



Food for thought

Baltic ideas for sustainable food policy

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Project participants



AirClim is a joint venture between four Swedish environmental organisations with the chief purpose of promoting awareness of the problems associated with air pollution and climate change, and thus, in part as a result of public pressure, bringing about the required reduction in the emissions of air pollutants, including greenhouse gases.

www.airclim.org



The Lithuanian Fund for Nature (LFN) mission is to care about wildlife and to encourage sustainable use of natural resources. Established in 1991 just after the restitution of state independence, LFN stands as the pioneering environmental NGO in Lithuania. Focus is on three primary domains intertwined with natural resources: forestry, fisheries, and agriculture, with the overarching aim being the enhancement of sustainability within these sectors.

<http://www.glis.lt>



The Polish Ecological Club in Krakow, Gliwice City Chapter is the local branch of one of the leading independent environmental NGOs in Poland. The Gliwice Chapter was established in 1988 and has been carrying out its non-profit activities through the realisation of both national and international projects ever since. It works to shape environmental awareness and improve the condition of Polish environment through activities in many fields, such as: sustainable agriculture, forestry and deforestation, water protection, sustainable soil management, factory farming impact on environment, health, animal welfare, climate change adaptation and mitigation, air pollution.

www.pkegliwice.pl

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Introduction

In recent years, the global food system has come under increasing scrutiny due to its significant environmental, social and health impacts. The need to accelerate the transition towards increased sustainability of our food system has been highlighted by many, not least it forms the core of the EU's Farm to Fork strategy, introduced in 2020.

The necessity for innovative approaches is underscored in the IPCC Sixth Assessment Report WG3¹:

“Transformation of food systems may come from technological, social or institutional innovations that start as niches but can potentially lead to rapid changes, including changes in social convention.”

Policymakers, businesses, and civil society organisations have already embarked on this journey, implementing a variety of initiatives aimed at promoting sustainability in the food system. This report examines thirteen notable examples of such initiatives in the Baltic region, highlighting their objectives, key outcomes, and lessons learned.

From eco-labelling of grocery stores to government-funded programmes supporting plant-based foods, these initiatives showcase diverse approaches to addressing sustainability issues throughout the food supply chain. Whether they aim to reduce food waste, promote organic farming, or encourage healthier dietary choices, each initiative offers valuable insights into how stakeholders can work together to build a more sustainable food system.

When the work on this report began, a proposal for a European Union framework law for a Sustainable Food System was still being expected. Our ambition was that this report could contribute to the discussion about that law. The fact that it has now been shelved indefinitely, however, does not make this report any less relevant.

Through analysis of these case studies, policymakers and stakeholders can gain a deeper understanding of effective strategies for promoting sustainability in the food sector. By leveraging lessons learned from these initiatives, policymakers can develop evidence-based policies and interventions that contribute to achieving broader environmental, social, and health goals outlined in initiatives such as the European Green Deal.

1 Babiker, M., G. Berndes, K. Blok, B. Cohen, A. Cowie, O. Geden, V. Ginzburg, A. Leip, P. Smith, M. Sugiyama, F. Yamba, 2022: Cross-sectoral perspectives. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.005

Background

Food systems are a crucial foundation of our societies and economies, and their influence can be experienced in our day-to-day lives. The simplistic, linear model of the food chain is currently being replaced by a food system approach that provides a more holistic understanding of the complexities of food production and consumption and allows us to identify opportunities for positive change in the food system. The desirable model for the food system not only satisfies the needs of the present generation but also ensures that food safety, security, and access to healthy food for future generations will not be compromised while the world's population is growing.

However, there are several challenges with the current food system that require urgent action, namely: food insecurity, climate change, animal welfare, food waste, and biodegradation, among others. Around 9 per cent of the EU population lack access to sufficient, safe, and nutritious food². Food production is responsible for more than one-third of global greenhouse gas emissions³. Nearly 59 million tonnes of food waste are generated annually, with an estimated market value of 132 billion euro in the European Union.⁴

There are many interconnected actors in the food system: farmers, producers, distributors, retailers, and consumers. The current food system does not ensure that the economic benefits are equitably distributed among the stakeholders. Although small and medium-sized farms make up 80 per cent of all farms in the European Union, they only receive 20 per cent of agricultural subsidies.⁵ The price of food is often artificially low due to subsidies, externalities and market distortions. This can make it challenging for farmers and producers to maintain environmentally sustainable practices and earn fair wages. To address this, it is necessary to support sustainable farming practices and create equalised market conditions for the producers.

Unfair labour practices and social injustice are prevalent in the current food system. Achieving social sustainability requires consideration of the needs and perspectives of all stakeholders, including marginalised and vulnerable communities. Food production and distribution also take a toll on the environment, as food production involves the extensive use of fertilisers and pesticides, which degrade soil, water and air quality.⁶ To achieve ecological sustainability, policies that promote regenerative agriculture, organic farming and agroforestry need to be put in place, which are likely to require significant investments in research, infrastructure and education. According to research, organic farming alone can reduce greenhouse gas emissions by up to 40 per cent and have positive effects on biodiversity and soil health.⁷ It is therefore crucial to achieve economic,

2 <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220225-1>

3 <https://www.fao.org/news/story/en/item/1379373/icode/>

4 https://food.ec.europa.eu/safety/food-waste_en

5 https://agriculture.ec.europa.eu/system/files/2019-05/cap-separating-facts-from-fiction_en_0.pdf

6 Christie, M., Martín-López, B., Church, A. et al. Understanding the diversity of values of “Nature's contributions to people”: insights from the IPBES Assessment of Europe and Central Asia. *Sustain Sci* 14, 1267–1282 (2019). <https://doi.org/10.1007/s11625-019-00716-6>

7 https://www.organicseurope.bio/content/uploads/2022/04/IFOAMEU_advocacy_organic-benefits-for-cli

social and ecological sustainability of the food system. Only a resilient food system is capable of meeting the nutritional needs of generations to come.

The European Union has recognised the significance of sustainable food systems. The EU has put in place several policies and initiatives to promote sustainability across the food system, the key one being the *Farm to Fork Strategy for a fair, healthy, and environmentally friendly food system*, adopted in 2020 as part of the European Green Deal. The strategy sets out a comprehensive framework of measures to be achieved by 2030, including promoting sustainable diets, reducing food waste and pesticide use, improving soil health, and increasing the share of organic farming. Another important initiative is the Common Agricultural Policy (CAP), which supports agriculture and rural development in the European Union. The CAP includes measures to support sustainable farming practices, small and medium-sized farms, protect biodiversity, and improve animal welfare.

There are also other partnerships and initiatives that advance the development of sustainable food systems in Europe. The EU Platform on Food Losses and Food Waste connects stakeholders from across the food system to share best practices and develop solutions to reduce food waste. Similarly, the EU Ecolabel programme certifies food products that meet sustainability criteria, informing consumers about sustainable choices.

The European Commission announced a new legislative framework for sustainable food systems that was supposed to be launched in late 2023. This EU law was aimed to address the lack of governance and integrated sustainability policy in EU food policy. The law might have the power to set obligatory sustainability targets for the actors in the food system, shift consumption habits, and make sustainable food more affordable. Unfortunately, this proposal was shelved.

Methodology

Central to this report are the case studies, which have been carefully selected from five European countries: Denmark, Germany, Lithuania, Poland and Sweden. The selection of these case studies was guided by specific criteria aimed at ensuring a comprehensive and insightful analysis of sustainable food system initiatives across different contexts. The criteria used for case selection include:

1. Degree of novelty:

- We prioritised initiatives that demonstrate innovative approaches or strategies for promoting sustainability within the food system. This includes initiatives that introduce new concepts, technologies, or policy frameworks to address environmental, social or health challenges.

2. Effectiveness:

- The effectiveness of each initiative in achieving its stated objectives was a key consideration. We focused on case studies with demonstrated success in generating positive outcomes, whether in terms of environmental impact, societal benefits, or economic viability. That said, some of the initiatives have had shortcomings that we also hope we can learn from.

3. Transferability to other levels of authority and/or regions:

- We sought initiatives with potential for scalability and replicability beyond their initial context. Case studies were selected based on their potential to inspire similar efforts at various levels of governance, from local municipalities to national governments, and across different geographical regions within Europe.

4. Diversity in type of initiatives and control instruments:

- A diverse range of initiatives was included to provide a comprehensive overview of sustainable food system interventions. We aimed to showcase initiatives led by different types of initiators, targeting various stakeholders, and employing a variety of control instruments, such as policy regulations, voluntary certifications, and public-private partnerships.

By applying these selection criteria, we aimed to offer a well-rounded portrayal of sustainable food system initiatives in Europe, highlighting both successful models and key lessons learned that can inform future policymaking and implementation efforts in the region. **The specific case studies chosen can be seen in the table on the next page.**

Drawing from the comprehensive analysis of the case studies, we have distilled a series of recommendations tailored to support policymakers in their efforts to promote sustainable food systems. **These recommendations are consolidated and presented in the concluding chapter of this report.**

	Initiative	Country	Type of initiator	Short description
1	The Juchowo Farm	Poland	Foundation	The largest biodynamic farm in Europe. It has been working proactively to develop a local market for its products, as well as engaging with the local community.
2	Proper Accounting in Agriculture	Germany	Citizen shareholder company	Tool for true-cost accounting for farms.
3	The Scanian Bean	Sweden	Public-private partnership	A regional action plan in cooperation between companies and authorities to promote the local production of pulses for human consumption.
4	Ecofood project	Poland	Local environmental NGO	A project aimed at supplying organic food, grown in non-polluted areas, to residents in the heavily polluted industrial regions in southwestern Poland.
5	Eco-labelling of grocery stores	Sweden	National environmental NGO	Third-party eco-labelling of grocery stores
6	Ban on energy drinks for under-18s	Lithuania	Government	Strict regulations on the sale of energy drinks to individuals under 18 years old, prohibiting their sale, purchase or transfer to minors and imposing fines for violations.
7	Sugar tax	Poland	Government	A levy on beverages containing added sugar, sweeteners, caffeine or taurine.
8	The Fund for Plant-based Foods	Denmark	Government	Fund aimed to support the development of plant-based foods.
9	Gyvi gali, Making plant-based food more accessible	Lithuania	Animal rights NGO	Advocacy and consumer awareness campaign for plant-based food.
10	Diet for a Green Planet	Sweden	Municipality	Politically anchored criteria for sustainable diets.
11	Internal climate tax	Denmark	Municipality	Internal climate tax to incentivise climate-friendly procurement.
12	Development of buffet tables at schools	Lithuania	Government	Recommendations with the aim of extending buffet-style lunches at school canteens in Lithuania.
13	Actions to reduce food waste	Lithuania	Government	A complex of actions: guidelines and information for primary producers, changes to rules for compliance with trade standards and subsidies for food charity.

Initiative 1 “Juchowo Farm”

Type of initiative

The largest biodynamic farm in Europe, located in the village of Silnowo, in northern Poland. Over the past two decades they have been working proactively to develop a local market for their products, as well as engaging with the local community,

Quick facts

Juchowo Farm was founded in the early 2000s with a commitment to biodynamic agriculture and restoring soil fertility. Covering approximately 2,000 hectares, the farm is owned by the Stanisław Karłowski Foundation. The foundation operates the farm based on the philosophy of “healthy earth, healthy plants, healthy animals and healthy people”.

Objective

Food production, processing and distribution that meets the principles of a sustainable food system is at the core of Juchowo. This implies respect for animal welfare, considering the impact on biodiversity and soil, as well as ensuring good working conditions for the employees. There is also an ambition to reshape the whole food chain beyond the farm itself.

Stakeholders

The farm is owned by the Stanisław Karłowski Foundation. The foundation is named after Stanisław Karłowski (1879–1939) who was a senator in the interwar period and from 1931 a pioneer of biodynamic agriculture in Poland.

However, the day-to-day operations are handled by Spółka Rolnicza Juchowo Sp. z o.o. (Juchowo Agricultural Company Ltd.) and Zakład Aktywności Zawodowej dla osób niepełnosprawnych (ZAZ) (Vocational Activity Facility for people with disabilities).

Key outcomes

- Revitalisation of the local and regional market for organic products
- Improvement of the condition of local soil, air and water
- Increased support for people with disabilities, particularly with regard to the development of vocational skills
- Shortening of food supply chains.

Potential for upscaling

Given the success of the Juchowo Farm, it would not be amiss to support similar establishments in other parts of Poland or even the European Union. From a food sys-

tem perspective, it is particularly interesting to see how policy can support the development of on-farm processing and the shortening of supply chains.

It is also worth noting the fact that parts of the business are run as a social enterprise that offers jobs to people with disabilities that who would otherwise be outside the labor market.

The uptake of green public procurement in Poland lags behind many other member states. If that was to change, Juchowo would potentially sell more of its products to public actors, such as school canteens.

The long story

Juchowo farm was owned by a German noble family in the early 1900s. After World War II the area became Polish, and the communist government turned the estate into a State Agricultural Farm. When the communist regime fell half a century later there was no one who wanted to buy and invest in the land. The property was abandoned and fell into disrepair for many years, until the early 2000s when a Polish-German foundation – the Stanisław Karłowski Foundation – was attracted by the farm. Thanks to donations from companies and individuals they managed to buy the land. And in 2004, they registered as an agricultural company and could embark on cultivating the land.

Right from the start Juchowo has implemented the principles of sustainable and ecological agriculture and conducted educational, scientific and teaching programmes. In addition, it organises and supports the social and professional integration of disabled people.

Today 1,076 hectares are used for biodynamic agricultural production. The management system is referred to as closed-loop agriculture. In short, all feed is produced on the farm and all manure is spread on its own fields. The cattle herd amounts to 700 livestock units, of which approximately half are dairy cows. In addition, about 20 hectares are used for garden crops – vegetables and herbs. Rye, barley, wheat, spelt, oats, buckwheat, flax, rapeseed, and fodder beets are grown for processing. Soil fertility is improved by growing clover and alfalfa.

To shorten supply chains and increase value, a large proportion of goods are processed directly on the farm. In total, more than 100 different food products are made at Juchowo including bread, yoghurt, pasta, jams, sausages, herbal teas and cordials.

To begin with, most of the produce from Juchowo was exported to Germany, as the demand for organic food in Poland was small. But a lot has changed in twenty years. During this time, interest in organic produce in Poland has grown, as well as the ability to pay for slightly more expensive food.

Milk is a good example. Until 10 years ago, all milk produced on the farm was transported and sold in Berlin. Gradually, the milk began to be processed on the farm, and local buyers were sought. Today, about 30 per cent of the milk is processed at the

on-farm dairy to make cheese, which is also sold within a radius of a few dozen kilometres from the farm. The milk is bottled, sold locally, but also distributed to dozens of organic food stores in the northern part of Poland.

Today, Juchowo products are sold at three levels:

- **Locally.** On the farm, there is a store that sells all the products that are available during the growing season and are processed on the farm. In addition, there is a store in the nearby town of Szczecinek (12km), which only sells goods produced at Juchowo.
- **Regionally.** Juchowo products can also be found in many organic stores in northern Poland; they even reach Warsaw and supply the stores of the Dobrze Cooperative. Employees of the company Juchowskie Smaki attend fairs and organic food fairs such as Natura Food in Łódź.
- **Online.** A very important role is played by the online store, where customers can order all the products online. Packages are distributed on Wednesdays, so with careful timing customers can receive their orders within two days.

Much of the work is done within the framework of a social enterprise that offers vocational training and employment for people with intellectual disabilities or mental health problems (abbreviated as ZAZ). The ZAZ business manages the herb and fruit garden, and refines the harvest into herbal teas, jams and cordials, as well as supplying the on-farm bakery. The ZAZ employees work part-time, participate in therapeutic workshops, and have access to therapeutic rehabilitation.

The fact that the farm is owned by a foundation has made it possible to collect funds for innovative and social projects, such as improving animal welfare by constructing a decent barn, carrying out studies of the soil quality, as well as vocational training. A possible disadvantage of the ownership form is that many people are involved in the decision-making processes and as a result they can take a long time.

Overall, Juchowo is an example of how a profitable agricultural business can be run without compromising ecological and social values. The involvement in the local community, the investment in processing directly on the farm and the development of short supply chains are cornerstones of its success.

Initiative 2 “Proper Accounting in Agriculture”

Type of initiative

Tool for true-cost accounting for farms.

Quick facts

The Regional Value Performance Calculator is a commercial tool that assesses the financial value of the social, ecological and regional economic services that farmers and landowners provide and classifies them on a colour-coded and percentage scale. The tool was originally developed for use in Germany, but it is now being adapted for other parts of the world.

Objective

To visualise and communicate the common goods that are delivered by sustainable farming businesses.

Stakeholders

The tool was developed to monitor the sustainability of farms, both organic and conventional.

Key outcomes

Several hundred farms are now using the tool.

Potential for up-scaling

So far, the tool has mostly been used by individual farmers. But it is also possible for stakeholders upstream of the supply chain to buy the tool to monitor and support their suppliers as part of their environmental management work. This ultimately benefits the farmers who are making the greatest commitment towards sustainability.

The approach of monitoring and valuing eco-friendly activities and measures could also serve as a model for developing new financial support systems for sustainable farming.

The long story

Industrial farming has many harmful effects, including soil erosion, loss of soil organic carbon, biodiversity loss, nitrate leaching and water contamination. On the other hand, diversified farms, managed under agroecological principles, may have many positive effects. However, neither the negative nor most of the positive impacts of agriculture are reflected in farm balance sheets or translated into market prices for agricultural products.

In response to these challenges Regionalwert AG Freiburg/Br, a citizen shareholder company in southern Germany, has developed a method for “proper accounting in agriculture”. The founder Christian Hiß grew up on one of the first organic farms in Germany. He had his own organic gardening business for some years, but quickly realised that sustainable farming in small, regional cycles was not financially worthwhile. However, turning to mass production and giving up the diversity of his farm was out of the question for him. Instead, he began to fundamentally rethink operational performance accounting.

The work started in 2016 and was done in collaboration with practitioners, society and academia, and the first commercial version of the calculator was launched in 2020. Since 2021, the tool has been managed as a separate business (Regionalwert Leistungen AG).

“Our mission is to reform the accounting practices in agriculture,” says Johanna Norris who works for Regionalwert Leistungen’s international team, in explaining the core idea. “The task is to assess sustainable practices on the production side – anything the farm can do that contributes to sustainability, whether it is ecological sustainability, supporting social infrastructure or supporting the regional economy. These are our three pillars.”

The performance calculator identifies and values sustainable farm management activities and assesses them based on the three pillars. These in turn are subdivided into ten thematic areas: soil fertility, biodiversity, climate and water, animal welfare, expertise, role in the community, quality of employment, economic sovereignty, regional economic cycles, and regional network. Each area includes sub-areas that are assessed using indicators.

She explains the procedure: “We have around 300 key performance indicators (KPIs), which we use to assess how sustainable a farm is. Farmers type in their data, they are asked a series of questions, the data entry takes up to five hours, in some cases a lot less.”

In most cases the farmers themselves pay for the service. Norris sees the time it takes to enter the data as one of the main challenges. “Farmers have a lot to do already, they don’t really want to do all the bureaucratic work.” But she believes that the effort pays off, since “this can bring them a lot of planning benefits, strategic advice”.

The result of each KPI is measured and rated on a colour-coded scale with the sustainability level expressed as a percentage. The reported efforts are also valued financially, which is a key element of the tool. “The aim is for the farmers to be compensated for these actions.”

In addition to individual farmers, a handful of food processors, millers and producers of breakfast cereals have purchased bundles of codes for their suppliers to enter data into the tool. The aim is to monitor and support their farmers in their sustainability efforts.

There are also ideas about collaborating with other actors downstream of the supply chain. “Retailers could play a major role. They could make big leaps in choosing growers or supporting growers to move towards more ecologically sound practices.”

Several hundred farms have already assessed their sustainability level. “The tool has been used to assess twelve different branches of farming all the way from livestock to vegetables and fruit farming”.

Most are based in Germany, but the tool is also being developed for use in other parts of the world. “The biggest farm that has put their data into the sheet was a farm from Latin America with 700 hectares.”

There are other tools that measure farm sustainability. “Though most of them are outcome-based, for instance they simply count how many bird species are found on the farm.” By contrast, the new tool measures “the actions that a farmer can take to contribute to a certain category, whether it is biodiversity or soil fertility”.

Besides being a tool for farmers here and now, there is also an ambition to introduce an alternative model for valuing the work of farmers and landowners on a broader scale.

Ultimately this would mean “a Common Agriculture Policy reform that is more based on the effort put in, rather than how many hectares a farm has, of course there are a lot of compliance rules, but the bulk of the money is distributed based on area, and we would like to see that changed”.

Initiative 3 “The Scanian Bean”

Type of initiative

Skånebönan (The Scanian Bean) is a regional action plan in cooperation between companies and authorities to promote the local production of pulses for human consumption.

Quick facts

Skånebönan (The Scanian Bean) is a regional action plan jointly created by representatives from food and agricultural companies, universities and research institutions in Skåne (Scania).

The goal is to speed up Skåne’s production of protein crops, such as peas, beans, lentils and lupins. The action plan also aims to create security for Swedish farmers to encourage them to grow such crops.

The action plan consists of four steps:

- To guarantee orders for protein crops from industry and commerce
- To create more preparation and processing facilities in Sweden
- To spread current knowledge so that it creates benefit
- To ensure that the plan is also extended nationally to the rest of Sweden

Objective

To increase the production of pulses for human consumption in Skåne. To help farmers to adapt their production of crops. To develop Skåne as a leading region for plant protein. To make Sweden more self-sufficient in pulses and become less dependent on imports with the aim of strengthening crisis preparedness.

Stakeholders

The work has taken place within the framework of an established private-public partnership, Skåne Food Innovation Network (SFIN) – a non-profit association for private companies, the public sector and universities that work in the food industry in Skåne.

The work on the action plan has been led by the Food Academy with support from Region Skåne and the County Administrative Board of Skåne. It has been financed by Region Skåne, which is also responsible for the continued coordination of the project.

Participants working with the Skånebönan action plan are:

- Hushållningssällskapet (The Rural Economy and Agricultural Societies)

- Lantbrukarnas Riksförbund (LRF) (The Federation of Swedish Farmers)
- Lantmännen (Swedish Agricultural Cooperative)
- Länsstyrelsen Skåne (The Scania County Administrative Board)
- Lunds Tekniska Högskola (LTH) (Lund University Faculty of Engineering)
- Orkla Foods Sverige
- Pernod Ricard/The Absolut Company
- Region Skåne (Scania County)
- RISE
- Sveriges Lantbruksuniversitet (SLU) (Swedish University of Agricultural Sciences)
- Sweden Food Arena

Key outcomes

Implementations of the action plan have already begun.

Some examples of activities:

- SLU Alnarp, Swedish University of Agricultural Science, has set up a research project entitled “How do we get the bean to the plate?” The aim is to create opportunities for southern Swedish farmers to meet buyers of legumes and together discuss obstacles and solutions for profitable business agreements.
- Joint canvassing of the Department of Rural Affairs to talk about how protein crops can become part of the updated food strategy. One of the requests is a stimulus package for increased cultivation.
- LTH (Lund University Faculty of Engineering) lets students look at waste products – how can they be used? LTH is considering linking this project to Skånebönan.

For Skånebönan to be successful, the entire complex food chain needs to make a simultaneous transition (regrouping) in different ways over many years. Therefore Skånebönan has no end date – the project will remain as long as there is a need for a common platform.

Potential for upscaling

Skåne has a long-established partnership between authorities, universities and companies in the food industry, something that has made it easier to start this type of strategic work.

To realign our food system, we will need to make major changes in production and consumption. This type of action plan – in which different actors are involved – facili-

tates the establishment of supply chains for new types of food.

We see great potential for spreading the action plan. If we are to reduce meat consumption we need to eat more legumes, and in large parts of Europe there is potential to grow significantly more beans and peas than is done today.

The regional action plan includes efforts to promote similar commitments and investments at national level.

We also believe that Skånebönan could be a model for a similar action plan at EU level. It offers a way to take a collective approach to reduce barriers in the production of legumes and make targeted investments in innovation and the establishment of new infrastructure.

This approach could also be replicated for other types of innovative food.

The long story

Skånebönan is a rallying initiative. The goal is for Skåne to become a leading region in the production of new plant proteins, as well as an attractive place for collaborations and investments around plant proteins throughout the entire value chain – the various companies that exist in the industry.

The project began when representatives of the Swedish Academy of Food, the County Administrative Board of Skåne and Region Skåne participated in a conference on protein crops and reached the same conclusion: joint investment in increased cultivation and processing is needed – so they decided to work together.

Region Skåne then gave the Food Academy the task of bringing together the right stakeholders and creating an action plan.

“We want to take advantage of plant protein as a growth industry. Many commentators believe that sales in the grocery trade could amount to SEK 2.5 billion in 2025. Leguminous plants are also better for the climate and the environment. They require less land and produce nitrogen, which is good for the soil,” says Sara Fredström, communications manager at the Food Academy in Lund.

The market for plant-based protein products has grown by 16 percent a year in Sweden for the past three years. Consumer demand has increased, but despite this, only a small percentage of the plant-based protein products made in Sweden are based on Swedish-grown products – most of the raw materials are imported.

“One of the reasons for high level of imports is that there’s still a large lack of opportunities for peeling, grinding and extruding protein in Sweden.”

The cultivation of plant protein in Sweden has certainly increased in recent years, but most of what is grown goes to animal feed. For food production, the protein crops grown in Sweden are not enough – the demand does not match the supply.

“In order to increase cultivation and processing, a number of basics must be in place, otherwise farmers and companies have neither the will nor the opportunity to invest. Among other things, it is about guaranteeing to farmers that someone will buy what they grow or share the cost of a lost harvest.

By creating better opportunities, Skånebönan aims to help improve access to raw materials for high-protein plant-based foods in Sweden. This is also important from a preparedness perspective. More Swedish goods make Sweden less dependent on imports, which increases its crisis preparedness and reduces emissions during transport.

“We need to increase supply capacity in Sweden. Our dependence on imports makes us vulnerable in times of crisis. Increased cultivation and processing can improve this, not least because plant protein is a good food to store.

According to the Swedish Agricultural Agency it is entirely possible to meet the increased demand from consumers in the long term. To do this requires:

- that the profitability of cultivation increases
- that agriculture grows to meet the needs of industry
- that Swedish foods that consumers choose are developed
- that there are more industries that prepare and refine the raw material so that it does not need to be sent abroad
- that the industry develops Swedish products that consumers want
- that research and raw material processing are in line with needs and wishes.

In Skåne, initiatives are now being taken to create better conditions. In the spring of 2022, representatives of Scanian food companies, agricultural companies, authorities, universities and research institutions were invited to a meeting.

In the autumn of the same year, the joint action plan “Skånebönan” – drawn up under the leadership of the Food Academy – was published and adopted.

The action plan specifies four steps that should eventually lead to increased production of Scanian protein crops and expanded further processing.

To get there, four sub-goals have been identified:

- Secure ordering of protein crops from industry and trade to agriculture
- More processing and processing facilities in Sweden that meet the needs of the supply chain
- Make current knowledge available so that it creates benefit
- National concern and continuation after this two-year action plan

“The action plan aims, among other things, to create security for Swedish farmers and encourage them to start growing protein crops. It is a living document that will be developed jointly over time and marks the starting point for the process of developing Skåne into a leading region for new plant proteins,” concludes Sara Fredström

Initiative 3 “Ecofood project”

Type of initiative

A project aimed at supplying organic food grown in non-polluted areas, to residents in the heavily polluted industrial regions in southwestern Poland.

Quick facts

The Polish region of Silesia is dominated by coal mining and heavy industry. In the early 1990s, it became known that the food grown in proximity to these mines and industries contained high levels of heavy metals. In response, the Gliwice Chapter of the Polish Ecological Club in Krakow initiated a project to map the presence of heavy metals in vegetables and the soil they were grown in. Simultaneously, they endeavoured to provide access to organic produce sourced from uncontaminated regions. To ensure the widest possible outreach, collaborative efforts were established with various institutions, including preschools and hospitals, targeting the most vulnerable segments of the population.

Objective

The aim of the initiative was twofold: to bolster preventive healthcare in the Upper Silesian Region and throughout Poland, while also raising awareness about the consequences of heavy metal pollution linked to industry, transport and agriculture.

Stakeholders

A characteristic of the project was the broad involvement of stakeholders, including:

- Local governments, primarily in the Upper Silesia region – Zabrze, Knurów, Bytom, Katowice, Gliwice – and from the Małopolskie Voivodeship and Lower Silesia – Wrocław, Oława, Brzeg
- Grocery store owners
- Non-certified organic farmers
- Hospitals
- Preschools
- Universities

Key outcomes

The educational activities raised general awareness of environmental pollution from both industry and agriculture. This was coupled with a deeper understanding of

the importance of preventive healthcare, with a special emphasis on safeguarding the health of children and seniors. Moreover, the media played a pivotal role in increasing the interest in products free from agricultural chemicals and other contaminants.

The project was also significant in the development of policy for organic production in Poland. A key legal milestone was reached at a pivotal point in 2001 with the governmental separation of organic farming and certifying institutions, alongside the establishment of a dedicated auditing body for organic farms. This milestone was further bolstered by the introduction of legislation on organic farming in November 2001. Notably, the Polish Ecological Club had been actively engaged in shaping this legislation since 1999, collaborating closely with the Polish Parliament and the Parliamentary Commission for organic farming.

Potential for upscaling

The project has many years behind it. Much has changed, both for the better and for the worse, since then. But some approaches from the project are still relevant in the design of future initiatives:

- Embrace a scientific approach: Vigilantly monitoring levels of heavy metals in food underscores the importance of evidence-based decision-making in safeguarding public health.
- Aspire to high-quality food: The initiative aimed to raise the quality of the food served in public institutions. Unfortunately, since this project was implemented, development has gone backwards; school canteens have been closed and food in the hospitals is no longer prepared on site.
- Cooperation between different actors: The project's aim to solve an urgent problem in the food system required involvement of a range of actors, both public and private.
- Develop marketplaces: The project acted as a platform that connected regional food producers to private and public consumers. With the digital technology available today, the possibilities are significantly greater.
- Rules for public procurement are central: What ultimately overturned this initiative were the rules on public procurement that Poland introduced in connection with joining the European Union. Since then, rules on green public procurement have been introduced, but they are voluntary and so far the uptake in Poland is low.

The long story

The Silesian region bears the burden of heavy metal contamination, a legacy of its extensive industrial history. Once a bustling hub of coal mining, metallurgy, and heavy industry, the landscape now carries the scars of decades of intense human activity.

The main route for heavy metals such as cadmium and lead to enter the human body is through food grown on contaminated soils. A high intake of cadmium over a long period of time will damage the kidneys, as well as increasing the risk of bone fractures and cancer. Lead affects the brain and nervous system. Foetuses and young children are most sensitive, and exposure may lead to delayed development, lower IQ and behavioural disorders.

After the fall of communism in 1989 there was more openness to discussing these kinds of environmental problems. Among those actively engaged were Halina Kacprzak and Janina Sokołowska, both researchers and members of the newly founded Polish Ecological Club (PEC). Stationed at the chemical-agricultural facility in Gliwice, they embarked on soil examinations, uncovering alarming levels of heavy metal contamination, particularly lead. Their investigations initially led them to Mysłowice, where one of the earliest cases of lead poisoning was documented. Subsequently, they extended their research to allotment gardens in Silesia, situated near steelworks and coking plants. During the 1980s and 1990s, a period marked by financial strain for many Poles, cultivating fruit and vegetables for personal consumption in these allotments was commonplace.

At the time, research findings were being published on the detrimental impact of heavy metals on children. The PEC used this evidence to advocate for sourcing fruit and vegetables from less polluted neighbouring regions, especially for children's consumption. Simultaneously, the organic farming movement in Poland was beginning to take shape, though there was no formalised certification scheme yet. Through collaboration with Ekoland, an association of organic food producers, a novel concept arose: not only the importing of produce from areas outside Silesia but specifically the introduction of organic produce. This collaboration with Ekoland facilitated connections with farmers engaged in organic production, making this initiative feasible.

PEC acted as middleman and imported organic produce into the polluted cities. The produce consisted mostly of root vegetables, such as carrots, beet, celery and potatoes. It could then be distributed to local storeowners, as well as to hospitals (including, for a short time, a municipal hospital in Gliwice, with food specifically for patients with diabetes) and several preschools. The length of the cooperation varied and lasted for anywhere from less than a year to almost a decade.

Produce stalls were established in the cities that agreed to participate in the initiative. These stalls were advertised as being subject to controls and selling produce cultivated in uncontaminated areas.

As part of a chemical analysis of the state of soil and crops, five metals were studied: lead, cadmium, chromium, nickel and zinc. The analyses were conducted by Halina Kacprzak for the entirety of the project – starting in 1990 and ending in 2000.

Simultaneously, an extensive information campaign was carried out. It covered topics such as comparing organic vegetables to conventional produce, and the health impact of heavy metals, as well as related environmental threats. It was aimed at a broad

audience. In Silesia, various lectures, workshops and conferences were organised for students of all ages, from preschool children to final-year students of the faculty of chemistry. Nationwide, there were scientific conferences targeted at stakeholders such as municipalities, as well as medical doctors.

Many of the other tasks, including the controls, were carried out by volunteers, particularly at the start, as there were no funds for this project. Back then, there were about 40 PEC members, and about 15 of them were actively involved in the project. The first funds for these activities came through a scientific researcher from Ruetgers University who heard about the initiative. Later on, the project received funding from the City of Gliwice and for a few years from the National Fund for Environmental Protection and Water Management.

The project stopped after ten years, in the year 2000. New rules for public procurement were introduced, and it is no longer possible for public actors to purchase organic products, since they could not compete with non-organic producers when it came to price. Rules for green public procurement were not introduced until 2014.

Studies of soil quality in Poland have been conducted since 1995, in five-year cycles, by the Institute of Soil Science and Plant Cultivation (IUNG), commissioned by the Environmental Protection Inspectorate.⁸ Unfortunately, the measurement sites do not cover the most polluted areas in Silesia. However, this may improve with the expected EU Directive on Soil Monitoring.

Although the project ended, it serves as a testament to the power of grassroots initiatives and broad collaboration. It should also offer inspiration to those who want Poland to increase its share of green procurement, from one of the lowest levels in the EU.

⁸ <https://link.springer.com/article/10.1007/s10661-017-6413-5>

Initiative 4 “Eco-labelling of grocery stores”

Type of initiative

Third-party eco-labelling of grocery stores.

Quick facts

The Swedish Society for Nature Conservation (SSNC) has their own eco-label: “Bra Miljöval”, which translates as “Good Environmental Choice”. Since 1998 they have been offering eco-labelling of supermarkets, either to individual stores or a whole chain. To obtain the licence, a store must successfully comply with over 70 distinct requirements, encompassing aspects such as product range, employee training and electricity consumption.

Objective

To reduce the negative impact on the environment, nature and health of the retail sector.

- It should be easy for consumers to make sustainable choices in the store, such as finding organic products, sustainably sourced fish, and vegetarian alternatives.
- The retail sector should contribute to the phase-out of environmentally harmful chemicals, partly through the product range offered by stores and partly by using only eco-labelled cleaning agents in stores.
- Supermarkets should reduce their negative impact on the environment and climate, including reducing energy consumption and the amount of unsorted waste.

Stakeholders

The Swedish Nature Conservation Society currently certifies one supermarket chain that has over 200 stores under the “Bra Miljöval” label. Additionally, a few independent stores have also earned this environmental certification.

Key outcomes

- More environmentally friendly assortments in stores. Including the exclusion of some truly environmentally hazardous products.
- The requirement for the assortment has also led to the development of new environmentally labelled products.
- Eco-labelling of grocery stores also sets rules regarding the reduction of food waste, energy consumption and staff training. Stores must also have action plans to promote the sale of plant-based alternatives and increase awareness of sustainability.

- In some cases, previous requirements included in the eco-labelling criteria have become general law. One example is the prohibition of phosphates in laundry detergents.

Potential for up-scaling

General assortment requirements, especially within certain product categories, could be a crucial means of promoting sustainable alternatives. It would also be possible to develop general requirements for continuous improvements, regarding food waste, energy usage and sales of organic products. This could be achieved through industry-wide standards or through legislation.

The long story

Eco-labelling for grocery stores has been in place since 1998 and since its inception has undergone five revisions. Ida Ekqvist at SSNC is responsible for the labelling of this specific category:

“It differs a bit from our other labelling areas because it doesn’t label a specific product you buy, since the label applies to the entire store. All our other product areas are services or products that a consumer purchases, such as insurance, a mobile subscription or shampoo. There are both challenges and opportunities with that.”

An important part of the criteria is that the store should have a wide range of environmentally friendly products while avoiding the provision of the most significant environmental culprits.

For example, there should be three environmentally labelled shampoos. If there are no such products on the market, the requirement could encourage the supermarket chain to develop its own brand products to meet the eco-labelling criteria. Then, increased demand drives the market to produce more eco-labelled products.

“Since the start there has been great progress in organic produce. So, if organic products make up more than five percent of a store’s sales, they don’t need to meet an assortment requirement, but they do need to increase sales over a three-year period and submit a report each year on how much they have sold, and that figure should grow continuously.”

Certain types of environmentally harmful products are completely banned from labelled stores. Scampi, for example, are only allowed if farmed in closed land-based recirculating systems. Another example is products that target children or come into contact with food, which must not contain bisphenols.

There are also requirements related to how the store is managed, which are not visible to consumers. Ida lists some of the criteria here:

“Staff should be trained in environmental issues. There should be an environmental ambassador and an energy manager. We have criteria for cleaning and staff areas. Only eco-labelled cleaning products should be used and only eco-labelled Fairtrade coffee.

There are also rules regarding transportation, waste separation and recycling.”

The criteria also require that the store should continuously reduce its electricity consumption and food waste. Ida believes in this model of not just setting a minimum level but instead demanding continuous improvement: “It really requires dedication.”

One of the challenges is formulating requirements that push for change but are still feasible for the stores to meet. Significant increases in food prices over the past few years have been a particular challenge, Ida explains: “It’s now very difficult for every store chain to increase the proportion of organic produce they sell. In cases like this you have to be pragmatic. We can’t demand an increase when the entire market is declining everywhere and interest is decreasing. When licensees are not able to fulfill a requirement due to such circumstances, we may grant a time-limited exemption, which is often associated with requirements on compensatory measures. For example, when they were unable to increase the proportion of organic products they sold, we instead demanded that they work more on promoting organic products, increasing the number of campaigns, and enhancing visibility.”

In this situation, Ida notes the need for industry-wide efforts: “If we ask an individual store to increase organic produce when there is much greater pressure on prices and competition is tougher, it becomes impossible. That is hard to demand and a probable consequence would be that consumers shift to grocery stores with less strict environmental ambitions. Instead, we need instruments that apply right across the grocery retail market. And I think the retail sector would need to establish common sustainability goals.”

Initiative 6 “Ban on energy drinks for under-18s”

Type of initiative

Legislation: amendment of the Lithuanian food law (Maisto įstatymas VIII-1608), adopted on 15 May 2014.

Quick facts

Lithuania became the first EU country to implement strict regulations on the sale of energy drinks to individuals under 18 years old, prohibiting their sale, purchase or transfer to minors and imposing fines for violations. These measures were taken due to the health risks associated with energy drinks, particularly among young people, aiming to promote healthier choices and protect vulnerable consumers in the country.

Objective

To protect young people, who are the most vulnerable, from the negative health effects of energy drinks.

Stakeholders

Consumers, retailers.

Key outcomes

Successful prevention of caffeine overconsumption by youngsters.

Potential for up-scaling

Such a regulation has a lot of potential to be scaled up in other countries as the legislative measures are easy to adopt.

This example is interesting because it shows the possibility of setting an age limit on products that do not benefit the health of children and young people. We are used to seeing similar restrictions for alcohol and tobacco.

The long story

In Lithuania, an amendment to the Food Law has prohibited the sale of energy drinks containing more than 150 mg/l of caffeine to persons under 18 years of age since 1 November 2014.

The law prohibits the sale, purchase or any other transfer of energy drinks to individuals under the age of 18. Sellers of energy drinks have the right to demand that a person buying energy drinks provide a document verifying their identity if there are doubts about their age. If such a person fails to provide an identity document, the sellers must refuse to sell them energy drinks. Selling energy drinks to individuals under 18 can re-

sult in fines ranging from 57 to 115 euros. If other individuals purchase energy drinks for unaccompanied minors, they would be subject to a fine of 14–57 euros.

Lithuania became the first country in the European Union to enforce such strict prohibitions, as other EU member states currently apply only recommended restrictions. The United States also adheres to provisions that prohibit the sale of these drinks to minors. In Norway, Belgium, Denmark and France, energy drinks are only sold in pharmacies.

Generally, caffeine, which stimulates the central and peripheral nervous systems, promotes alertness and increases physical activity. Moderate consumption of caffeine does not pose a health risk, but about 30 percent of energy drinks in Lithuania are sold in 500 ml packages. Energy drinks are dangerous due to their high caffeine concentration, which means there is a higher risk of overdose.

Energy drinks stimulate the nervous system and exhaust the body by mobilising it. After such stimulation, we feel depleted, exhausted and the need to replenish energy arises again, which can lead to dependence. One of the most severe consequences of long-term energy drink consumption is physical exhaustion.

It is dangerous to consume more than 200–500 mg of caffeine at once for adults, and more than 75 mg for children. Children are more sensitive to caffeine, and the energy drinks increase blood pressure, promote addiction, negatively affect the endocrine system, and can make children hyperactive and aggressive. Minors should be encouraged to obtain energy through natural means, such as following a daily routine, getting adequate rest, eating a healthy diet and engaging in sports, rather than relying on artificially stimulating substances.

Food products that may cause addiction and have negative health impacts are not the most sustainable choice. Fostering sustainable food systems also means creating a food environment in which the healthiest choices are the easiest. The healthiest options should be promoted, and less healthy choices discouraged. The most vulnerable consumers, in this case minors, are protected by such legislation.

<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.98953/asr>

<https://ntakd.lrv.lt/uploads/ntakd/documents/files/energiniai.pdf>

Initiative 7 “Sugar tax”

Type of initiative

A levy on beverages containing added sugar, sweeteners, caffeine or taurine.⁹

Quick facts

The Polish tax on sugary drinks, effective since the beginning of 2021, consists of two components. There is a fixed value for beverages containing 5 g or less of sugar per 100 ml or those with any sweetener included in Regulation (EC) No 1333/2008 of the European Parliament and of the Council. Additionally, a variable value is applied for each additional gram of sugar beyond 5 g/100 ml. An extra charge per litre is levied for beverages containing caffeine or taurine, with the cumulative levy capped at PLN 1.2 per litre. There are also various derogations.

Objective

To discourage citizens from consuming high-sugar beverages, and to motivate producers to reduce the amount of sugar and sweeteners in their products. The ultimate aim of this restriction is to improve the health of Polish citizens and mitigate the adverse effects associated with excessive sugar consumption, including obesity and diabetes.¹⁰

Stakeholders

Ministry of Finance, Poland

Ministry of Health, Poland

Natural persons, legal persons and organisational units without legal personality that:

- sell beverages to retail outlets,
- conduct retail sale of beverages as a producer, entities that purchase beverages as part of an intra-Community acquisition or import beverages from outside the EU,
- order the production of a beverage covered by the tax from the manufacturer, where the composition of the beverage subject to the tax is part of the contract – the ordering party is responsible for paying the tax.¹¹

Key outcomes

A significant 36 per cent increase in the average price of carbonated drinks was measured in the first eight months of the tax, accompanied by a notable 20 per cent

⁹ <https://www.biznes.gov.pl/pl/portal/00252>

¹⁰ <https://www.biznes.gov.pl/pl/portal/00252>

¹¹ <https://www.biznes.gov.pl/pl/portal/00252>

decrease in sales compared to the previous year. However, more recent data indicates a rebound in sugary drink sales, with an 8 per cent decline in demand in 2021 followed by a 2 per cent increase in 2022. External factors, including the pandemic and weather conditions, are thought to have partly influenced these fluctuations.

Potential for up-scaling

Firstly, a more coordinated approach across the European Union could enhance the effectiveness of sugar-sweetened beverage taxes. As of the beginning of 2023, fewer than half of EU countries have implemented such taxes.¹² A common policy would be beneficial to encourage more countries to introduce national laws.

Another avenue for expanding the initiative involves broadening the range of products subject to the sugar tax.

An alternative approach could be to increase the tax to raise product prices to levels at which the production of sugary drinks becomes financially unviable and they become less appealing to consumers. However, such a strategy poses a significant risk of backlash, particularly considering the severe criticism the new tax has already faced, exacerbated by the backdrop of recent years' high inflation.

Considering the overarching objective of improving the diet and health of citizens, a multi-pronged approach is worth exploring. While the sugar tax aims to discourage consumption of unhealthy products, merely relying on discouragement might not be sufficient, as indicated by the rebound in demand for sugary drinks in 2022. To address this, simultaneous encouraging practices, such as making healthy drinks more financially viable and appealing, should complement discouraging practices, as well as promoting a healthy lifestyle in general.

The long story

The sugar tax, also known as the sugar levy or the foodstuff levy, was enacted through legislation passed on 14 February 2020¹³ and has been effective since 1 January 2021.

Polish authorities gave attention to the need for a sugar tax in the 2019 report "Sugar, obesity – the consequences", published by the Department for Analysis and Strategy of the National Health Fund in Poland. The report highlights a concerning trend, noting that the average sugar consumption per person in Poland increased by 6.1 kg from 2008 to 2017, reaching an annual consumption of 44.5 kg per person by 2017. This rise was notably associated with increased intake of sugary drinks, contributing to approximately 1,400 deaths annually in Poland due to excessive consumption of sugar-sweetened beverages.¹⁴ Recognising the gravity of this health concern, the World Health

12 <https://www.obesityevidencehub.org.au/collections/prevention/countries-that-have-implemented-taxes-on-sugar-sweetened-beverages-ssbs>

13 <https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200001492>

14 <https://www.nfz.gov.pl/aktualnosci/aktualnosci-centrali/prezentacja-raportu-cukier-otylosc-konsekwencje,7296.html>

Organization recommends taxing sugary drinks as a means to address this issue.¹⁵

The levy was constructed as the sum of two values: one fixed and one variable. The fixed value is set at 0.50 PLN¹⁶ per litre, is levied for beverages containing 5 g per 100 ml or less of sugar or for any amount of at least one sweetener. The variable value, amounting to 0.05 PLN per litre, is applied for each additional gram of sugar beyond 5 g/100 ml in a beverage. For beverages containing caffeine or taurine, there is an additional charge of 0.10 PLN per litre. It is important to note that the cumulative levy cannot exceed 1.2 PLN per litre.

Furthermore, drinks containing fruit, vegetable or fruit-vegetable juice that make up at least 20% of the composition benefit from a reduced tax. In such cases, only the variable tax value is applied, and the fixed component is not added. Beverages that are exempted from the sugar tax include medicinal drinks, dietary supplements, special-purpose foods, infant formula follow-on formula, sport drinks with a sugar content of 5 g or less per 100 ml, excise goods, beverages made from milk and dairy products (e.g., yogurt or kefir), and beverages containing over 20% fruit, vegetable or fruit-vegetable juice with a sugar content of 5 g or less per 100 ml.¹⁷

A significant ruling by the Polish Supreme Administrative Court on 22 November 2022 clarified that sugars naturally occurring in the beverages, such as during the process of non-alcoholic beer fermentation, are not subject to the sugar tax.^{18 19} However, if a beverage includes added juice containing naturally occurring sugars, these sugars become taxable.²⁰

According to the October 2021 CMR report, the average price of carbonated drinks witnessed a notable 36 per cent increase in the period January to August 2021. At the same time, sales of these products experienced a significant decline of 20 per cent compared to the previous year. In response, producers employed various strategies to offset profit losses. These measures included reducing added sugar, increasing juice content, promoting “sugar-free” (lite/zero) products, and reducing the product unit size to maintain affordability without raising prices – that is, attempting to avoid increasing the prices of the product by decreasing the size of the container the product is sold in, such as offering beverages in volumes of 1.25 litres and 0.85 litres.²¹

Despite these initial trends, recent data indicates a resurgence in the sales of sugary drinks. The CMR notes a decrease of 8 per cent in demand for sweetened beverages in 2021 compared to 2020, followed by a 2 per cent increase in 2022 compared to the

15 <https://apps.who.int/iris/bitstream/handle/10665/260253/WHO-NMH-PND-16.5Rev.1-eng.pdf>

16 As of the time of writing this report, 1 PLN is roughly 0.22 €

17 <https://www.biznes.gov.pl/pl/portal/00252>

18 <https://orzeczenia.nsa.gov.pl/doc/AA92A3FF0B>

19 <https://sip.lex.pl/orzeczenia-i-pisma-urzedowe/pisma-urzedowe/0111-kdsb1-1-4019-137-2021-13-mf-przeslanki-oplaty-od-185222939>

20 <https://www.podatki.gov.pl/pozostale-podatki/aktualnosci-srodko-spozywcze/komunikat-w-sprawie-zmian-w-oplacie-cukrowej/>

21 <https://www.cmr.com.pl/2021/10/radio-zet-co-wiemy-o-skutkach-oplaty-cukrowej/>

previous year. External factors, such as the ongoing pandemic and weather conditions, particularly the intensity of the summer heat, are believed to have influenced these fluctuations.²² The average temperature in Poland in summer 2021 (June–August) was 19.1°C²³, and in summer 2022 the average temperature was slightly higher, 19.3°C²⁴. The high temperatures likely contributed to a higher demand for refreshments, of which sugary drinks are a popular choice.

Considering the recent implementation of the tax, drawing definitive conclusions about its effectiveness remains challenging at this point. Ongoing external factors and their impact on consumer behaviour further complicate the assessment of the initiative's overall success.

The new tax has faced a lot of criticism for the timing of its implementation, lack of precision, effectiveness and transparency, and the perceived burden it places on consumers amid rising inflation in Poland.^{25 26 27 28 29} In spite of the criticism, the potential of the tax is clear. It has been noted that proper allocation of the funds can support curbing sugar overconsumption and the reduction of its effects. An example of such investment is the KOS-BAR pilot project dedicated to providing comprehensive bariatric care for patients suffering from morbid obesity. Furthermore, a positive effect was observed in the form of greater awareness of dietary habits among citizens. However, it has been suggested that increasing the levy is in fact necessary to ensure a long-term decrease in the purchasing trends of sweetened beverages.^{30 31 32}

In late 2022, rumours circulated that the Ministry of Finance was considering broadening the range of products subject to the sugar tax. However, the Ministry denied these claims in January 2023.³³

22 <https://biznes.gazetaprawna.pl/artykuly/8610495,podatek-cukrowy-napoje-cukier-popyt-podsumowanie.html>

23 <https://imgw.pl/wydarzenia/charakterystyka-wybranych-elementow-klimatu-w-polsce-w-sierpniu-2021-podsumowanie-sezonu>

24 <https://www.imgw.pl/wydarzenia/charakterystyka-wybranych-elementow-klimatu-w-polsce-w-sierpniu-2022-roku-podsumowanie>

25 <https://businessinsider.com.pl/twoje-pieniadze/prawo-i-podatki/podatek-cukrowy-czym-jest-i-w-jakim-celu-zostal-wprowadzony/p9jsgyh>

26 <https://www.prawo.pl/zdrowie/niskie-wplywy-z-podatku-cukrowego-z-powodu-luk-w-prawie,516252.html>

27 <https://stat.gov.pl/obszary-tematyczne/ceny-handel/wskazniki-cen/wskazniki-cen-towarow-i-uslug-konsumpcyjnych-w-grudniu-2021-roku,2,122.html>

28 <https://stat.gov.pl/obszary-tematyczne/ceny-handel/wskazniki-cen/wskazniki-cen-towarow-i-uslug-konsumpcyjnych-w-grudniu-2022-roku,2,134.html>

29 <https://stat.gov.pl/obszary-tematyczne/ceny-handel/wskazniki-cen/wskazniki-cen-towarow-i-uslug-konsumpcyjnych-w-lutym-2023-roku,2,136.html>

30 <https://pulsmedycyny.pl/podatek-cukrowy-powinien-byc-jeszcze-wyzszy-ekspert-o-kroku-dalej-1155415>

31 <https://www.medexpress.pl/ochrona-zdrowia/eksperci-trzeba-stopniowo-zwiekszac-podatek-od-cukru-84939/>

32 <https://www.gov.pl/web/zdrowie/program-kompleksowej-opieki-medycznej-dla-chorych-na-otylosc-olbrzymia-leczona-chirurgicznie>

33 <https://www.podatki.gov.pl/pozostale-podatki/aktualnosci-srodki-spozywcze/komunikat-w-sprawie-zmian-w-oplacie-cukrowej/>

Initiative 8 “The Fund for Plant-based Foods”

Type of initiative

Government fund aimed to support the development of plant-based foods.

Quick facts

The Fund for Plant-based Foods (Plantefonden) is part of the Agreement on Green Transition of Danish Agriculture reached in October 2021. The aim is to reduce the climate and environmental footprint of Denmark by increasing the share of plant-based foods in production as well as on people’s plates. The fund can support a range of activities across the food chain, such as development of plant breeding, cultivation, processing, domestic and international sales promotion, education, and knowledge sharing. Approximately DKK 84 million (EUR 11 million) is allocated annually from 2023 to 2030. At least half of the fund’s resources are earmarked for organic food.

Objective

To contribute to the development of the plant-based food sector, aiming to reduce the climate and environmental impact of Danish agriculture while transforming food production.

Stakeholders

The fund’s board is appointed by the Minister of Food, Agriculture and Fisheries, based on recommendations from business organisations and civil society. The secretariat that administrates the fund is located within the Danish Agriculture Agency.

Key outcomes

The fund was set up in March 2023 and the first call opened in May 2023.

Potential for up-scaling

A shift to more plant-based food needs to be supported with investments. Similar funds are needed in more countries. The EU could also set aside earmarked funds for the development of plant-based food. The fund is also setting a benchmark by allocating such a large share of the fund to support organic production.

The long story

Denmark is famous for pork production. The number of pigs even outnumbers the human population. It may therefore surprise outsiders that the country is taking steps towards a dietary shift. Earlier this year they launched a fund aimed at promoting

plant-based food. The initiative is one of the outcomes of a broad political agreement on “a Green Transition for Danish agriculture” reached in 2021.

Marie-Louise Boisen Lendal, The Chair of the Fund for Plant-based Foods (Plante-fonden), is pleased by the fact that “the whole agreement has an overwhelming parliamentary majority behind it. From left to right there is a very singular voice behind this particular effort in the transition, since the law was univocally accepted”, and she adds “plant-based foods need to be popular and broadly accepted. The Danish decision-makers have in that matter shown responsibility from right to left.”

The agreement states that a shift to more plant production is a central element of the green transition. To support this transition, the parties decided to allocate around €11 million annually until 2030 to finance a dedicated fund for plant-based food initiatives. The funding was secured by moving resources from an existing governmental fund with a more general aim to support research and development in the agri-food sector.

“In our strategy we have identified a need to support the whole value chain in this shift. We need better-quality plant-based products as an alternative to meat and dairy products. But in particular we need to influence consumers in their everyday choices. So in our first action plan we are targeting projects that in a variety of ways make plant-based foods more attractive for consumers,” says Marie-Louise Boisen Lendal when explaining the fund’s initial focus. The fund can be used to support various activities, including knowledge transfer, information campaigns, research and development, and participation in quality schemes. At least half of the resources are earmarked for organic projects, in line with Denmark’s political objective to double organic farming by 2030.

The first call for proposals was opened in May 2023, and the fund’s initial focus will be on three key areas. First, efforts will be made to increase the share of plant-based food in public and private institutional kitchens and food services. Second, the promotion of private consumption of plant-based food among Danes will be prioritised. And finally, the fund aims to boost the demand for Danish plant-based food in export markets. Grants will be awarded to companies, organisations, research institutions, and knowledge dissemination bodies.

Signe Kristine Nørgaard, the project manager for establishing the fund, is satisfied with the response: “The interest was quite overwhelming, we held an applications webinar and the attendance exceeded the capacity of our online meeting. So we had to ask people to sit in pairs in front of their computers so that everybody could take part.”

The deadline for applications was the last day of August 2023. “The number of applications for the first round ended at 97 projects and the total amount applied for exceeds several times the available funds.”

The fund’s definition of plant-based foods encompasses a broad range of items derived from plants, edible fungi, algae and beneficial microorganisms. This includes both unprocessed and processed raw materials and ingredients, potentially combined with non-animal components suitable for food production. The scope covers various items

such as root vegetables, whole plants, stems, buds, flowers, fruits, seeds, mushrooms, yeasts, seaweed, and algae from land-based and marine sources. But it is not always easy to draw the line between what is plant-based and what is not. Signe Kristine Nørgaard explains: “We cannot support the promotion of hybrid products that are only partly plant-based, on the other hand we may support a canteen which serves some meat, but where the goal of the project is to increase the proportion of plants on each plate. The meals could still contain some meat, but that is not the goal of the project.”

The launch of this fund shows that even a country with vested interests in the meat industry can work proactively to transform the food system so that it better aligns with our long-term climate and health goals. When asked what European decision-makers can learn from this initiative, Marie-Louise Boisen Lendal wants to see dedicated action on a dietary shift:

“We need a total shift in our food system if it is going to become more sustainable. Plant-based food is the only solution that has the potential to deliver this at large scale. So plant-based food consumption and production need to be a political priority all over Europe. Plant-based food must be available and affordable for every European and not just for the privileged.”

“Historically, decision-makers have impacted food-consumption and production many, many times. This is no different. You have to make more plant-based diets attractive and accessible.”

Initiative 9 “Gyvi gali – making plant-based food more accessible”

Type of initiative

Advocacy and consumer awareness campaign.

Quick facts

NGO “Gyvi gali” is the only organisation in Lithuania actively working to promote a plant-based diet. The campaign “Čia Gali” (“Here you can”) has a website <https://ciagali.lt/> and an online map for consumers who want to find restaurants, cafes and other public eateries that offer plant-based options. The NORI GALI programme has had more than 12,000 participants over the past one and a half years. People are most likely to join due to their desire to eat a healthier diet.

Objective

To advocate for a plant-based diet, to inform consumers about its benefits, and to ensure that delicious, animal-friendly, sustainable and healthy plant-based foods are easily accessible to everyone.

Stakeholders

Consumers, food producers, food suppliers, restaurants, politicians, and public institutions.

Key outcomes

- Better-informed consumers, shifting social norms and attitudes towards plant-based foods.
- Influencing restaurants and other environmentally conscious businesses to include more plant-based options in their menus or supply chains.
- Making plant-based options easily accessible in public institutions (like schools, universities, hospitals, etc.)

Potential for up-scaling

Because a plant-based diet is considered more environmentally friendly and sustainable, promoting it and spreading awareness of its benefits can be done both informally and by politically prioritising it as a criterion in public procurement procedures.

The long story

“Gyvi gali”, a non-profit organisation advocating for a plant-based diet, frames its work in three main focus areas: educating society, partnering with businesses, and seeking institutional changes. It has also initiated two campaigns:

- NORI GALI (If you want, you can), a 22-day programme that is free to join and lets participants learn more about plant-based diets, offers a wide choice of vegan recipes, and provides support from the community.
- ČIA GALI (Here you can), bringing together restaurants that offer plant-based dishes. A website <https://ciagali.lt/> created for consumers makes it easy for them to find public catering establishments that serve plant-based options.

The goal of the NGO is to ensure that delicious, animal-friendly, sustainable and healthy plant-based foods are easily accessible to everyone. So both campaigns encourage people to include more sustainable and healthy food in their diet. One of the aims is to increase consumer awareness of the benefits of plant-based eating. Another is to encourage food businesses to include plant-based dishes in their menus or supply chains, offer more animal-friendly alternatives and use them to replace ingredients of animal origin.

“Our vision is that plant-based food should be the number one choice for people, businesses and institutions. We are ready to work as much as needed towards this vision, and I am sure it will work out,” says Meda Šermukšnė, CEO of the organisation.

<https://ciagali.lt/apie-kampanija/>

Initiative 10 “Diet for a green planet”

Type of initiative

Politically anchored criteria for sustainable diets.

Quick facts

The municipality of Södertälje has collaborated with other stakeholders to develop a concept it calls “Diet for a green planet”, which sets out five criteria for public meals.

As part of its policy for public meals, the municipal board has decided that all meals served must meet the following criteria:

- Tasty and healthy food
- Organic, preferably from Ecological Regenerative Agriculture (ERA)³⁴
- Less animal products, more vegetables, legumes and whole grains
- Locally produced in season
- Reduced waste
- The Diet for a Green Planet’s guidelines for healthy eating are based on the Swedish National Food Agency’s dietary advice, which is founded on the Nordic Nutritional Recommendations.

Objective

To make public meals healthier and more environmentally friendly.

And to incorporate sustainability in the following areas: climate, Baltic Sea and eutrophication (nutrient leakage), health, biodiversity and soil diversity, land and use.

Stakeholders

The municipality of Södertälje, Sweden

In cooperation with BERAS International (Building Ecological Regenerative Agriculture and Societies) and the Swedish Institute (educational videos).

³⁴ Ecological Regenerative Agriculture is a circular farming method that:

- Promotes biodiversity both in and above soil
- Reduces negative environmental impact of the Baltic Sea and other waters
- Makes cultivation a positive factor for climate impact by binding carbon into the soil.

Key outcomes

63.9 percent of the food served in the municipality's canteens in 2022 was organic, compared with 20 percent in 2010.

Each pupil ate on average 43.5 grams of meat per day in 2022, while pre-schoolers ate 34.5 grams.

Since the municipality started to work with Diet for a Green Planet in 2010 the quantity of meat has been reduced by 44 percent.

Nowadays the amount of imported meat has been drastically reduced since the start of the campaign.

The nutrition unit in Södertälje runs around 80 kitchens in preschools, schools and elderly care, which together serve approximately 24,000 meals to 17,000 diners every weekday.

Potential for up-scaling

These criteria for sustainable public meals have already been adopted by other municipalities³⁵. The work could easily be extended, since Diet for a Green Planet is a way of thinking based on a holistic perspective, more than a final answer on right and wrong. The concept applies rules of thumb and challenges you to become creative, environmentally aware and healthier at the same time.

The concept is an effective, well-established and hands-on example that can be used by several levels of authority in the future implementation of sustainable food systems legislation in the EU.

The long story

The journey towards becoming a leader in sustainable public meals began back in 2001. This was when the municipality of Södertälje took a political decision to use its food purchasing policy as a tool for environmental sustainability work. In 2004, a director for the Diet Unit was hired with overall responsibility for all meal activities in the municipality.

A new Diet Policy was developed, and step by step the municipality has since worked towards sourcing food more sustainably, both in its regular operations and in various development projects.

The concept of Diet for a Green Planet was developed as a result of two research projects, BERAS (Baltic Ecological Recycling Agriculture and Societies, 2003–2006) and BERAS Implementation (2010–2013). Södertälje Municipality played a leading role

³⁵ The concept has also been implemented in the municipalities of Mollet del Vallès in Spain, Łomża in Poland and Molėtai in Lithuania.

in the implementation of BERAS, to develop and implement the food concept within the public meal sector.

The concept of Diet for a Green Planet has been a cornerstone of this work and guided its direction since 2010. It has generated substantial interest and received many awards – among other things Södertälje was voted the “School Food Municipality of the Year 2014” by White Guide Junior.

Sara Seing is head of the Diet Unit in Södertälje and a driving force behind the implementation of Diet for a Green Planet in Södertälje.

“Diet for a Green Planet is our sustainability platform. The concept is very comprehensive, it covers the whole food system with the help of the five criteria. And it’s a very creative tool. Wherever you work in the food system, you can implement the concept – it’s thoroughly planned from top to bottom,” she says.

The response from staff working with food in Södertälje municipality has been very positive.

“They have certain food products to choose from, but can be very creative within that range. Before the project was implemented, we had a common detail-oriented menu, now everyone creates their own menus from the Diet for a Green Planet-concept.”

The initiative has had several ripple effects.

Södertälje municipality collaborates with an adult education college and this has resulted in a course in Diet for a Green Planet designed for staff who work in public kitchens or provide consumer information in a variety of roles, including kitchen personnel, administrators or managers.

As part of the Diet for a Green Planet concept the municipality also works with smaller food companies to develop their business in a sustainable way. Today it has turned into a regional competence hub.

Right now Södertälje municipality is involved in a project with partners all around The Baltic Sea. It aims to develop the work of public authorities in enabling favourable conditions for food producers and consumers to make sustainable food choices.

“We’re building a toolbox and have started identifying what different partners are working with during the project period. Several of the partners are interested in starting to use the tools we’ve developed in Diet for a Green Planet.”

The five criteria for public meals – the long version

- Tasty and healthy food
To become popular and have an impact, the food must be well prepared and appealing. It should also be consistent with the nutritional recommendations.
- Organic, preferably from Ecological Regenerative Agriculture (ERA)
Ecological Regenerative Agriculture is a kind of circular farming in which the number of animals and the land area are in balance. But because there is no labelling scheme for Ecological Regenerative Agriculture, food that has the KRAV or EU organic label can be chosen instead. If you are able to identify products from Ecological Regenerative Agriculture, this is a plus.
- Less animal products, more vegetables, legumes and whole grains
A rough benchmark is that meat, fish or eggs should make up around 10% of the total ingredients, and dairy products should not exceed 0.5 litres/person per day (equivalent to 50 grams of cheese). Animals must have been reared under good conditions, and fish must come from sustainable fishing or sustainable aquaculture. Legumes and other protein-rich seeds are good substitutes when using small amounts of animal products. Choose whole grain cereal-based products instead of refined, as this provides a better feeling of satisfaction, higher nutritional value and less wastage.
- Locally produced in season
Primarily fresh produce from local, regional and national suppliers. Conserved and frozen products, i.e. semi-manufactured foods may be needed to supplement the diet during the part of the year when the supply of local produce is low.
- Reduced waste
Minimise wastage in production, processing, distribution, cooking and from the plate.

<https://dietforagreenplanet.se>

<https://matlust.eu/om/information-in-english/>

<https://interreg-baltic.eu/project/kismet/>

Initiative 11 “Internal climate tax”

Type of initiative

Internal climate tax to incentivise climate-friendly procurement.

Quick facts

Aarhus municipality introduced an internal climate tax in 2022. The tax is directly incorporated into the prices from contract suppliers for selected food categories, such as beef, lamb, meat-based ready meals, as well as fruit juice, juice, and soft drinks. The funds generated through the tax are reinvested in the areas of operation but some also go towards the municipality’s efforts to promote the green transition.

Objective

To incentivise more sustainable choices in the procurement process and ultimately reduce the climate footprint of the municipality.

Stakeholders

Aarhus Municipality.

Key outcomes

12% overall decrease in food-related emissions. This corresponds to 1100 tonnes of CO₂ each year.

Potential for upscaling

This concept should be replicable in most municipalities in the European Union. The administrative threshold might, however, be a little higher for smaller municipalities.

The long story

The city of Aarhus, Denmark, has found a simple and effective route towards greener public consumption by introducing an internal climate tax. The initiative targets product categories with a high climate impact, including certain food products.

“It all started with a political proposition brought to the city council in late 2021. The proposal by Socialistisk Folkeparti (the Green Left) was to factor in the carbon footprint when considering public expenditure. It was accepted in January 2022, and it came back to our table to figure out how,” says Jeppe Deleuran, who works as an economist in Aarhus main office and was part of the team that designed the new tax.

Jeppe and his colleagues evaluated the overall climate impact of a range of foods,

before deciding which ones to target. The most anticipated is meat from ruminants. Before this climate tax was introduced, beef accounted for only 1.7 percent of the total food purchases, though it was responsible for a significant 26 percent of food-related emissions.

Juice and lemonades were chosen as the second group of foods to target. While these beverages do not have the highest individual carbon emissions, the sheer volumes consumed made them the third-largest category for emissions. Preventing dehydration among the residents in nursing homes was the motive for much of the consumption. But in conversations with the staff, it became clear that a large percentage of the drinks were wasted. A full glass was served, but only sipped at and the rest was poured down the sink. So it seemed reasonable that juice consumption could be reduced without significantly affecting the well-being of the elderly.

The city council had decided to set the tax at DDK 1000 per ton of CO₂, with a plan to gradually increase this to DDK 1500 per ton by 2030. When a chef at a nursing home accesses the municipality's portal to place an order, an extra DKK 32 per kilogram is added to the price of beef and an extra DKK 1.6 is added per litre of apple juice.

The large increase in the price of beef has been proven effective. One year after the introduction of the internal climate tax, CO₂ emissions from beef had fallen by a staggering 40 percent, corresponding to a 12 percent overall decrease in food-related emissions.

"The large reduction was unexpected for us, we didn't think it would be that much," says Rasmus Lillelund Lovring, who was also part of the team that developed the tax.

More expected was that the lower price increase on drinks would have a correspondingly lower effect, a reduction of about 7 percent. It contributed to a total emission reduction of 25 tonnes of CO₂.

One might imagine that there are legal obstacles that could prevent municipalities from introducing measures like this. Rasmus explains: "The trick that makes it legal is that it is an internal climate tax, so the money stays in the municipality, and that is quite important".

The revenue is not only circulated within the municipality but is repaid to the same sector, or in the case of nursing homes to the same unit. This means the only cost for the measure is administration, which Jeppe summarises as "not a big deal".

The risk of increased administration was otherwise what aroused the greatest concern, when planning for the tax. There were also some worries from the kitchens whether they would have to go full vegetarian. But as Jeppe explains, “Communication is really a key word, after a lot of communication within the organization, there was not very much resistance”.

The swift implementation and outstanding results are also due to previous efforts.

Back in 2019 the city council adopted a target to reduce food-related greenhouse gas emissions by 25 percent by 2025. This was followed by training of kitchen staff in how to make climate-friendly meals. Rasmus stresses the significance of education: “You need to ensure that the staff have the required skills. And then you can push them to use their skills through these economic incentives; you cannot just do one, you must do both, otherwise there would be a lot of frustration.”

As expected, beef has been replaced by food from several different categories: “We see an increase in pork and chicken, as well as vegetarian alternatives.”

“The main thing to take away from this is that economic incentives work,” says Jeppe when reflecting on what policymakers in general can learn from this initiative. He emphasises the importance of “a price signal when you take action”, in contrast to a fee that is paid later. Rasmus adds: “It is also important that this price signal, the economic incentive, is large enough.”

Aarhus city is now in a process of evaluating the tool. Everything indicates that the internal tax will remain and that the planned increases by 2030 will be implemented. But there is also a discussion about whether a tax can reach a level where it is no longer useful. Rasmus comments: “How much lower we can go on beef? Maybe we are at some kind of end goal for beef, but we will see as time goes on, as we get more data, and we can analyse it.”

Beef emits 18 times as much CO₂ as lentils.

One kilogram of minced beef emits 32.5 kilograms of CO₂.

A kilo of red lentils emits 1.8 kilos of CO₂.

One kilogram of chicken breast emits 3.44 kilos of CO₂.

A kilo of cheese emits 7.7 kilos of CO₂.

Source: Concitos Climate Database

Initiative 12 “Development of buffet tables at schools”

Type of initiative

Recommendations, published in 2019, with the aim of extending buffet-style lunches at school canteens in Lithuania.

Quick facts

In 2019, the Ministry of Health of the Republic of Lithuania introduced recommendations for buffet table settings in school canteens to promote healthy eating and reduce food waste. The implementation of buffet tables allowed students to choose from a variety of options and significantly decreased food waste, with schools reporting a reduction of 50 to 80 percent in food waste compared to traditional meal systems.

Objective

The goal of the initiative is to ensure healthy nutrition in educational institutions and reduce food waste by implementing buffet table settings in school canteens, providing students with a wider variety of choices and encouraging them to make nutritious food selections, ultimately leading to a significant reduction in food wastage.

Stakeholders

Consumers, caterers.

Key outcomes

Improved food culture, consumption of vegetables, and reduced food waste.

Potential for up-scaling

As buffet eating is believed to improve food culture and be a more environment-friendly way to organise meals at school, it is being continually promoted in Lithuania. Although Covid-19 put a halt on the development of buffet tables at schools due to health concerns, it can now be resumed and expanded in Lithuanian educational institutions, especially primary schools, where a lot of children get free meals.

On a more general level this shows that there is an untapped potential for improvements in reviewing how food is served in public canteens. These actions can even save money because less food is wasted.

The long story

In 2019, the Ministry of Health of the Republic of Lithuania unveiled a groundbreaking initiative to ensure healthier nutrition in schools and tackle the pressing issue of

food waste. The proposal introduced recommendations for adopting a buffet table setup in canteens, aiming to empower students with a broader array of meal choices, foster a culture of independent eating, and cater to their personal taste preferences.

Presently, students in the first and second grades receive complimentary school meals, but this approach has led to significant food waste due to the pre-prepared nature of the meals, leaving children with no say in what they eat. Regrettably, salads and vegetables, essential components of a balanced diet, frequently end up as the most wasted items. In contrast, the buffet system empowers children to select from a diverse range of options, promoting the consumption of nutritious meals. Additionally, some schools present students with an exemplary plate demonstrating recommended portion sizes and the proportion of various food items, guiding them towards better food choices. The buffet meals can be either complete, allowing students to choose all the dishes and quantities, or partial, allowing them to serve themselves side dishes or soups.

Kaunas District Municipality emerged as an early adopter of this innovative approach, implementing a pilot project of buffet tables in six educational institutions back in 2017. Žydra Narbutienė, a key figure responsible for organising catering at these institutions, revealed that the buffet principle sparked meaningful discussions among teachers and students about healthy eating and food waste, and resulted in increased student independence. The municipality conducted a survey in September 2021, showcasing the remarkable success of the initiative. Food waste showed a significant decrease, as uneaten food remained in communal containers, available for consumption by other children or members of the school community, thereby eliminating unnecessary waste. Schools that embraced buffet-style meals reported a notable 50 to 80 percent decrease in food waste, with a mere 5–9 percent of the prepared food going to waste. In contrast, schools continuing with the traditional meal system saw an average of 12–20 percent of the prepared food being wasted. This success further solidifies the buffet system's role in promoting a healthier and more sustainable approach to school meals.

<https://sam.lrv.lt/lt/veiklos-sritys/visuomenes-sveikatos-prieziura/mityba-ir-fizinis-aktyvumas-2/vaiku/svedisko>

Initiative 13 “Actions to reduce food waste”

Type of initiative

A complex of actions: guidelines and information for primary producers, changes to rules for compliance with trade standards and subsidies for food charity.

Quick facts

Between 2019 and 2022 the Ministry of Agriculture of the Republic of Lithuania introduced several initiatives to address the issue of food waste. They published guidelines for primary producers on how to donate food surplus, legalised the sale of fruit and vegetables that do not conform to the standard quality requirements, and began to subsidise food charity organisations that collect food from primary producers and food industry.

Objective

To reduce and prevent the amount of food waste.

Stakeholders

Primary producers, food industry, food charities

Key outcomes

Financially stronger food charities, stakeholders informed about the process of food donation, enabled the sale of non-standard fruit and vegetables.

Potential for up-scaling

A similar template could be used in other parts of the food supply chain to encourage collaboration with food charities and support them, but also to generally raise suppliers' awareness on the issue of food waste.

The long story

To encourage primary producers to donate food that would otherwise be wasted, the Ministry of Agriculture gathered information and prepared a publication entitled “10 answers to how to donate food from farms”, which informs farmers and small producers about who can donate, what can be donated, the requirements that donated food must meet, and how to receive available tax incentives.

In 2019, a change in the Rules for Checking Compliance with Trade Standards of Fresh Fruits and Vegetables Supplied on the Domestic Market, Imported and Exported, enabled the sale and donation of fruit and vegetables that do not pass the aesthetic retail standards as suitable for reuse.

In 2022, the Ministry issued an order concerning financial support for food charity organisations, which collect food surplus in the agricultural sector and food industry. The sum of €500,000 Euros was earmarked for this purpose – no more than €0.5 per kilogram of collected food.

According to the representative of the Ministry of Agriculture, Loreta Mačytė, in 2022, the Food Bank applied for funding and was paid over €130,000 for 350 tonnes of food saved. That year, 150 tonnes were collected from farmers and over 200 tonnes from the food industry.

In the first half of 2023, €270,000 has already been paid to the Food Bank for more than 539 tonnes of food distributed to people in need. The largest reductions in food waste are in potatoes, onions and red beetroot. The donations were collected from 115 different operators.

In autumn 2023, support will once again be available for charities that rescue food from farms and food businesses. The Ministry encourages other charities to participate in the campaign, both to help reduce food waste and to help feed the poor with healthier food.

Sources:

<https://zum.lrv.lt/lt/veiklos-sritys/maisto-pramone-ir-kokybe/maisto-kokybe/maisto-svaistymo-mazinimas>

<https://www.e-tar.lt/portal/lt/legalAct/7bc429d0af5f11ec8d9390588bf2de65>.

Recommendations

General recommendations

Some recurring themes emerge from the case studies considered, many of which can be translated into general to good practices for policy making. Although some of them may seem obvious, many of them are often missing from food system-related policy development.

1. **Holistic approach:** Embrace a holistic approach that considers the intrinsic interconnectedness of the food system, linking environmental, health, economic, and social factors. Policies should consider the interactions between multiple dimensions to avoid deploying conflicting policy measures and ensure synergies are fully maximised. Today strategies and policies are often designed using a siloed approach, with gaps, inconsistencies, and contradictions between policy objectives and specific measures. One of the most obvious high-level examples is the conflict between climate policy objectives and measures to promote industrial livestock systems. Anti-obesity strategies coexist with agri-trade policies that make junk food the cheapest to produce, and therefore extremely abundant. Many of the initiatives focus on addressing specific areas or products, whether it's reducing sugar content in beverages, promoting plant-based diets, or implementing bans on certain products. Targeting specific issues within an overarching systemic approach allows for a more effective and measurable impact.
2. **Long-Term vision and consistency:** Developing policies within a framework of coherent long-term visions and corresponding medium- and long-term objectives can support consistency and policy effectiveness. Initiatives with a long-term vision, supported by consistent efforts, tend to have a more lasting impact. Examples of this include the Södertälje and Aarhus municipalities and the state of Denmark, all of which have been structured towards clearly anchored goals for a sustainable food system. This, in turn, has enabled the development of various instruments to achieve those goals. With measures related to food, this approach can also support the development of clear and consistent messaging, which helps to build new habits and sustain positive behaviours over time.
3. **Multi-stakeholder engagement:** Involving all relevant stakeholders, including government bodies, businesses, NGOs, and the public, has been crucial for the success of several of the initiatives showcased in this report, such as the Ecofood Project, the Fund for Plant-based Food and Diet for a Green Planet. Collaboration fosters collective responsibility and increases the likelihood of achieving common goals. Unfortunately, this is often lacking at both the EU and national level.
4. **Communication and transparency:** Clear communication about the objectives, benefits, and implications of initiatives fosters public understanding and support. At the same time, we can see that incomplete communication and lack of transparency, as in the case of the Polish sugar tax, can lead to criticism and pushback.

5. **Education and Awareness:** Allocate resources for comprehensive public education and awareness campaigns aimed at empowering individuals to make informed choices regarding their food consumption and production practices. This will help foster a culture of sustainability and encourage behavioral change. Furthermore, education and awareness-raising among farmers emerge as crucial components in several of the case studies examined. By providing farmers with knowledge about sustainable agricultural practices, environmental conservation, and the benefits of organic farming, these initiatives aim to foster a mindset shift towards more environmentally friendly and socially responsible farming methods.
6. **Evaluation and data-driven decisions:** Continual evaluation of initiatives is essential. Regularly assessing the impact of policy measures helps in making data-driven decisions, refining strategies, and ensuring that goals are being met.
7. **Flexibility and adaptability:** Flexibility in approaches is observed across initiatives. Whether adapting to external factors like health emergencies or adjusting policies based on outcomes, the ability to be flexible and responsive enhances the effectiveness of interventions.
8. **Combining efforts and policy integration:** Quite a few initiatives combine technical instruments with educational and awareness-raising efforts, such as the Internal Climate Tax and the Ecofood project. The Actions to Reduce Food Waste initiative is a good example, in which new rules, guidelines and subsidies are combined to form an effective policy mix. Implementing supply- and demand-side policies in combination makes ambitious targets easier to achieve. Combining improved and increased information with behavioural, administrative and/or market-based instruments can boost policy effectiveness and maximise outcomes.
9. **Adequate funding and smart financing:** A transition to more sustainable food production will require investments. Initiatives such as the Fund for Plant-based Foods in Denmark demonstrate the importance of government funding in supporting such development. The partnership model, as used by the Scanian Bean, enables the pooling of resources and sharing of financial responsibilities, making initiatives more financially sustainable in the long term. Changes in consumption do not require the same investments and it is possible to find solutions where savings in certain areas can finance increased costs in other areas. For example, the Diet for a Green Planet initiative in Sweden incorporates financially sustainable practices, such as reducing food waste and optimising procurement processes, to fund its sustainability efforts. By aligning financial incentives with environmental objectives, these initiatives can achieve both economic and ecological benefits.

Local and regional governments

1. **Importance of political will:** The success of initiatives like the Diet for a Green Planet in Sweden underscores the significance of strong political will and leadership in driving sustainable food system reforms at the local level. Local and regional governments must prioritise sustainability goals and demonstrate commitment to implementing policies and initiatives that promote healthier and more environmentally friendly food practices.

2. **Embrace public meals as leverage:** Municipalities and regions are responsible for most public meals, food served at preschools, schools, nursing homes and hospitals. Here there is enormous potential to make a difference through Green Public Procurement. In addition, efforts can be made to encourage healthy eating and reduce food waste. The possibility of using the public canteen as an arena for raising awareness and creating new food ideals should not be underestimated either.
3. **Support the development of sustainable food production:** The region is a good level for developing food production in a sustainable direction. Within many member states, agricultural production may look different in different parts of the country, but within a region the conditions are usually more similar. This facilitates counselling and targeted support programmes, for example. Likewise, a region means reasonable distances for producers to share infrastructure for processing (such as mills), distribution and training of the workforce. This could include the development of local food networks, investment in public transportation and distribution systems for locally sourced foods, and facilitate access to land for organic farming initiatives.
4. **Foster policy innovation:** The local and regional scale is suitable for testing new ideas. For several of the initiatives in this report, we can see that they are driven by committed officials who have the freedom to act based on ambitious political targets. Policy makers at the local and regional levels should embrace policy innovation to incentivise sustainable food practices and address systemic barriers to change.
5. **Invest in education and awareness raising:** Educating consumers and raising awareness about the benefits of sustainable food practices should be essential components of local and regional government efforts. Knowledge of the local and regional context increases trust and the conditions for success, in contrast to messages coming from a more remote actor. Public education campaigns, community workshops, and school programs can help build awareness of issues such as food waste reduction, organic farming, and healthy eating, empowering individuals to make more sustainable food choices.

Member states

1. **Adopt a national food strategy:** The development of policies within the framework of coherent long-term visions and corresponding medium- and long-term objectives will support consistency and policy effectiveness. Initiatives with a long-term vision, supported by consistent efforts, tend to have a more lasting impact. A National Food Strategy should encompass a wide array of considerations, including environmental sustainability, public health, economic viability, and social equity. By formulating national food strategies, countries can address the complex challenges within their food systems in a cohesive and coordinated manner. Such strategies provide a framework for setting clear goals, implementing targeted policies, and fostering collaboration among various stakeholders. Additionally, national food strategies ensure alignment with broader initiatives like the EU's Green Deal, facilitating a harmonised approach towards building more resilient and sustainable food systems across Europe. A National Food Strategy could also include cross-sectoral collaboration and sharing, resource mobilisation, and collective action towards sustainability goals.

2. **Align legislative frameworks and regulations:** National governments play a crucial role in establishing legislative frameworks and regulations that support sustainable food practices. Although the Common Agricultural Policy (CAP) is decided by the European Union, it is up to the member states to decide how it should be applied on the ground. The same applies to various other EU policies. At the same time, there are areas where the member states have their own competence, for example the design of national dietary recommendations. It is at the national level where it is possible to introduce different types of economic instruments, such as taxes.
3. **Allocate funding for a transition:** National governments should recognise the importance of providing policy support and allocating sufficient funding for initiatives aimed at promoting sustainable food systems. The member states have great influence over how the CAP funds are distributed in their own country. Initiatives such as the “Fund for Plant-based Foods” in Denmark demonstrate the impact of targeted funding and policy incentives in driving the transition towards more sustainable food production and consumption practices.
4. **Develop capacity-building and technical assistance:** National governments should support capacity-building and provide technical assistance to local governments, businesses, and community organisations involved in sustainable food initiatives. Training programmes, technical guidance, and financial support can empower stakeholders to implement best practices, overcome barriers, and drive innovation in sustainable food production, distribution, and consumption.

European Union

1. **An EU Sustainable Food Systems Law should be developed to streamline a meaningful and just transition across the Union:** In 2020, following the publication of the European Green Deal, the European Commission published the Farm to Fork Strategy, in which it announced its intention to publish a legislative proposal for a Sustainable Food Systems (SFS) Law. The stated objectives of the framework – to “promote policy coherence at EU and national level, mainstream sustainability in all food-related policies and strengthen the resilience of food systems” (Farm to Fork strategy, 2020) – would be crucial for addressing some of the key obstacles the transition faces. This is particularly the case with the current lack of a holistic approach to food system-related policy and consequent lack of policy coherence, which hinders policy effectiveness and the achievement of vital sustainability objectives. A bold EU food policy could build on and scale up local food policies, providing a multiplier effect for bottom-up change. It could also support the achievement of sustainability objectives set in other EU policies by aligning with them and bolstering policy coherence. An ambitious proposal from the Commission could also help rally citizens’ support for the EU by demonstrating its will to stand up to protect people’s health and quality of life, as well as providing a general direction of travel and policy framing for national-level action.

2. **The EU should push for national food strategies in line with the EU's Green Deal, Farm to Fork and Biodiversity 2030 objectives:** Policymakers at the EU level should encourage and support the development of national food strategies that align with the objectives of the EU's Green Deal, and its ensuing Farm to Fork and Biodiversity strategies. These national plans should integrate sustainability considerations across the food supply chain, from production to consumption, and prioritise actions to reduce environmental impact, improve public health, and enhance resilience to climate change. Collaboration and information sharing between EU institutions and national governments are essential to ensure coherent and effective implementation of these strategies.
3. **The EU's long-term budget must be mobilised to support the transition to sustainable food systems:** There is a need to prioritise investments in sustainable food systems within the EU's long-term budget, ensuring that funds are directed towards initiatives that align with environmental, social, and health objectives. This may include subsidies for organic farming, incentives for reducing food waste, and support for research and innovation in sustainable agriculture. The CAP is the single largest financial item in the EU's budget and comprises a total of 386.6 billion euro for the period 2020–2027. But only a minor share of it is put towards an actual transition to sustainable food production.
4. **Developing science-based and measurable goals for the food system:** An effective policy is facilitated by clear and measurable targets for sustainability in the food system, informed by scientific evidence and data. This may involve setting goals for healthy eating, emissions from the food system and livestock numbers. EU-level and national-level targets should be aligned to ensure coherence and accountability.

