Horizon
The EU Research & Innovation Magazine

European Commission

All aboard! Europe's food wagon steers towards a greener path

Making diets kinder to the environment and better for people's health requires root-and-branch changes in production and consumption.

13 December 2023 - By ANTHONY KING

As a young scientist, Dr Christian Bugge Henriksen never minded getting his hands dirty. He put on his wellies to study soil nutrients in barley and potato fields in his native Denmark.

Henriksen has since taught university courses on food gardening and forestry. He has also gotten knee-deep into questions about what kinds of foods are better for public health and the planet.

Costly calories

'Our food system today has a huge impact on the environment, biodiversity, soils and water resources,' said Henriksen, an associate professor in the Department of Plant and Environmental Sciences of the University of Copenhagen. 'We also have lots of health issues caused by obesity and malnutrition.'

Food production is responsible for around a third of global greenhouse-gas emissions, contributes to destroying species and ecosystems and is a prime reason that more than half of all adults in the EU are overweight.

Henriksen believes a better way must exist to make tasty food with less impact on the environment – and on people's waistlines.

He leads a research project that received EU funding to engage Europeans, including children, young adults, farmers and food-sector representatives, to help Europe move away from industrialised food production focused in large part on livestock.

Called CLEVERFOOD, the project began in January 2023 and runs until the end of 2026. Participants come from nine countries: Belgium, Denmark, Greece, Hungary, Italy, the Netherlands, Poland, Portugal and Spain.

'We need a food system that is fair, healthy and sustainable,' said Henriksen. 'Unfortunately, that is not what we have right now.'

All systems go

Getting there requires widespread and coordinated change.

That means action on many different fronts at once: altering consumer habits, producing and processing locally, reducing water and energy use, recycling nutrients, ensuring less food gets thrown away, cutting packaging waste and, not least, creating an institutional framework to spur change and nurture it.

'We need a transformation in the food system,' said Kerstin Pasch, an agrobiologist who is head of the German Institute of Food Technologies' office in the Belgian capital Brussels.

She leads another Europe-wide project to build momentum for a revamp of the way that food is produced and consumed on the continent. Called FOSTER, the four-year initiative is due to run through August 2026 and is examining how dissemination of the latest knowledge and practices can be improved.

Pasch outlined the challenge by painting a picture of the system that's a good deal more complex than the simple storybook image of the farmer on a farm.

The food system includes large numbers of people involved in the production, processing, storage, selling, consumption and disposal of food. All involved need to understand their role and the impact of their actions, according to Pasch.

'The food system is much more than just agricultural production,' she said.

Orchestrating change

The European Green Deal has a target of making the EU climate-neutral by 2050.

The EU's Farm-to-Fork strategy and recent changes to the Common Agricultural Policy will help restructure the food system in line with Europe's environmental goals.

An EU research initiative called Food 2030 is charting the way forward, listening to the science.

That's where projects like CLEVERFOOD and FOSTER come in. They bring together a wide range of players pushing for a fairer, healthier and more sustainable food system, creating momentum for real changes in production, distribution, retail and consumption.

'We need more sustainable agriculture, which means producing enough food while not having a negative impact on the next generation,' said Pasch.

CLEVERFOOD has created an online platform for numerous EU-funded initiatives with a shared vision. It has already attracted more than 70 of them with a combined investment exceeding €450 million, according to Henriksen.

'The aim is to facilitate the mobilisation of European citizens – including children, youth, farmers, entrepreneurs, investors, researchers and educators – as well as policymakers to transform the food system,'

he said.

People power

Ultimately, real change will need to come from a combination of top-down and bottom-up approaches.

Pasch points to the role of local authorities and grass-roots organisations in driving transformation.

In Germany, for example, the food policy council for the CityRegion of Stuttgart, a partner in FOSTER, is encouraging school canteens to source ingredients from local food producers and helping farmers process their crops closer to home.

In Serbia, an initiative is helping farmers improve production through new technologies. A digital village seeks to make work and life in the countryside more appealing, especially for young people.

In the Netherlands, a Food Transition Coalition with around 200 members wants to accelerate a shift so that food prices reflect their true costs, including with regard to environmental impact.

For this group, the "no more hunger" motto that has driven much of agrifood policy in Europe during the post-war period needs to change to "a healthy life on a healthy planet. For everyone".

Pasch agrees.

'After the Second World War, there was a strong focus on producing sufficient food,' she said. 'Now just producing more food is not enough.'

A meaty issue

One way to reduce the food system's environmental footprint is to scale back the role of meat.

'The current levels of meat production and consumption are not sustainable in the long run,' said Henriksen.

Today, meat is an important source of protein. Consumption of it tends to rise as people get wealthier and, over the past 50 years, meat production worldwide has at least tripled.

Around 5 billion hectares – or 38% of the world's surface – are farmed globally.

Roughly 40% of the world's cropland goes to feeding animals rather than humans.

It doesn't mean everyone needs to become vegetarian. But less meat consumed would mean fewer animals raised, leaving more room for plants to be grown for protein. That in turn would help the climate and biodiversity.

Old habits, new chances

The business of raising farm animals for food has a long history in Europe, so any transition to more plant-based diets must encourage new business practices.

In Denmark, for example, there is a matchmaking platform for farmers growing legumes.

This is helping to build a community of growers who can provide advice on best practices and markets. Another national initiative is addressing varieties of oats, peas and fava beans to improve flavour, nutrition and other quality characteristics for plant-based foods.

'If farmers grow these varieties rather than just growing bulk crops, they will get a higher price,' said Henriksen.

Whether in Denmark or Serbia, Germany or the Netherlands, or a host of other European countries, overhauling Europe's food system is no longer being merely debated but also put into practice.

Accelerating changes across the food system will be the main challenge in the years ahead.

‘Different projects and initiatives may target a few isolated components of the food system, but not usually the entire system,’ said Henriksen. ‘That’s what we need now for the benefit of people and the planet.’

Research in this article was funded by the EU. The views of the interviewees don’t necessarily reflect those of the European Commission. If you liked this article, please consider sharing it on social media.

Food 2030

The EU is seeking to spur a transition towards sustainable, healthy and inclusive food systems through its research and innovation policy framework known as “Food 2030”.

Food 2030 is driven by an awareness that current production and consumption patterns are affected by and contribute to crises including malnutrition, climate change, biodiversity loss and resources scarcity.

The framework brings together research and innovation players in different areas to tackle interconnected challenges through a systemic and multi-actor approach.

The main goals include developing knowledge and impactful solutions fostering sustainable healthy diets; climate-friendly, environmentally smart and circular food systems; and resilient and empowered communities. Other top goals are encouraging new business models, capacity building and education for a just and fair food-systems transition respecting planetary boundaries.

This article is relevant to the Food 2030 Pathway on governance and systems change.

More info

- CLEVERFOOD
- FOSTER
- EU sustainable food systems research and innovation