

# Healthy meals – a way to environmental, economic and social sustainability ?

**A pre-conference to 10th EPHC arranged by European Public Health Association, Food and Nutrition Section and the Swedish National Network for Good Food Habits**

## Program

**Introduction by chairs:** Natalie Rangelov, EUPHA Section on Food and Nutrition and Lena Björck, Swedish National Network for Good Food Habits

### **Food as an essential link between health and sustainability**

- 13:40 Amanda Wood, The EAT-Lancet commission/Stockholm Resilience Centre. Topic: Using science-based criteria to reconfigure global food systems
- 14:00 Elin Rööf, Swedish Agricultural University. Topic: Food production and climate impact
- 14:15 Mattias Eriksson, Swedish Agricultural University. Topic: Economic and environmental costs of food waste
- 14.30 Emma Patterson, Stockholm County Council/Karolinska Institutet. Topic: How can Swedish school meals be made more sustainable?

*Coffee break*

### **Changing the conditions to enable sustainable diets to be normal**

- 15:30 Tim Lang, Professor of Food Policy, University of London, UK

### **Experience: Ghent en Garde, striving for more sustainable local food system**

- 16:05 Katrien Verbeke, City of Ghent, Belgium

### **Food, health and equality from an Agenda 2030 perspective**

- 16:30 Annica Sohlström, General Director Swedish National Food Agency

**Concluding comments from the chair**

# Using science-based criteria to reconfigure global food systems

**Dr. Amanda Wood**

EAT-Lancet Commission, Stockholm Resilience Centre, Stockholm University, Sweden

Food is fueling several of the major public health challenges facing the world today. Our current food systems fail to provide healthy diets for all, and unbalanced diets are the leading cause of poor health globally. Food systems also represent one of the most significant drivers of environmental degradation. It is clear that current food systems are not placing us on a trajectory to meet the ambitions of the United Nations Sustainable Development Goals (SDGs). Yet because food cross-cuts so many of the SDGs, reconfiguring our food systems to provide healthy diets in sustainable ways can take us a long way in reaching these global goals. Currently, there is no universally accepted definition of what constitutes a healthy diet from sustainable food production. What is needed is to link science to practice and policy by setting science-based criteria that can be used to guide and measure progress toward positive transformation of food systems at all scales.

This talk presents EAT's core science program, the EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems, which synthesizes the best available science to define what constitutes a healthy diet globally, and what sustainable food production looks like that preserves functional ecosystems. The ambition of the EAT-Lancet Commission is to produce criteria that define a safe operating space for food systems, which can then be translated to national and regional levels to guide actions promoting healthy and sustainable diets for all. The Nordic region has been proposed as a test ground for developing roadmaps of action to achieve positive food systems transformations, and the rest of the talk will explore opportunities to use these science-based criteria to provide healthy and sustainable meals to all in the Nordic region.

The EAT Foundation believes that we can shift food systems from being a main driver of global challenges to a key solution to tackle them. We aim to link science to practice and policy by setting science-based criteria that can be used to guide and measure progress toward positive transformation of food systems at all scales. This talk presents EAT's core science program, the EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems, which synthesizes the best available science to define what constitutes a healthy diet globally, and what sustainable food production looks like that preserves functional ecosystems.

## **Food production and climate impact**

**Dr. Elin Rööös**

Dep. of Energy and Technology, Division of Agricultural Engineering, Swedish University of Agricultural Sciences

The need to reduce emission of greenhouse gases in order to avoid catastrophic consequence of global warming is urgent. Current levels of global emissions will exhaust the carbon budget available to limit warming below 2 degrees as was decided under the Paris agreement in only 20 years (66% probability). As the richest 10% of the global population is responsible for almost half of global emissions, great responsibility to rapidly lower emissions rests on developed countries.

Food systems account for 20-30% of global greenhouse gas emissions. About 15-25% arise in agriculture and the rest during post-farm such activities as processing, packaging, transports, storage and preparation. The main sources of greenhouse gas emissions in agriculture are nitrous oxide emission from soils due to nitrogen application, methane emissions from ruminants and methane and nitrous oxide from manure management. Another major source is land use change e.g. deforestation to supply more agricultural land. Energy use on farms and for producing inputs, most importantly mineral fertilizers, also cause emissions of greenhouse gases but to a lesser extent than those from the biological processes.

Calculating the climate impact of different food products is commonly done using life cycle assessment methodology (LCA) by considering emissions that arise in all steps of the production chain and relate these to 1 kg of food. Livestock products show considerably higher climate impacts than plant-based foods due to the need to cultivate feed. The climate impact from ruminant meat is especially high.

The choice of food can however not be based solely the climate impact of different foods. Agriculture affects eco-systems in a multitude of ways and includes living sentient beings (farm animals). Goal conflicts between climate mitigation and other sustainability aspects (including use of pesticides, biodiversity conservation and animal welfare) must be acknowledge in the design of more sustainable food systems as well as how resources are used most efficiently.

## **Economic and environmental costs of food waste**

**Dr. Mattias Eriksson**

Dep. of Energy and Technology, Division of Agricultural Engineering  
Swedish University of Agricultural Sciences

Waste, loss or spoilage of food is an efficiency issue that has attracted increasing attention in recent years. Although food waste seems like a simple problem, the solution “to just stop throwing it away” is much more complex than would appear at first glance. This is because food waste is not just a problem, but also a solution to other problems, such as putting public health at risk or reducing economic profit, which are often a higher priority. Food is also wasted for a large number of reasons, which makes it difficult to find a ‘quick fix’ to reduce food waste once and for all. In many countries the food waste in itself creates a problem if it is dumped in landfill and generates methane. In other countries, Sweden included, landfilling of organic waste is prohibited and surplus food is considered a resource that can be used for biogas production or for feeding people in need. It is therefore not the wasted food that should be the main concern, but the wasteful behaviour that results in unnecessary food production.

Since food waste valorisation measures, like energy recovery, have limited possibilities to fully recover the resources invested in food production, there is a need to prevent food waste. Prevention is most important at the end of the value chain, where the largest number of sub-processes has already taken place and occurs in vain if the food is not used for its intended purpose. Households, but also restaurants and supermarkets, are found in the end of the food supply where the food is consumed. It is therefore important to understand what is wasted in these sectors, and why, in order not just easing the symptoms of over consumption but actually take action to solve problems generating food waste.

## **How can Swedish school meals be made more sustainable?**

### **Dr. Emma Patterson**

Centre for Epidemiology & Community Medicine, Stockholm County Council  
Research group Community Nutrition and Physical Activity, Karolinska Institutet

Free school lunches are provided daily to all ca. 1 million primary school children in Sweden, and have been for decades. As they are free to all, irrespective of parental income, they are very likely to be contributing to lessening the dietary gap otherwise seen with respect to socioeconomic position. Due to their reach and scale, school meals hold great potential to positively influence children's dietary patterns, as well as a significant portion of the food procured by the public sector. School meals today are generally of high quality. However, there is still room for improvement when it comes to certain nutrients, with respect to how the meal is served and integrated within teaching, and in terms of the environmental impact.

Although many dimensions of a sustainable diet are compatible and synergistic, this is not always the case. In addition, school meals must also adhere to strict budget limitations and be acceptable to the intended consumers (children). Hence, trade-offs are unavoidable when aiming for healthy, environmentally, economically sustainable school lunches.

The aim of the OPTIMAT project, running from 2016-2021, is to identify strategies for optimising the composition of school meals in Sweden and answer the question: to what extent can school meals be improved from a nutritional and environmental perspective while still being acceptable to students and affordable to schools? Linear programming will be used to optimise school meals for minimal environmental impact while constraints such as nutritional adequacy, cost, and acceptability are met.

In collaboration with the National Food Agency and their recent survey of adolescent diets we will assess if the contribution of school meals to total intake differs by socioeconomic position and overall school meal quality. (This is assessed using our web-based tool "School food Sweden", covering six domains: choice, nutritional quality, safe food practice, service aspects and pedagogical integration, environmental impact, organisation/policy issues.) Based on current purchasing practices, linear programming will identify nutritious, affordable, and acceptable "food baskets", optimised for low greenhouse gas emissions as a marker of sustainability. We will then develop four-week school meal plans and test/evaluate them, quantitatively and qualitatively, leading to guidelines for planners of school meals.

# **Changing the conditions to enable sustainable diets to be normal**

**Prof. Tim Lang**

Professor of Food Policy, City University of London, UK

This paper considers what is necessary for sustainable diets to be normal. At present, while there are some (but too few) positive trends and drivers, the majority point to the burden of diet's negative impact on health, environment, society and economy. More attention is required on what to do about it. With certain honorable exceptions (e.g. Sweden), policy-makers have not so far done much to redirect consumption to address the 'multi-criteria' nature of the 21st century food challenge. Globally, the SDGs and the Paris Climate Accord set useful goals and targets but only a few countries have begun to engage at the national state level.

There is growing interest at the City region level. And companies are tentatively engaging but more about individual products than across food culture as a whole. This patchy picture of engagement does not amount to the systems change. Certainly, we need to be more confident that a world is possible in which sustainable diets are normal, and we need to experiment more vigorously about what to do, and how. The paper poses key questions facing the public health world. What actually do sustainable diets look like (as we eat at present but changed marginally or radically)? Is unsustainability unstoppable? Will crisis force change? How can we unlock the apparent current lock-ins to unsustainable consumption and production? What societal forces are needed to alter the current mismatch between evidence, policy and behavior? The paper concludes that the public health movement has much to contribute to the clarification of the answers, not least by supporting alliances for sustainable consumption and production across the food system, at all levels of food governance.

## **Ghent en Garde, striving for more sustainable local food system**

### **Dr. Katrien Verbeke**

Food Policy coordinator, City of Ghent, Belgium

In 2013 the City of Ghent (Belgium) launched 'Gent en Garde', a food policy that includes five strategic goals to pave the way for a sustainable food system for Ghent. These goals were decided upon based on various stakeholder discussions, input from the city administration and political agreement.

1. A shorter, more visible food chain
2. More sustainable food production and consumption
3. The creation of more social added value for food initiatives
4. Reduce food waste
5. Optimum reuse of food waste as raw materials

Inspired by a similar approach in cities like Bristol and Toronto, the City of Ghent set up a 'food council'. The Gent en Garde food policy council consists of about 25 members from various sectors, i.e. agriculture, associations, knowledge institutions and commerce.

The food policy is part of the ambition of climate neutrality of the city but also looks for synergies with other strategic domains of the city, such as innovation, health, education and agriculture. Some successful examples of local initiatives will be presented:

#### Thursday Veggie Day

If we reduce our meat intake, we also drastically reduce the carbon footprint of our diet immediately. The Thursday Veggie Day campaign aims to encourage everyone to eat a tasty vegetarian dish at least once a week

#### Foodsavers Ghent

The Ghent Social welfare department has joined forces with the city administration to develop a system to distribute food surpluses from retail and other sources to a range of social organisations, so as to reach the most vulnerable inhabitants of the city.

#### Sustainable school meals

The new lunches are part of a multi-faceted approach: maximizing the positive social and ecological impact, preventing food waste, involving and informing pupils and service personnel and making sure that school meals remain affordable for vulnerable children.

## **Food, health and equality from an Agenda 2030 perspective**

**Dr. Annica Sohlström**

**Director-General, National Food Agency, Sweden**

Food production and consumption are directly or indirectly related to all the 17 Sustainable Development Goals, SDG, in the 2030 Agenda. Unhealthy eating habits contribute to the majority of disease and premature deaths in Sweden and in many other European countries. Even in our wealthy countries there are socioeconomic differences in food habits leading to inequalities in health. We need to understand how dietary habits are formed, and especially how dietary habits are formed when resources are short. What would make a healthy diet affordable and achievable for all groups in society? How can we compensate for structural differences in the possibilities to live healthy lives?

In order to reach the goals in Agenda 2030 we need a new food system taking all aspects of sustainability into account, the social, economic and environmental aspects. The real challenge is to broaden our perspective and keep all dimensions of sustainability in mind. We need to restructure our society to facilitate sustainable food choices. We need more evidenced based actions and policies that promote healthy dietary habits in all groups and thereby reduce social inequalities in health.

Agenda 2030 is useful as a lever for successful public health actions, there is a momentum now, but it is crucial that our efforts are evidence based. The public sector is very dependent on the scientific community; we need research which take many aspects into account: nutritional aspects of course, but also environmental and social aspects. That's our responsibility both at the public authorities and in the research communities.