Rapporteur Template for Scientific Events

Event Title :	Towards a Research Agenda for Global Food and Nutrition Security	Date:	May 8.5. 2015
Event Organiser:	EU Scientific Steering Committee for Expo		
Event Target Group:	Scientific community, policy makers, different categories of stakeholders (decision makers, civil society, industry representatives;), representatives from different countries/organisations, including Africa (but no one from Asia)		
Rapporteur:	Ewa Jakubczyk , Maria Saarela, Béatrice Darcy-Vrillon		

1. Which research themes are concerned? (Tick all relevant areas)

☒ A: Improve public health through nutrition – healthy and sustainable consumption
☒ B: Increase food safety and quality
☒ C: Reduce losses and waste – more efficient food chain
☒ D: Manage the land for all ecosystem services – sustainable rural development
☒ E: Increase agricultural outputs sustainably – sustainable intensification
☒ F: Understand food markets in an increasingly globalised food system
☒ G: Increase equity in the food system

2. What is the challenge and why does it exist?

- Food &nutrition security is a global issue (not only EU)
- Not only a matter of enough food on the whole but a problem of accessibility for some populations or parts of the populations. A key issue for the future with an increase of the global and there is not enough . Also a problem linked to the quality of food , as nutritious food is not always available for everybody. On the whole (globally) there might be enough food produced (at the moment but probably not in the future), but it is not evenly available/consumed
- The problem is how to ensure sufficient, adequate, safe and sustainable intensification of food and nutrition; it is an urgent and complex question, in the context of climate change, food and non-food uses, and the issue of losses and wastes at different steps of the food chains.
- The historic growth of the yield of agricultural production is faltering around the world, production increase will be more difficult to achieve; a person share of land is shrinking and each of us wants more from it
- agricultural land per capita is decreasing all the time – we need to intensify the production (=increase yields)
- climate change impacts agriculture; it is pushing down yields.
- abundance of cheap calories (food of poor nutritional value)
- food waste (at the primary production level and consumer-product level)
- agriculture/food production. The problem of urbanization and competing demands for land and natural resources

3. What will happen if the challenge is not addressed?

- Short Term Consequences
- Long Term Consequences

- If demand and yield growth continues as now: 120% more water is required, and 42% more cropland
- -Economic cost of malnutrition, which comprises undernutrition (has decreased but still a problem)

and overnutrition leading to obesity, the “double burden”.
- environmental problems/production problems due to unsustainable production practises and climate change
- There is no sustained society without security, and this includes food security, it might lead to political insecurity; refugee problems; illegal immigration and related crime (human trafficing etc.)
- The matter of agriculture in the question of climate change needs more attention: several questions, adaptation to climate change, mitigation; concept of “climate smart agriculture”.
- Opposition between farmers and environmentalists, which leads nowhere.
- -price volatility

5. What were the suggested solutions, research insights and/or policy proposals? Were specific new research or development actions identified?

- -food security must be back on the political agenda, with the perspective of food and nutrition security.
- need of a new perspective: agriculture has been viewed as an industry of the past; it is now and must be seen as an industry of the future
- multidisciplinary research is needed; also basic research is needed to achieve innovations
- on agriculture and environmental issues, the way forward is a marriage between science and farming; exemple: in Africa, transformation of agriculture implies an increasing role of science and technology, and a progress of innovation culture
- among new R&D actions identified, change of livestock management perspectives thanks to “One health” perspectives.
- systems and interdisciplinary thinking is necessary; thinking about the whole food system for sustainable intensification.
- we need to get into the virtuous spiral of more coordinated and strategic research is needed; also, and research and innovation; nevertheless there is no “silver bullet” for that.

<u>Panel 1</u>

- We need research on sustainable intensification + basic research (on plants and animals) to achieve long term innovation ; research and innovation is key for sustainability but research must produce knowledge which is needed for innovation.
- it is important to attract young scientists in the field of agriculture;.
- balance in land use for agriculture vs other uses (e.g. biofuels); agricultural land in EU is also decreasing and thus more production per hectar is needed; farmers need new economic opportunities (new markets, new products, trade); better use of existing resources; minimise the waste of food and especially food protein
- research related to sustainable intensification of food production account and reducing losses: link to feeding people. (taking into account environmental impacts); proper economical models that take into environmental factors in the development of food sciences and implementation of innovations. ; incentives and restrictions for farmers; identification of environmental limits Exemple: competitiveness of agriculture in Africa, and tackling the issue of food safety (with biological measures)
- The increase of public founding of research
- The importance of the balance land use for food production. The application of agroecology for sustainable farming and reducing wastes.
- The improvement of productivity is the best solution to increase biodiversity.
- The strong impact of climate change on the technical interactions between agriculture and food production: making farming eco-compatible needs new ideas.
- climate change will have larger impact in Africa
- The agricultural system today is broken; if we don’t change things we cannot continue to produce even the same amount of food as we produce now

<u>Panel 2</u>:

- women should be in the centre of food systems to ensure better nutrition in families

- there is a double burden of malnutrition (simultaneous presence of undernutrtion and obesity in a country)
- how to scale up/implement the innovations?
- interaction between policies and science is not easy
- food logistics are increasingly complex (transport networks etc); how to ensure food safety in this complex situation? increase in the complexity of logistics leads to food safety issues in practice: need of monitoring programmes and ready-to-use methods, and progress in risk assessment.
- emerging risks should be identified early
- diagnostic tools should be developed e.g. for the quick on site monitoring ; also consumer POC should be developed (comment: how to define the right limits of detection???)
- food adulteration is increasingly important and also a food safety concern
- consider food safety and quality as public good - a general question: are we prepared to sacrifice safety level because of the prices of food?
- food waste and losses can be minimised by ensuring by ensuring that raw material are of high quality (e.g. milk without antibiotic traces)
- food wastes and losses: it is a key-issue for industry, starting from raw materials to considering storage conditions in factories, and packaging.
- Food waste :focus on prevention vs using wastes?
- In EU countries the proper agricultural techniques of cultivation may be a crucial factor that may lead to decrease of food losses:
- mycotoxin contamination in developing countries. is causing a lot of food losses; this can be minimised by educating farmers about the suitable (dry) storage conditions for crops
- -Thepackaging waste is a complex issue; on the other hand too big packaging sizes easily lead to food losses/waste; packaging needs also to be good enough to ensure the longest possible shelf-life for the product; we have to choose the right packaging and portion sizes
- consumers need to be educated about food waste (e.g. there is still confusion about labelling of foods; best by – use by)
- retails sector is also causing food losses, especially with their offers pay one get two and oversized packagings
- it is really difficult to re-use the mislabelled /wrongly packaged food products because none of the packaging can be removed by machines (thus un-packaging is far too costly)

<u>Panel 3</u>:

- three political objectives: equity, gender (importance of mothers being educated), and nutrition
- research issues: functioning of value chains; impact of food prices on food security in the world; impact of trade which is heterogeneous (with winners and losers): need of models, longer term studies on trades; need for basic, institutional research
- we need more research on how markets work
- business-science cooperation necessary to advance food security
- in all cases, importance having access to the right data
- -xemple of Africa: importance of research from private sector; look at Africa as a market, not only a provider of raw materials
- trade vs development: two different issues
- we need targeted policies for trade and markets for different situations to improve local and global food security
- Africa should also be considered as a potential market for food products (and not just a producer of raw materials)
- more equity needs to be into the value chain (e.g. in Africa value chains are short compared to EU)

<u>Concluding panel</u>:

- Importance of teaching/education: need of more multidisciplinary or integrated research projects to solve complex problems in the food sector and education of researchers for innovation

- We need a better education system about food and nutrition
- More innovations should be applied to the food sector
- suggested: EU should take the specific initiative of a platform for agriculture and food research, with open access data, open places for experimentation and improving agricultural statistics
- suggested: redirect our research on agriculture and food to focus on supply-quantity and on demand, involving society (through better communication with social networks)
- controversy on "more competition needed between scientists": some think that raw material are of competition is already high quality
- we need to improve the education in innovations in universities
- how can we attract young people into food/agricultural sciences?
- we need to be able to bring research into market
- we should have a dedicated innovation trust fund to move onwards
- (for EU funding in agro/food has been diminishing for years; we need new funding sources for the new research agenda
- EU should have specific platform for collaborative/international research in agriculture/food sciences
- scientists from many different areas should be brought together (comment: this has already been done in EU projects; there is also a risk that research get too fragmented; there is an optimal level for this; more is not always better)
- we need less competition and more collaboration in research
- The new way of research collaboration can be achieved by a new research funding.
- We should also look at a food demand not just food markets (i.e. what is available)
- we need to prioritise the proposed actions; how to do that? (government incentives for farmers are not working)
- the current discussion should be better linked to bioeconomy initiatives

6. What are the expected benefits and risks of such initiatives?

- Benefits: The better organisation of food market, more sustainable food production, conservation of biodiversity, the decrease of pollution.
- No silver bullet, but many of the actions were considered to be absolutely crucial to ensure future sustainable food systems, i.e. from food production to consumption (importance of demand; question of Waste);
- there are huge risks if things are not done

7. Does this event address research challenges others than those in the discussion document ?

- See different items mentioned by the different panels.
- need of a mechanism to define research priorities
- make science of food more attractive for young people
- Better use of ICT in research and innovation, sharing data

8. Did this event point out gaps in the private and public research infrastructure/systems which should be addressed?

- -panel discussion showed that the new system of research funding should be implemented.
- research is limited and very competed
- private funding is even more limited
- financing gaps are huge
- we need new innovative financing mechanisms

9. What best practices were mentioned at this event?

- The discussion was fairly general (things should be done but how?)
- Horizontal issues discussed were around the need for new funding models for such research: public, public-private or new funding sources

What follow-up actions emerged from this event?

- see the panel discussion minutes above