

Wageningen University & Research Knowledge Base Program  
(KB22) - Global Food & Nutrition Security (GF&NS)

Flagship Program Food Systems for Healthier diets  
CGIAR research program Agriculture for Health and Nutrition  
(A4NH), phase 2, 2017-2022

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is Yellow**

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perspectives, ideas, anything!  
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**WAGENINGEN**  
UNIVERSITY & RESEARCH



# Report

## "The Future for Food Systems"

Wageningen University & Research – IFPRI  
workshop

Co-organized with  
FOODSECURE & SUSFANS

4 November 2016  
Hof van Wageningen,  
Wageningen, Netherlands



**FOODSECURE**  
FOR POLICIES THAT MATTER



## BACKGROUND

The workshop was organized within the framework of the Wageningen University & Research (WUR) strategic research program (KB22) on Global Food & Nutrition Security (GF&NS) and marks the start of the Wageningen-led flagship program 'Food Systems for Healthier Diets' that will form part of the CGIAR research program Agriculture for Nutrition & Health (A4NH) in 2017-2022. The workshop was co-organised with the EU-funded research projects [FOODSECURE](#) and [SUSFANS](#), which explore the future of global and European food and nutrition security, balanced diets and the sustainability of food systems.

The aim of the workshop, which was attended by about 100 researchers and experts from the private sector, government and civil society organizations, was to support systematic food systems research as an analytical and policy device. Starting with invited keynote presentations, the workshop continued with open space workshops related to the ongoing Wageningen-based research programme Global Food & Nutrition Security (GF&NS). Finally, the workshop concluded with a plenary panel discussion with representatives from public and private sector to assess the role of food system analysis for policy and practice. This note captures the keynotes and parts of the plenary discussion; for the GF&NS section we refer to the [website](#) of the programme.

## PHOTO REPORT

<https://myalbum.com/album/Nc4UW73sFUIB>



## MAIN WORKSHOP OUTCOMES

Food system research can function as an idea generator for interventions

Food systems research is important to understand and inform policy and individual choices on the complex systems that influence our food choices

and co-determine our health. This was one of the conclusions drawn at 'The future for food systems' workshop, held on 4 November 2016 in Wageningen.

A second conclusion was that interventions must be developed on a local scale together with local stakeholders, including consumers and traders in the (in)formal sector.

'Decisions made in the food systems are important for public health and the environment', said A4NH director John McDermott. At global level the current food systems do not deliver enough on health: still more than 800 million people suffer from chronic hunger, 2 billion people face undernutrition, and as many as 2 to 2.5 billion people are overweight or obese. Moreover, food systems are at the heart of many environmental problems and need to contribute to solutions for sustainable resource use. This is why WUR and CGIAR start a new program which contributes to informed decision making and eventually to more effective interventions.



## Zero Hunger is yellow!

On behalf of the board of directors of Wageningen University & Research, Jack van der Vorst invited partners to work together to identify options, opportunities and strategies for sustainable and reliable global and local food systems that contribute to healthier diets, create food security and end malnutrition. The key knowledge challenge is to bring together the different perspectives on and assess the trade-offs between sustainable consumption and healthy nutrition, robust supply chains and climate-smart production systems.

Read more about Zero Hunger:

[www.wur.eu/zerohunger](http://www.wur.eu/zerohunger)

Watch the animated video:

<https://www.youtube.com/watch?v=G7x4y3oPbcI>



### New Wageningen co-led flagship programme

The Wageningen-led flagship programme 'Food Systems for Healthier Diets' under A4NH was introduced by Ruerd Ruben. The partners will collaborate in developing a transdisciplinary food systems approach in a range of low and middle countries, including Nigeria, Ethiopia, Bangladesh and Vietnam.



### What is a food system?

There is a need for a clear definition of what is a food system. A useful suggestion, taken from a recent report of the UNEP International Resource Panel, was presented by Henk Westhoek of PBL Netherlands Environmental Assessment Agency: 'A food system considers all the elements (environment, people, inputs, processes, infrastructures, institutions) and activities that relate to primary producing, processing, distributing, preparing and consuming food, and the socio-economic and environmental outcomes of these activities.' A food system is much more complicated than a food chain, he explained. It's more like a 'food web' in which farmers, traders, food companies, retailers, and consumers continuously influence each other's activities. 'In such a food system you can follow the money,' he said. 'Then you will see that, in the United States, 78 % of a product's price goes to the supply chain and only 17 % to the farmers.'

### Drivers that influence the outcomes

'Food systems represent a welcome widening of perspective from production-based approaches' said Martin van Ittersum with wide agreement among the audience. However, there was a lot of discussion about the perceived drivers that influence the outcomes of food systems. Those present agreed that cultural habits are an important driver; for instance, the cultural preference of young



people for fast food over traditional, more nutritious meals. In England, the famous chef Jamie Oliver has achieved some success in addressing this habit. And in the United States, pop star Beyoncé has done a good job: after she wore a T-shirt with a kale painted on it, kale sales sky-rocketed. Several people present wanted to know how this type of intervention - making use of a local celebrity - can be developed for other regions, in such a way that not only the middle class but also the poor people are reached. 'You could involve secondary schools', one of the participants suggested. How to scale up a successful pilot is one of the pillars of food systems research.



### New policy goal

John Ingram, Food Systems Programme leader at the University of Oxford, stressed the difference between the established policy goal of 'Food Security' and the new, broader goal of 'Sustainable Nutrition Security'. 'Food security is about access to sufficient food,' he said. 'Sustainable Nutrition Security requires both sustainable food system activities and sustainable diets as outcomes. For this, achieving food security is a necessary condition'. But what is a sustainable or healthy diet? A healthy diet differs for young mothers, young people, elderly people and babies, as it does for consumers in for example Uganda, who live in

different regions where staple crops vary (millet, sweet potato, maize or sorghum). 'This is a very important question for us,' said Orlando de Ponti, advisor to the seed company East-West Seed. 'If you researchers can tell us which deficiencies consumers in a region have, we can adapt our breeding programme. For instance, if we know that there is a lot of zinc deficiency in Ethiopia, we can breed a local spinach with more zinc in it.' Some participants stressed the value of indigenous fruit and vegetables for a healthy diet. Promoting indigenous crops could be one of the interventions in a region. 'Not only because they are nutritious,' one of the attendants said, 'but also because they can contribute to climate mitigation and more biodiversity in the field.'



#### Pulse Innovation Platform

It is not easy to fulfil the twin goals of a healthy diet and sustainable production. Venkatesh Sosle, of the McGill Centre for the Convergence of Health and Economics, and colleagues have attempted to do this by setting up the Pulse Innovation Platform (PIP), an open forum where members systematically identify bottlenecks hindering innovation in the sector. It is important to come up with interventions in this sector, because the not so popular pulses are both nutritious and environment friendly. Designing effective interventions around innovation has many economic drawbacks, reflected Marrit van den Berg. 'The platform convenes partners from academia, private, public and civil society actors in farm, food and health sectors,' Sosle explained. Interventions include the field-testing of technical innovations, product development, training of local small and medium-sized companies and marketing of products made from pulses.



#### Agricultural development pathways, value chain networks and urban food choices

Parallel sessions were organised around key questions addressed by the [WUR research program Global Food & Nutrition Security](#). The sessions focussed on (i) understanding the dynamics of food systems and how nutrient rich foods can lead or contribute to healthier diets, (ii) what delivery systems work and (iii) how the food system is shaped by the interaction between consumers and the food environment. The aim is also to figure out in the research program which incentives work effectively for proper food system innovations in support of sustainable consumption and production.

#### True pricing

How can sustainable production be achieved? One of the policy interventions mentioned during the panel and plenary discussion was 'true pricing': calculating not only the production costs of a food product, but also the environmental and social costs or benefits. The idea behind true pricing is that it encourages consumers and investors to choose sustainable food and sustainably working companies. 'We support experiments in true pricing,' said Patricia Wagenmakers of the Netherlands Ministry of Economic Affairs. 'And we would like to know if true pricing really helps and whether these experiments are scalable.'





### Advocacy and lobbying

A question from the moderator and chair, Paul Engel, was whether advocacy and lobbying works. According to Frank Mechielsen of HIVOS, one of the panel members, lobbying does work. For instance, the Zambian government used to subsidize only maize production, as a result of which farmers neglected other, more nutritious crops including vegetables. Partly thanks to lobbying by NGOs and researchers, the budget for agricultural reforms is now being made available for more crops. Another example is the successful lobbying by NGOs against EU export subsidies, which disrupted food production in poor countries.



### Bring in your experience

The question remains, however, whether the researchers are really prepared to start a dialogue with stakeholders outside the academic world. 'Are we ready for this transdisciplinary research?' asked Pieter van 't Veer, professor at WUR. According to John McDermott of IFPRI, dialogue and advocacy will be part of the new Food Systems for Healthier Diets programme.

### Wageningen needs you

So it was no surprise when programme leader Ruerd Ruben, of WUR, closed the discussion with an urgent call to participate in the new programme by contributing ideas and experience. 'We have to go from understanding to change, and that means that we want to be involved in processes of changes.'



### Parallel workshop sessions:

1. Drivers for food systems
2. Sustainable Food systems
3. Systems for healthier food consumption

## 1. Drivers for food systems

Chair & Moderator: Diane Bosch (Wageningen University & Research).

Co-facilitators: Jan Brouwers, Irene Koomen (Wageningen University & Research) and Jan Verhagen (Wageningen University & Research).

Participants: 22 experts from realms of science, NGO and private sector and public policy.

Objective is to examine the concepts of food systems from / across various sectors to identify: (i) key drivers of food systems; (ii) drivers for change of food systems; (iii) and cater for cultural drivers of food systems. Main elements that came out from the discussion are summarized below.

### Open and holistic view of food systems

Perspectives on food systems should allow for a holistic view and be an incubator for new ideas. They should also be open for new actors and allow these new actors to join in the common understanding of the system and rearrange coalitions for change.

### Various drivers of food systems

Visitors selected the following most important drivers: cost reduction/profit; mechanization and innovation; the political, economic and institutional environment; habits and health knowledge; and inequality.

### The most important drivers for change

Firstly the purpose of change needs to be clear, relevant and matching urgency for change and agreed upon by the main actors, otherwise change will not start up. Some actors have considerable power in the present constellations, like large agrobusiness. If they would allow other actors and views to become part of the core coalition and core values, like stronger inclusiveness and sustainability, the rearranged governance structure would be the main driver of change. This would be shown in a more balanced power structure.

### To cater for cultural drivers of food systems

Each food system (and its sub systems) will have to contextualise the system. Also changes in habits have to be understood (like urbanization with middle class workers interested in new types of food; or societies shifting from a large hot meal at midday to a short working snack and a shorter dinner in the evening). Group behaviour is also an important element to be understood.



## 2. Sustainable Food systems

Convenor: Jim Groot (Wageningen University & Research).

Co-facilitators : Peter Ravensberg, Nina Waldhauer (Wageningen University & Research).

Participants: 40 experts from realms of science, NGO and private sector and policy.

The objective is to search for a practical but comprehensive operational definition of Food Systems, based on a clear understanding of its internal and external dynamics. Main questions of discussion are: (i) what is a the correct definition of a sustainable food system; (ii) what are sustainable food system drivers and (iii) how to use the concept of sustainability (people, planet, profit) when adapting, preparing and modelling the future.

Main elements that came out from the discussion:

### Need for alignment, synergy and boundaries

There are already many system approaches which focus on all or parts of the complete food system. For example Food Security Index in which WUR is involved and the nutrient model. It is time that within Wageningen we align the systems and models and share data sources. That requires clear definitions and system boundary definitions.

### Include the human factor and quality of life

There is a need for multiple perspectives on food systems. Presently there is too much focus on economics and technology development. We need to include the human factor and quality of life (anthropology), social research studies and more sustainability perspectives (circularity, LCA). This is urgent.

### Internalize external effects into price setting

There is a difference in the chain of values in the supply chain. Hereby is important to take into account the human factor, governance of chains, education and capacity building. The market price is always very important, but it does not reflect always the internal values of the product, i.e. the fact that small farmers are involved, ecological way of production, intrinsic contents of the produce, etc. Internalizing external effects into the price is needed.

### Moral and ethics: from which perspective

It is difficult to define what is a 'good' system and what is a 'bad' system: is organic better than integrated high-tech intensive production? Is import worse than local produced? Is feed import good or bad, considering the misbalance in nutrients over the continent? Is consumption of processed food worse than fresh food? However benchmarking on certain criteria's would be appropriate.

### Global linkages: regional systems always part of global food system

The outcome of a regional food system is the nutritional balanced diet. Further we have to take into account that a regional food system is always part of the global food system, including processing and trade.





### 3. Systems for healthier food consumption

Convenor: Thom Achterbosch (Wageningen University & Research).

Co-facilitators: Ireen Raaijmakers, Marijke Kuipers (Wageningen University & Research).

Reporter: Harriëtte Snoek (Wageningen University & Research).

Participants: 20 experts from realms of science, NGO and private sector and public policy.

The objective is to examine key drivers in food systems towards achieving or safeguarding balanced and adequate diets of urban populations in low and middle income countries. Examples are presented from ongoing projects including GF&NS project URBCONS and EU-funded projects SUSFANS and FOODSECURE, and participants are encouraged to share their views in the discussion.

Two research examples are presented. One on drivers of food choice from a consumer perspective and one on foresights. The main points of discussion and conclusions are the following.

#### What is a 'healthy' diet?

In the discussion on the consumer study the group pointed out that "healthy diet" is a sensitive and complicated topic and it is unclear what is the correct definition. How has the 'healthy diet' evolved under the 'nutrition transition'. There is a discussion on the balance between 'fresh' food intake and 'processed food'. Processed foods have a multifaceted role in the nutrition transition and that role should be taken into account. Attention should be given to what is the precise operationalization of processed food and why is this operationalization used.

#### Different perspectives on malnutrition

Interesting to notice and to keep in mind, to study and to take into account in interpretation and further modelling is that perspectives around malnutrition issues and target groups differ considerably. There is not one definition, perspective and morality. The focus on vegetables was considered relevant and researchers were urged to take this even in more detail and look at the handling and preparation at home.

#### Influence of target group and context

Important is that the healthiness of a diet depends on the target groups and the context (e.g. meat consumption, processed food). We need to get closer to the consumer and to go beyond the diet composition: scheduling meals and food preparation are part of the food systems.

#### Foresight modelling and transformative change

It was confirmed with the discussion that foresight modelling is relevant work. But important is to get insight into how foresight can contribute to transformative change with and among actors. There are challenging trade-offs around the future diet (2050): sustainability – health – economy. Equality and sustainable: transformation should come from a scenario where they actually stimulate each other.



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### Workshop organizing committee

Christine Plaisier, Ruerd Ruben, Jan Verhagen, Diane Bosch, Jim Groot, Thom Achterbosch (Wageningen University & Research)

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## PROGRAM – 4 November 2016

09:00 - 09:10	Welcome Prof. Jack van der Vorst (General Director Social Sciences (SSG), Wageningen University & Research)
09:10 - 09:20	The Dutch support for the CGIAR research program Agriculture for nutrition and health (A4NH) Dr. Melle Leenstra (alt. delegate CGIAR System Council for the Netherlands, Netherlands Ministry of Foreign Affairs)
09:20 - 09:30	Introduction to the workshop prof. Ruerd Ruben (Wageningen University & Research) and dr. John McDermott (Director A4NH, IFPRI)
09:30 - 10:15	Food System interactions: Policy strategies for resilience & participation Dr. Henk Westhoek, PBL Netherlands Environmental Assessment Agency <i>Response by prof. Pieter van 't Veer (Wageningen University &amp; Research, Human Nutrition)</i>
10:15 - 11:00	Food System: Agents and Metrics for Sustainable Nutrition Security Dr. John Ingram, Environmental Change Institute, Oxford University <i>Response by prof. Martin van Ittersum (Wageningen University &amp; Research, Plant Production Systems)</i>
11:30 - 12:15	Food System analysis: Convergence for Agriculture, Health and Wealth Dr. Venkatesh Sosle, Centre for the Convergence of Health and Economics, McGill University <i>Response by dr. Marrit van den Berg (Wageningen University &amp; Research, Development Economics)</i>
12:15 - 12:30	Plenary discussion
12:30 - 14:00	Lunchbreak
14:00 - 15:00	<i>3A: Drivers for food systems</i> Chair & moderator: Diane Bosch (Wageningen University & Research)  <i>3B: Sustainable Food systems</i> Chair & moderator: Jim Groot (Wageningen University & Research)  <i>3C: Systems for healthier food consumption</i> Chair & moderator: Thom Achterbosch (Wageningen University & Research)
15:00 - 15:30	Plenary reflection parallel workshops
15:30 - 16:00	Coffee/tea break
16:00 - 17:10	Policy and practice panel What is the role of food system analysis for policy and practice? How can research help to boost the effectiveness of policy instruments and incentives for healthier and sustainable diets?  <i>Panel discussion with the following representatives:</i> <ul style="list-style-type: none"> <li>- Frank Mechielsen (HIVOS)</li> <li>- Herbert Smorenburg (GAIN &amp; Amsterdam Initiative against Malnutrition)</li> <li>- Jan Steijns (FrieslandCampina)</li> <li>- Orlando de Ponti (East-West Seed)</li> <li>- Corinne Abbas (Netherlands Ministry of Foreign Affairs)</li> <li>- Patricia Wagenmakers (Netherlands Ministry of Economic Affairs)</li> <li>- John McDermott (IFPRI, A4NH)</li> </ul>
17:10 - 17:30	Closing remarks by prof. Ruerd Ruben
17:30 - 18.30	Reception

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