Plant-based proteins among food-production positive 'tipping points'

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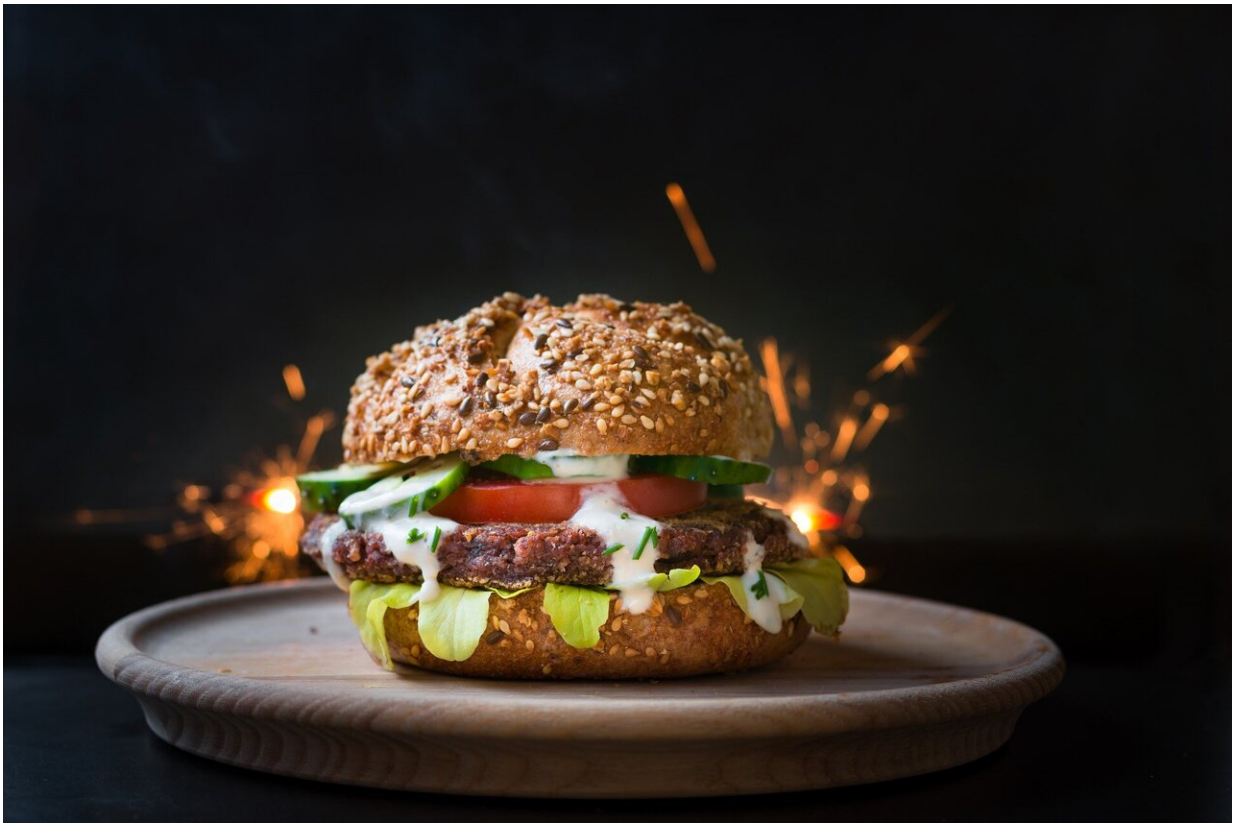

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Triggering positive "tipping points" could transform the way we produce food and use the world's land, according to a new report.

One tipping point would be widespread acceptance and uptake of "alternative proteins" such as plant-based meat substitutes.

The new report—by the Food and Land Use Coalition (FOLU), SYSTEMIQ and the Global Systems Institute at the University of Exeter—says positive tipping points could trigger rapid decarbonisation, protect biodiversity, ensure healthier human diets, improve food security and create more inclusive and resilient rural economies.

Tipping points are thresholds which, once crossed, trigger irreversible, self-reinforcing changes.

Humans are causing climate tipping points by emitting greenhouse gases—but we can also intervene to "tip" social, technical and economic systems for the better.

The report comes in a year of key opportunities for climate action, including the COP26 UN meeting in Glasgow in November.

"We urgently need to change the way we produce food and use land," said Professor Tim Lenton, director of the Global Systems Institute.

"Unless we transform in the next ten years, both the Sustainable Development Goals and the Paris Agreement climate targets will be out of reach.

"Our report identifies key positive tipping points to transform food and land use systems, and offers a more general strategic framework for triggering positive tipping points towards global sustainability.

"Positive tipping points provide a message of optimism and empowerment when faced with dauntingly complex challenges.

"We can all play a role in triggering positive tipping points towards a sustainable future."

Scarlett Benson, Co-Head of Knowledge Generation at FOLU, said: "Global transformation of food and land use systems is needed now more than ever as we rebuild the economy in the wake of COVID-19.

"The world must unlock rapid change at scale to achieve our vision for sustainable food and land use systems in the next decade."

On diversifying sources of protein, the report says that the current booming market in plant-based alternatives to meat, such as the Impossible Burger, is not yet being matched by a reduction in meat consumption.

But with more than 25% of Europeans now considering themselves "flexitarian," vegetarian or vegan, a few critical interventions could help tip the scales.

Such proteins have far less environmental impact than intensively raised beef and many other meats.

A shift to eating more plant-based proteins could help protect natural ecosystems from the impacts of intensive livestock production, allowing farmers to focus on more traditional, less intensive practices that help to protect and restore nature.

The report says investment in innovation to improve the taste, quality, affordability and social acceptance of alternative proteins is a critical early-stage policy intervention required to trigger tipping points and accelerate reinforcing feedback loops.

These changes could support the related issue of promoting healthy diets.

The report defines this as a transformation of global diets towards local variations of the "human and planetary health diet"—a predominantly plant-based diet rich in fruits, vegetables and whole grains, diverse protein sources, and reduced consumption of sugar, salt and highly processed foods.

On "protecting and restoring nature," the report says taking account of "natural capital" (the value humans gain from nature) in decision-making, as well as subsidy reform and carbon pricing, could help to trigger tipping points.

And on "productive and regenerative agriculture," the report uses India as a case study and says increased public and private investment to promote sustainable agriculture could trigger "reinforcing feedback loops" that could lead to a tipping point.

The report's authors worked with a wide range of scientists, farmers, indigenous peoples' groups, policymakers, business, financiers and others.

The report is titled "Accelerating the 10 critical transitions: Tipping points for food and land use systems transformation."

A related working paper—"Operationalising positive tipping points towards global sustainability"—is available online here.

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