EURAGRI workshop:

CURRENT, INTERRELATED STRATEGIC ISSUES IN EUROPEAN AGRICULTURE RESEARCH AND POLICY

Summary

The workshop took its starting point in the frequently described, numerous and interlinked challenges to be tackled by the ago-food system in the mid and long-term and the growing understanding that we are living in the transition period towards a bio-based society.
Its aim was to discuss if these challenges correspond to the debate visible in the current EU research policy structures and how they relate to its various groups of actors (ministries, research councils, research institutions, the related industries, the farming community and the consumer).

The first session had the title: "Is the broad outlook of the challenges corresponding to the current and future RTD and innovation priorities?" This session was moderated by Eric Regouin, Ministry of Economic Affairs, Agriculture and Innovation of the Netherlands and a short introduction was given by Gianluca Brunori, member of SCAR 3rd Foresight Expert Group. He outlined the main ideas developed in the SCAR 3rd Foresight exercise. The foresight study started with postulating that we are living in the anthropocene[1]. From there two opposing and competing narratives were elaborated, a productivity and a sufficiency narrative. These two narratives define the underlying problems fundamentally different. The productivity narrative assumes that there is not enough production which creates a productivity gap. New high technological innovations are needed to increase production and to succeed barriers to their adoption need to be removed. By contrast the sufficiency narrative states that there is overconsumption and waste that needs to be reduced. The technologies used today are inappropriate, social innovation is needed which includes changes in society's ways to think about its resources. It also means that learning in a general and an educational sense is important for a successful transition to a sustainable future.
Barna Kovacs, DG Research and Innovation, the commenter, responded that Horizon 2020 includes the challenges and the EU strategy on the European bioeconomy aims at the transition but the great task is to translate these challenges and strategic aims into research. The bioecnomy observatory[2] is meant to play a key-role in this context.

[1] The ***Anthropocene*** is a recent and informal geologic chronological term that serves to mark the evidence and extent of human activities that have had a significant global impact on the Earth's ecosystems. The term was coined by ecologist Eugene F. Stoermer but has been widely popularized by the Nobel Prize-winning atmospheric chemist Paul Crutzen, who regards the influence of human behavior on the Earth's atmosphere in recent centuries as so significant as to constitute a new geological era for its lithosphere. Wikipedia

[2] Establish a *Bioeconomy Observatory* in close collaboration with existing information systems that allows the Commission to regularly assess the progress and impact of the bioeconomy and develop forward-looking and modelling tools (by 2012). Review progress and update the Strategy at mid-term. Communication from the Commission to the European parliament, the Council, the European Economic and Social Committee of the Regions. Innovation for a sustainable growth: A bioeconomy for Europe {SWD (2012) 11 final}

The following discussions pointed out that we have enough analysis of the situation and that we know the problems and have the overall concepts ready for a bioeconomy. However, we do not know how to get to the solutions. The systems our societies are based on are driving in the 'old' directions. This is also reflected in the need to develop new economic models for the bioeconomy which go beyond the agricultural economy model. However, only data for the latter is available. So on what data basis should we make the predictions/build the scenarios for the 'new/different' future?
The trade-offs between productivity and the environment, the interests (private and public) of all the different but associated groups (society-consumer-industry-farmer) have to be integrated and knowledge management and education have to be optimised.
There was a general agreement that solutions have to be bottom up respecting the (still) present diversity (ecologically, structurally, culturally etc.) and they have to be regionally anchored, also to ensure public ownership. The society at large has to be mobilised. Key ingredients have to be open innovation, knowledge sharing and communication also with the support of high technology communication strategies to change people minds. It includes also rethinking our education system, starting at primary school.
So, what are the implications for future research priorities?
Mapping of the available models but not only limited to economics but the wider aspects would be a start also to help interactions with the political decision making system. Furthermore consensus has to be achieved concerning research priorities accompanied/followed by a bundling of resources (Regional, MS, and EU). And finally changes in structural- and mind-settings have to be brought on its way to increase cooperation of 'human habitats' within and with their surrounding world: research/research disciplines, policy/policy departments, industries, sectors, civil society, consumers etc.
Yet, who can (over)see this? How can the systems be opened up? What are the common values and the relevant indicators?
The session ended on three summarising and thought provoking questions:
What are the main drivers that can provoke change?
What research priorities can we agree on under given political and economic situations?
What are the implications for research budgets in terms of prioritising?

The second session, entitled 'The reform of CAP and the relation to current and future RTD and innovation priorities', was moderated by Elfriede Fuhrmann, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria. The introduction was given by Marcus Carson, Stockholm Environment Institute based on outcome of an European Environment Agency expert work shop on CAP in October last year. It looked at the underlying challenges of the CAP in view of goals related to food security, environment and territorial balance. He pointed out that transformation, a shift in paradigm, rather than reform is needed concerning CAP. That means a change in the conceptual model for solving the challenges ahead. For true transformation it is important how and on what basis the Commission defines its challenges with regard to the new CAP: Abandon it? Favour equity? Protect the diversity of agricultural systems? Maintain the environment? The Commission also has to decide which way to go when two things collide and how to prioritise. However, he continued, it is often prevalent conceptual models that impact the decision making and prevent real change. The key transition themes as outlined by the EEA Green CAP expert workshop are i) reduce ecosystem impact of European agriculture, ii) embrace diversity of European agriculture and iii) revitalize ecosystem services as the core purpose of the CAP.

Finally, Carson pointed out that a crisis might be necessary to flip priorities and make real change happen. He exemplified it by the food safety crisis which he regards as a catalyst for change. Nevertheless, he pointed out that also incremental change happens.
This introduction was commented by Martin Scheele, DG –agri. The food crisis was not the trigger for a shift in paradigm but coincided with the present CAP reform. The big shift in paradigm was related to the clarification of the drivers such as trade-offs between public and private interests and the recognition of public goods in the policy set up. The complexity of the system was acknowledged with multiple, interacting targets to be achieved, such as:

- Asynchrony/disparities in EU countries and all the follow up problems
- Better targeting of challenges with regard to common interests
- Income support, closely linked to the budget and transfer payments
- Territorial dimensions, different functions of different areas
- Provision of public goods, limits and willingness to pay

This resulted in the 2 pillar system with the first pillar organised top down according to the rules and the second pillar with a targeted, differentiated approach, bottom up.
In the following discussion it was stated that change processes are always contingent due to the asymmetrical shifts and the danger of re-enforcements in the 'new' direction.
In contrast to the past when different interests, 'environment' with focus on extensification and 'market' with focus on competitiveness and response to global demand, where regarded as opposing, today there are new patterns emerging. Tactical co-operations are set up between different camps looking for common grounds. One example is the co-operation between Syngenta and bird protection groups where sustainable extensification goes hand in hand with efficiency.
It was also mentioned that a driver of change was sometimes the institutionalising of a paradigm shift, a lobbying for change from inside the institutions to the related actors outside.
Related research priorities named were:

- Who are the farmers? It is necessary to understand the diversity, fragmentation and social dimension of farms.
- System resilience (environment – territorial balance) is a key word and the CAP reform has to be flexible enough to provide it and also to communicate it.
- How can research help with the implementation of policies and the fulfilment of their goals also with regard to international dimension, equity and trade?
- CAP is a very complex policy measure that has to meet the complex system 'environment'. Research should close the knowledge gaps and define appropriate tools to strengthen the impact of policy measures.

Session III, "Is the need to cover the various levels from regional to global sufficiently represented in the current and future RTD and innovation priorities?" was moderated by
Lotta Rydhmer, Swedish Agricultural University. The introduction was given by Carol Crumley, University of North Carolina and Swedish Agricultural University. It was titled 'On diversity and dynamics: alternative worlds and pathways. The combination of biological and cultural diversity is

the backbone of agricultural system adaption under changing conditions as obvious from the history of land management when taking a long-term perspective. However how to manage systems that are so diverse on a global scale? And at what scale do we need to maintain diversity? At landscape, region or European scale to maintain resilience to future changes? To answer that, we need to now the relationships between the different components. We also have to take a system approach that allows the planning for the future as multiple paths. Mosaics (ecology of practice) can be used at multiple scales and thus economic risks due to future challenges (i.e. climate change) can be spread. Crumley named a perma culture[3] approach as an example, not the single thing has to be conserved into the future but the idea.
Elfriede Fuhrmann commented that the work in the ERA-net RURAGRI illustrated some of the basic problems when dealing with these questions on a political level. What is understood by a region? Regions have many aspects: environmental, social and cultural ones etc. Concerning the interactions of regional authorities with regard to regional development there has to be a common understanding on what should be supported. This means that there have to be interactions of all partners within the region.
The following discussion focused on defining regions. It was suggested that models of regional systems defined by their respective interactions and synergies should be developed and validated through discussions with local people. Thus also the variability between systems could be addressed. It was also mentioned that the availability of resources can make the difference in defining a region and its responsiveness to change. Yet it has to be defined to what sort of change it should be responsive to. In order to create dynamics it might also be useful to look at new relationships, i.e. rural and urban areas. Also the focus on results rather than measures might overcome the problem of comparison due to regional diversity. The re-invention of advisory systems to assemble knowledge and monitor work on farms could help to obtain an overall system understanding. Research programmes should be more thematic and take a problem based and solution orientated approach and should be linked with the public in general and the farmers.

In a final session, moderated by Uno Svedin, member of EURAGRI board, the main thoughts were summarized and looked at across the different sections.
How to engage all players in one system and create a playing field open for everyone with a certain degree of diversity maintained?
How to design research programmes that are targeted to the challenges and integrate all the different groups involved? They have to reward dialogue and therefore processes matter rather than outputs. It was suggested to create multi-actor projects where actors are in daily contact in operational mixed groups (Guideline for Horizon 2020?).

[3] Permaculture design emphasizes patterns of landscape, function, and species assemblies. It asks the question, “Where does this element go? How can it be placed for the maximum benefit of the system?" To answer this question, the central concept of permaculture is maximizing useful connections between components and synergy of the final design. The focus of permaculture, therefore, is not on each separate element, but rather on the relationships created among elements by the way they are placed together; the whole becoming greater than the sum of its parts. Permaculture design therefore seeks to minimize waste, human labor, and energy input by building systems with maximal benefits between design elements to achieve a high level of synergy. Permaculture designs evolve over time by taking into account these relationships and elements and can become extremely complex systems that produce a high density of food and materials with minimal input. Wikipedia

We need a research agenda where we the see gabs for breakthroughs and solutions. But in what kind of research should we invest our money to achieve breakthroughs, in incremental research, in star researchers or in shotgun method.
We also need to look at the global context and include gender aspects.
Education has to play a major role because paradigm shifts happen in the next generation.
Mosaic and variety are prototypes for mind sets and mind shifts. Processes for long term and short term changes are different.