food system thereby holds the future of humanity on Earth in its hand," he adds.

## **Food systems powerful means to potentially save 174 million lives from premature death**

In the report, the scientists provide the most comprehensive modeling of the impacts of two possible futures for the global food system to date: our "Current Trends" pathway, and the "Food System Transformation" pathway.

In its "Current Trends" pathway, the report outlines what will happen by 2050, even if policymakers make good on all current commitments:

Food insecurity will still leave 640 million people (including 121 million children) underweight in some parts of the world, while obesity will increase by 70% globally.

Food systems will continue to drive a third of global greenhouse gas emissions, which will contribute to 2.7 degrees of warming by the end of the century compared to pre-industrial periods. Food production will become increasingly vulnerable to [climate change](#), with the likelihood of extreme events dramatically increasing.

FSEC also finds that the food system can instead be a significant contributor to economies, and drive solutions to health and climate challenges. In the "Food System Transformation" pathway, economists show that by 2050 better policies and practices could lead to undernutrition being eradicated, and cumulatively 174 million lives saved from premature death due to diet-related chronic disease.

Food systems could become net carbon sinks by 2040, helping to limit global warming to below 1.5 degrees by the end of the century, protecting an additional 1.4 billion hectares of land, almost halving nitrogen surplus from agriculture, and reversing biodiversity loss. Furthermore, 400 million farm workers across the globe could enjoy a sufficient income.

"The cost of achieving this transformation—estimated at the equivalent of 0.2-0.4% of global GDP per year—is small relative to the multi-trillion dollar benefits it could bring. Food systems are a uniquely powerful means of addressing global climate, nature and health emergencies at the same time—while offering a better life to hundreds of millions of people," says Hermann Lotze-Campen, FSEC Commissioner and Head of Research Department Climate Resilience at PIK.

"Rather than mortgaging our future and building up mounting costs leading to high hidden health and [environmental costs](#) that we will have to pay down the line, policymakers need to face the food system challenge head-on and make the changes which will reap huge short- and long-term benefits globally," says Ottmar Edenhofer, PIK Director and FSEC Co-Chair. "This report should open up a much-needed conversation among key stakeholders about how we can access those benefits whilst leaving no one behind," he concludes.

**More information:** C. Ruggeri Laderchi et al, [The Economics of the Food System Transformation](#)

Provided by Potsdam Institute for Climate Impact Research

Citation: Transforming food systems could create trillions of dollars of economic benefits every year (2024, January 29) retrieved 28 April 2024 from <https://phys.org/news/2024-01-food-trillions-dollars-economic-benefits.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.