

FUTURE OF GLOBAL FOOD AND FARMING HOW CAN SCIENCE SUPPORT FOOD SECURITY?

30 March 2011

Venue: Mansholt Room, Charlemagne Building, 170 rue de la Loi, Brussels

Programme

The high-level seminar will debate the impediments and choices for global sustainability and food security driven by the expanding world population combined with the need to stop over-exploiting natural resources such as soil and water as well as the impacts of the climate change. The seminar will focus on the challenges for food security and will discuss how to achieve and sustain food supply, both inside and outside of the European Union. The objective is to identify the stresses on the food system and what kind of solutions already exist and can be deployed by spreading knowledge and technology.

The case for urgent action in the global food system is now compelling. We are at a unique moment in history as diverse factors converge to affect the demand, production and distribution of food over the next 20 to 40 years. Whilst the global food system currently delivers for many, it is nevertheless already failing in two critical ways; consuming the world's natural resources at an unsustainable rate; and failing the very poorest, with almost one billion of the least advantaged and most vulnerable people still suffering from hunger and malnutrition.

The needs of a growing world population will have to be satisfied as critical resources such as water, energy and land become increasingly scarce. Food production and the food system must assume a much higher priority in political agendas across the world if we are to feed 9 billion people by 2050 equitably and sustainably.

This seminar will provide an opportunity to discuss what this means for policy makers across Europe. High-level experts from the fields of science, industry, civil society and policy makers will debate the challenges, choices and opportunities for developing global sustainability and food security around key issues, which include: managing supply and demand in the food system, food price volatility, ending hunger, and mitigating climate change. The objective is to identify what kind of solutions already exist and can be deployed by spreading knowledge and technology.

The seminar is organised jointly by the European Commission's Joint Research Centre (JRC) and the UK Government Office for Science.

09.30 - 10.00 Registration and welcome coffee

10.00 - 10.45 OPENING SESSION

- **Dominique Ristori**, Director General, Joint Research Centre, European Commission
- **Sir John Beddington**, Chief Scientific Adviser to the UK Government
- **Marit Paulsen**, Member of the European Parliament, Vice-Chair, Committee on Agriculture and Rural Development, European Parliament

10.45 – 12.10 **PANEL 1: Balancing future food demand and supply sustainably**

Moderator: **Mark Driscoll**, Head of Policy, Sustainable Consumption, the World Wildlife Fund

Description:

The food system is currently consuming resources faster than they are being naturally replenished and renewed, including: consuming 70% of total global water withdrawals from rivers and aquifers and directly contributing 10-12% of Greenhouse Gas (GHG) emissions. The global food system has to be redesigned to bring sustainability centre stage. This requires concerted action across several policy domains to address the challenge of balancing supply and demand sustainably over the next decades. If food supply is to increase without the use of substantially more land and with diminishing impact on the environment, sustainable intensification is a necessity. Panel topics:

- Improving productivity sustainably using existing knowledge
- New science and technology to raise the limits of sustainable production and address new threats
- Reducing waste
- Influencing demand
- Improving governance of the food system
- Raising the political profile of food
- Reducing environmental impact of the food system
- Maintaining biodiversity and ecosystem services while feeding the world

Questions for discussion:

- How do we increase the priority of food system research and development across the EU?
- How can the EU role in the governance and oversight of the food system be developed, particularly around the introduction of new technologies, to ensure it takes account relevant considerations for ensuring future food security and sustainability?

Panellists and presenters:

Food security and its relevance to farms' policies, Tassos Haniotis, Director, Economic analysis, perspectives and evaluations, DG Agriculture and Rural Development, European Commission

The business perspective, Helena Leurent, Director, Head of Agriculture, Food and Beverage Industry, World Economic Forum

Future science priorities for food security, Leen Hordijk, Director, Institute for Environment and Sustainability, Joint Research Centre, European Commission

Bio-based economy - more than our daily bread, Maive Rute, Director, Biotechnologies, Agriculture, Food, DG Research and Innovation, European Commission

Member State views, Andrzej Butra, Undersecretary of State, Ministry of Agriculture and Rural Development, **Krzysztof Jazdzewski**, Deputy Chief Veterinary Officer, Poland

12.10 – 13.00 **PANEL 2: Volatility in the food system**

Moderator: **John Bensted Smith**, Director, Institute for Prospective Technological Studies, Joint Research Centre, European Commission

Description:

Volatility in global commodity markets can have an adverse effect on consumers and producers disrupt the global food system and generate economic and political instability. While the amount of volatility in the food system remains uncertain, price spikes in the future are inevitable. They have been a feature of agricultural markets for as long as data has been available. While volatility has been lower over the past 20 years price spikes in 2007/8 had a profound impact, increasing hunger and the risks of political and social instability. Current World Bank estimates show that the recent food price volatility, in early 2011, has thrown an additional 44 million people into hunger. As food prices have remained generally high and volatility has increased over the past three years, how to protect the most vulnerable groups from the worst effects of food price volatility is becoming a political priority around the world. Panel topics:

- Volatility in the past and in the future
- How to mitigate against the negative consequences of volatility
- How to protect the most vulnerable from volatility
- Policy implications relating to future volatility

Questions for discussion:

- How do we define ‘volatility’ and what are the factors that contribute to it?
- What levels of volatility are considered ‘acceptable’, and should governments intervene to attempt to control volatility within defined bounds?
- How can the negative consequences of volatility be mitigated, and which interventions would be most effective?
- Which collective actions and planning at the international level (for example the EU or G20) should occur to protect the poorest from the worst effects of volatility?
- Would there be anything new in the problem of balancing supply and demand / hunger in the future and, if so, what this factor will be?

Panellists and presenters:

Policy view, Willi Schulz-Greve, Head of Unit, Economic analysis of EU agriculture, DG Agriculture and Rural Development, European Commission

The Foresight Perspective – Will Martin, Research Manager, Agriculture and Rural Development, Development Research Group, World Bank

Searching for sustainable food systems in a resource constrained world: policy implications, Wolfgang Ritter, Federal Office for Agriculture and Food, Germany

13.00 - 14.00 Lunch

14.00 – 15.00 PANEL 3: Ending hunger

Moderator: **David Wilkinson**, Director for Programmes and Stakeholder Relations, Joint Research Centre, European Commission

Description:

The food system is currently failing to address hunger. In addition to the 925 million people currently experiencing hunger, another billion are thought to suffer from the 'hidden hunger' of not having enough vitamins and minerals. In contrast, a billion people are over-consuming. Efforts to end hunger internationally are already stalling, and without decisive action food prices could rise substantially over the next 40 years making the situation worse. A stronger constituency for hunger reduction needs to be built. We need to take a broad view of the nature and causes of hunger and its many impacts, including the severe and long-lasting nature of the effects that hunger and under-nutrition can cause. Panel topics:

- Agriculture as a powerful force in poverty and hunger reduction
- Making agriculture work harder to reduce hunger
- The short fall in data and monitoring of hunger
- International leadership on hunger reduction

Questions for discussion:

- There is a shortfall in data and evidence on hunger and hunger monitoring, how do we develop better metrics and indices of hunger? What type of data is needed at what resolution?
- What are the possible interventions required to generate a more robust and consistent consensus on tackling hunger?
- Strong level of political courage and leadership are essential to this agenda, how do we generate and sustain this focus?

Panellists and presenters:

Sir Gordon Conway, Imperial College London

Policy view, David Radcliffe, Sustainable management of natural resources, DG EuropeAid Development and Cooperation

The Foresight Perspective – Phil Bloomer, Director of Campaigns and Policy, Oxfam

15.00 – 16.00 **PANEL 4: Meeting the challenges of a low emissions world**

Moderator: Leen Hordijk, Director, Institute for Environment and Sustainability, Joint Research Centre, European Commission

Description:

Agriculture, including fertiliser production, directly contributes 10-12% of Greenhouse Gas (GHG) emissions; this figure rises to 30% or more when land conversion and costs beyond the farm gate are added. Addressing climate change and achieving sustainability in the global food system need to be recognised as dual imperatives. Ambitious, and in some cases legally binding, targets for reducing emissions have been set, which cannot be achieved without the food system playing an important part. Conversely policies on climate change mitigation must account for their potential impact of the global food system, in view of its vital role in human survival and wellbeing and its influence on wider issues of sustainability. There is a clear case for substantially integrating and improving considerations of agriculture and food production in negotiations on global emissions reductions. Panel topics:

- The food system in a low carbon world – the policy implications
- Enabling GHG reductions in the food system
- The food systems adaptation to climate change
- Metrics for measuring GHGs from farming systems

Questions for discussion:

- What are the main challenges confronting agriculture as a result of climate change?
- What can agriculture do to reduce emissions?
- What are the costs of action relative to inaction?
- What are the main changes and policy actions needed to promote these more sustainable approaches?
- How do we develop better metrics for measuring GHGs from farming systems?

Panellists and presenters:

Roadmap to a Resource Efficient Europe, Michael Hamell, Head of Unit, Agriculture, Forests and Soil, DG Environment, European Commission

Tara Garnett, Food Climate Research Network, University of Surrey

Is the Livestock Shadow so Long? Greenhouse Gas Emission of Livestock Sector, Jacques Delincé, Head of Agriculture and Life Sciences in the Economy, Institute for Prospective Technological Studies, Joint Research Centre, European Commission

FACCE Joint Programming Initiative on Agriculture, Food Security and Climate Change, Jean-François Soussana, Scientific Director, Environment, INRA

16.00 – 16.30 **CONCLUSIONS AND THE WAY FORWARD**

Sandy Thomas, Foresight Director, Government Office for Science, UK Government

Dominique Ristori, Director General, Joint Research Centre, European Commission