Workshop report

EUROPEAN PARTNERSHIP "SAFE AND SUSTAINABLE FOOD SYSTEMS FOR PEOPLE, PLANET AND CLIMATE"

Workshop

Brussels, 18th September 2019
13.30 -17.00

European Commission,
8, Square Frères Orban, 1040 Etterbeek, Brussels

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Introduction

A workshop on the European Partnership "Safe and Sustainable Food Systems for People, Planet and Climate" took place on the 18th September 2019 in Brussels. The event brought together the members of SCAR FOOD SYSTEMS SWG and representatives of JPIs FACCE, HDHL, OCEANS; EIT FOOD; BIOEAST; FIT4FOOD2030; FoodDrinkEurope and the European Commission (DG RTD, DG AGRI and DG SANTE) to exchange views on the priorities for the Food Systems Partnership.

The first part of the workshop was dedicated to the general presentation of the EU partnerships, the process of preparation and in particular to the Food Systems partnership.

During the roundtable discussions, different stakeholders acting in the Food System area identified the main challenges to be addressed by the Food Systems Partnership and discussed the expected impact.

I. European Partnerships- State of Play of preparation and next steps – *Maria Reinfeldt (DG RTD A4.002)*

The new framework programme Horizon Europe (2021-2027) will support European Partnerships to deliver on global challenges and EU priorities.

Definition:

"*European Partnership means an initiative where the Union, prepared with early involvement of Member States and/or Associated Countries, together with private and/or public partners (such as industry, universities, research organisations, bodies with a public service mission at local, regional, national or international level or civil society organisations including foundations and NGOs), commit to jointly support the development and implementation of a programme of research and innovation activities, including those related to market, regulatory or policy uptake*"

Three types of partnerships have been proposed:

- **Co-programmed** European Partnerships - Between the EU, Member States/Associated Countries and private and/or public partners.
  Based on memoranda of understanding and/or contractual arrangements; implemented independently by the partners and by Horizon Europe

- **Co-funded** European Partnerships, using a programme co-fund action and involving EU countries, with research funders and other public authorities at the core of the consortium.
  Based on a joint programme agreed by partners; commitment of partners for financial and in-kind contributions & financial contribution by Horizon Europe.

- **Institutionalised** European Partnerships - where the EU participates in research and innovation funding programmes that are undertaken by a number of EU countries.
  They are based on long-term dimension and need for high integration; partnerships based on Articles 185 or 187 of TFEU and the EIT-Regulation supported by Horizon Europe.

These partnerships will only be implemented where they would be more effective in achieving the Horizon Europe objectives and expected impacts compared to other activities of the Horizon Europe programme.

Important to consider is also the capping of the budget in pillar II that can go for Partnerships (the majority of the budget in pillar II should be allocated to actions outside of European partnerships).

The **general conditions** for Partnerships are set out in the **Article 8** of Regulation establishing Horizon Europe[1]. The **Annex III** of the proposal for Horizon Europe, specifies provisions[2] and the criteria for their selection, implementation, monitoring, evaluation and phasing out.

The areas of the Partnerships have been identified in the **Strategic Research planning process** in Horizon Europe.

The Commission proposed to explore the possibility of 44 candidates. This is a significant rationalization because the overall number has been reduced from 120 to 44. The candidates can be found in a document called: "**Orientation towards the Strategic R&I plan**"[3] (Annex 7- mission areas and partnership candidates).

The consultations first with Member States, and then with the public, confirmed that the portfolio with 44 candidates is relevant for addressing with a partnership approach. The Commission Services are currently working with potential partners and stakeholders to further define the objectives, expected impacts, commitments and contributions from partners. In addition, there are ongoing discussions with the Member States on a few additional candidates.

The identification of Co-programmed and Co-funded partnerships in the Strategic Plan will take into account the progress made with potential partners, in particular vis-à-vis meeting the conditions and criteria of Horizon Europe. It will also be influenced by the outcome of the impact assessments of Institutionalised Partnerships (based on Articles 185 and 187 TFEU).

For each partnership candidate, services have prepared a fiche that describes the objectives and possible scope. It provided input to the consultation of Member States and serves as a basis for the next steps of preparation. This is a kind of internal preparatory work that was done.

The overall number of propositions for partnerships relevant to cluster 6 have also been reduced from 24 to the following 8 to ensure a more strategic approach in the future:

1. Accelerating farming systems transition: agro-ecology living labs & research infrastructures
2. Animal health: Fighting infectious diseases
3. Environmental Observations for a sustainable EU agriculture
4. Rescuing biodiversity to safeguard life on Earth
5. A climate neutral, sustainable and productive Blue Economy
6. Safe and Sustainable Food System for People, Planet & Climate
7. Circular bio-based Europe: Sustainable, inclusive and circular bio-based solutions
8. Water4All: Water security for the planet

The idea is to have more ambitious partnerships in the future.

Structured consultation of MS on European Partnerships

The Commission launched a consultation of the Member States to gather early input on the portfolio of proposed partnership candidates. This consultation is a part of the Strategic coordinating process and ensures MS earlier involvement in the prioritisation and definition of

[1]Regulation establishing the Horizon Europe: https://data.consilium.europa.eu/doc/document/ST-7942-2019-INIT/en/pdf

[2] EU partnership-provisions and criteria: https://www.era-learn.eu/documents/provisions_horizoneurope

[3] Orientation towards the Strategic R&I plan : https://ec.europa.eu/research/pdf/horizon-europe/ec_rtd_orientations-towards-the-strategic-planning.pdf

the objectives and scope as well as the transparency of the selection. The idea is to have one entry point and it is agreed this point to be the **Shadow Strategic Configuration of the Programme Committee** (shadow SPC).

The draft report based on the MS feedback will be finalised and published in November.

The consultation conclusions:

Additional 25 priorities for partnership came out of the MS consultation, in addition to the 44 already identified. However, they were limited to 8, instead of 25 and their respective fiches will be developed:

1. One Health / AMR
2. Social transformation
3. Smart and zero-emission waterborne transport
4. Brain Health
5. Sustainable, Smart and Inclusive Cities and Communities
6. Future Forests and Forestry
7. European Geological Service
8. Materials and Production

In addition to the 8 new priorities, the French delegation proposed a ninth partnership on "Cultural heritage".

Ongoing discussions:

The results of the discussion at the Shadow Strategic Programme Committee meeting, held on 12th September 2019, are that the partnerships are quite mature and strong:

- The partnership candidates that could be added are "*Smart and sustainable cities*" and "*One health/AMR*"
- The *Forestry*; *European Geological Service* and *Waterborne transport* require more work and need to be clarified because there is not enough commitment on the table, or not enough ambition. The partnership should really do more than just projects or just bring communities together. It should also be about thinking what is the impact that we want to achieve.
- *Brain Health*; *Social transformation* and *Materials and Production* need to be further prepared for the next strategic planning process by 2024.

These new proposals will be discussed again at the next Shadow Strategic Programme Committee (shadow SPC) meeting on 24 October.

Another important result of the consultation is that the MS expressed their interest to contribute to or connect the partnerships with industry. The MS involvement in practice in such a partnership should be discussed more closely. In this context, the Commission is currently preparing 3 workshops with MS in the areas of Mobility, Digital and Industry (information has been communicated via the shadow SPC).

It is important to consider that not everything could be a EU partnership. Just because the priorities are not addressed in the partnership it doesn't mean that it is not a priority. The strategic plan will identify the priorities then it is important to know what should be addressed by the regular calls in the work programmes, what should be a partnership and what a mission. In addition, there is still the possibility for a CSA support (Part IV of Horizon Europe Regulation) for networks where MS could work together.

OPEN ISSUES:

- One very practical consideration for the partnerships is the **Budget**. According to the regulation, there is a budget cap meaning that no more than 50% from pillar 2 go to the partnerships. Currently we can discuss the priorities but at the end we really need to see what comes out from the negotiations. Therefore, there cannot be stand-alone decisions on partnerships, but important to keep portfolio view.
- What is still needed to be discussed is whether and how the **cohesion funds** could be used as national contributions. The EC thinks that it could make the partnership more open and will increase the participation and impact, since the main rationale is not leverage of funds but achieving common objectives.
- Another requirement that comes from the provisions is that **the data** on the proposals, projects and results need to be accessible on eCORDA

NEXT STEPS

- Come up with concrete and complete proposals after discussion with partners
- Prepare a partnership proposal in close collaboration with MS/Partners and guidance from EC services (according to the guidance and template). To be provided in February 2020 for all partnerships that are supposed to be launched in 2021/22
- Maintain a portfolio approach to all European Partnerships to assess coherence and budget allocations, as well as to ensure more coherent approach to implementation aspects.

See also in the presentation more details on co-programmed and co-funded partnerships

Discussion:

Q: *JPIs and ERA NET they are not a partnership but they could be in collaboration*
A: No specific ERA-NET scheme is foreseen in Horizon Europe. However, strong ERA-NETs based on contributions of their members can continue to launch calls without Commission co-funding. The ERA-Learn Network will continue to provide support for the coming years. Some ERA-NETs will form a corner stone of the emerging partnerships.
Pillar 3 of Horizon Europe (Widening Participation and strengthening the European Research Area) could include an open, competitive call for coordination and support actions (CSAs). In this way the continuation of some ERA-NETs could be supported. If we look back at the history, the 1st ERA-NET was typically a CSA.

As for the JPIs, they are still existing and ongoing. In H2020, they could apply for CSAs in each societal challenges. In the future program Horizon Europe, they can apply to CSAs but on a competitive basis.

Comment: the European Joint Programming co-fund (EJP):
In the future the co-funds will be much more like an EJP. However, we still need to agree on the details and the rules of participation. It could include mini programmes on a very specific field and each co-fund will be somehow tailored-made to ensure that it would meet the expected impacts.

II. European Partnership - Safe and Sustainable Food Systems for People, Planet & Climate - *Hans-Joerg Lutzeyer, DG RTD, Unit C.2 – Bioeconomy & Food Systems*

The Food Systems partnership has two main origins in "safe food systems" and "sustainable food systems". As explained in the previous presentation, the number of partnership candidates was reduced and one of the results of this reduction was the comprehensive proposal of a partnership on safe and sustainable food systems.

With the new incoming European Commission, the priorities on the EU agenda are changing. The new President-elect of the European Commission Ursula von der Leyen presented her political agenda and her vision for Europe. She announced the "**European green deal"** in the first hundred days in office. She also announced a new "**Farm to Fork Strategy"** on sustainable food along the whole value chain. The objective is to support all actors of the food systems, from producers to consumers, in this transition towards more sustainable food systems.

There is an opportunity that the emerging partnership on safe and sustainable food systems could be one of the research and innovation action points of the approach.

This is also an opportunity for the MS, Stakeholders and communities to link the partnership to other connected policies.

In the team of designated new Commissioners, the Commissioner for Health will take the lead on the farm to fork strategy with other Commissioners contributing.

OPEN ISSUES:

- How to link to the **Food 2030** approach: Nutrition, Climate target –operating within planetary boundary, Circularity and Innovation.
- A major input on **food safety** aspects came from the workshop on food safety systems of the future on 17 January 2019, organised by DG RTD (see the workshop outcomes in annex 1, page 15). Therefore, it was suggested to focus the discussions in this workshop on **Food sustainability** and challenges such as dietary shift, food waste and microbiome (see the fiche). These challenges could be modified during co-creation of the partnership.
- Also **the type of partners** is open for discussion: Public-public would be the preferred option for food safety aspects. For food system transformation the discussion is open. Depending on the objectives, it could start with one type of partnership (public-public) and extend after some time to public – private? The phasing-in approach is something to consider too. Starting with some aspect and once further aspects are developed, we can follow up with some others in the second or third year.
- **Include all food systems**, making sure that primary production, procession, retailing, distribution and consumers are considered, was proposed, but the interface with the **agroecology partnership** for example needs to be part of the picture.

PATHWAYS IDENTIFIED BY FOOD2030:

- **Dietary shift** includes **alternative proteins**
- **Urban food systems**
- **Food waste streams** is an element which technically is broadly covered and followed by BBI but it looks also at consumer behaviour that could be a part of dietary shift.
- **Food safety of the future**
- **Microbiome** is something to explore – it is a little bit standing alone in the approach and could be something to consider and fit in together with other research such as health (human and plant), quality of food, waste management….
- **Food from the oceans**

- **Africa Food Systems,** linked to the EU-AU priority on Food and Nutrition Security and Sustainable Agriculture (FNSSA)
- **Personalised nutrition**
- **Digitalisation and new technologies**

These pathways were identified thanks to the three-year Food2030 experience, based on FOOD 2030 conferences, the FOOD 2030 expert group, food system policy think tanks, research papers and project deliverables etc. The selection is based on the evidence and recognition of their importance.

Other significant elements are NUTRITION for sustainable and healthy diets; CLIMATE smart and environmentally sustainable Food Systems; CIRCULARITY and resource efficiency; and INNOVATION. It is important to keep in mind that these four FOOD2030 Priorities remain at the heart of our community.

III. Roundtable discussions (5 questions - 4 groups)

The discussions were organized in parallel roundtables where the four working groups debated challenges, gaps, added value and expected impact.

Q1: What are the main challenges to be addressed by the Food Systems Partnership (FSP)?

- Provide at least **2 challenges** for a safe and sustainable FS (e.g. food safety, food waste, etc.)
- Identify the **specific gaps** that can be addressed by the partnership (e.g. food safety: risk assessment methodologies, traceability, emerging risks, crisis management,…)

CHALLENGES

The main challenges are to provide healthy, adequate, safe, nutritious (e.g. less fat, salt, sugar → food reformulation) and sustainable food to everyone that takes into account the three pillars of sustainability: environmental, economic and societal.

Challenges that have emerged from the discussion are key elements for enabling sustainable production and diversification of FS.

1. **Dietary shift** for people and climate - it is a kind of umbrella for other issues but also a big issue for consumer health, Non communicable Diseases (NCDs) and consumption practices such as food waste. Unhealthy diet is the biggest problem and the first cause of death on the global level.
   - Dietary shift linked with nutrition (micronutrients deficiency, nutritional properties of food and link with peer consumer group)
   - Dietary shift linked with sustainability (Promoting a protein shift towards more vegetal proteins, analysing new trends and speed of change, promoting more sustainable traditional food, decreasing meat consumption…)
   - Dietary shifts linked to different population groups (age, culture, health status, ..)
   - Develop a systemic approach considering how each step (*primary production, processing, packaging, retailing, transport and logistics, marketing and advertising, traceability and labelling, consumption*) can contribute to a healthier and sustainable diet.
   - Diversifying food systems – Diverse primary production and supply chain are needed with the development of improved study design including monitoring and feedback.

2. **Food Safety** - Food safety was not discussed in detail because a major input on food safety challenges came from the workshop on food safety systems of the future, held on 17th January 2019, organised by DG RTD (see the food safety workshop outcomes in annex 1, page 15).

3. **Circularity and efficiency of natural resources**
   - Identification and better understanding of chains/networks with high potential to transform to future proof systems, bridging between different value chains(food and non-food, cascading approach)
   - Analysis of trade-offs and obstacles
   - Assess the real impact on environment
   - Reduction of food losses and waste at different level of the value chain - towards Zero food waste

4. **Urban food systems -** the cities address specific problems due to the people and fluxes density

5. **Consumer behaviour, society** and **current food systems**
   - Change consumer habits
   - Restore **consumer trust**
   - Better understanding how challenges and their solutions affect society, e.g. new technologies, products, services due to digitization, new value chains, competitiveness through citizen engagement, sustainability assessment.

6. **Policy Coherence:** Comprehensive and coherent policy is needed to support the goals and to meet expectations.
   - How to formulate policy to promote safe, sustainable, healthy food systems?
   - How to translate research results into usable knowledge for policies and consumers?

GAPS:

1. **Dietary shift:**

- Need for **dietary guidelines** for different population groups (such as vulnerable populations, migrant groups) from specific regions.
- Efficient studies with diverse multidisciplinary partners for improvement of **micronutrient status** and impact on health and environment.
- Business models for a **low-meat food system** (protein shift/ new sources of protein) => sustainable animal production.
- **Lack of methodologies and indicators** to assess the change at different level of the value chain (from production, processing, distribution to consumption) taking into account that the speed of change is slower on the production side.
- **Lack of integrated data** on farm and market economics, missing scenarios.
- Increase knowledge of **quality of more diverse plants** and **new proteins**, product innovations.
- **Trade-offs** should be considered. What are trade-offs between health/ environment? => foresight on transitions is needed. The EU as the largest food exporter, contributes to global food security, but also puts a burden on natural habitats in other countries. Therefore, it is important to take into account the impact of good European nutritional diet on the other countries (e.g. imported deforestation by conversion of rain forest to agricultural land).

2. **Food Safety**

- Take into account **climate change** that could have negative impacts on food safety-emerging risk factors due to climate change.
- **Compliance**, **traceability** and **labeling**, **transparency** of all control efforts by data sharing and block-chain technology (fast traceability) for improving consumer trust.
- **Risk assessment methods-** need for development of risk assessment methods and **better coordination** of these assessments
- **Crises management** (risk mitigation)
- **Zero pesticides** approach => Good link to Chemical Partnership and other relevant partnerships is needed.

3. <u>Circularity and efficiency of natural resources</u>

- Link **food** and **non-food** through new processes – valuable co-products by design
- **Recycling carbon** and analyzing full carbon cycle at different scale. **Lack of data** and data integration
- **Optimizing the scale** of food chain operations (local-global, participatory approach at local scale...)
- The **new business** model to be competitive
- Avoiding **food waste** by design
- **Food packaging** need to be revisited (less plastic)

4. <u>Urban food systems</u> - missing knowledge on many points

- Integration of urban food systems; need for data fluxes from cities (incoming and outgoing; products, waste, water, resources…)
- Short supply chains: analyzing benefits - risks -costs
- How to engage new food actors and start-ups...
- Citizens' need and demands, integration of consumers
- Urban food system design (virtual feeding city)

5. <u>Consumer behaviour, society</u> and **<u>food systems</u>**.

- Direct involvement of consumers/ **citizens**, manage consumer expectations
- Connection of **consumers and producers** (creation of demand)
- Consumer behaviour research in the context of dietary shift
- Innovation for **consumer trends** (organic food, clean labelling, ethical labelling of food)
- **Consumer perception and social acceptance,** long-term effects, nutritional impact, depending on social status, role of processors and technology, (cultivated meat, insects, underutilized fish…).
- **Education** of consumers for various population groups with methods adapted to different cultures and values at different levels (public authority, educational systems from school to university level, health care providers, consumers)
- **Access to information** by consumers: improvement of traceability – independent certification. Need for a more complete information explaining why it is necessary to account for externalities: fair and just prices (greenhouse gas (GHG) emissions, water, other resources, energy, land – is this accounted for in food prices?)
- Increase consumer awareness on FS complexity and uncertainties (benefits/risks).

6. <u>Policy coherence</u>

- Ensuring more **transparency** in food systems. Therefore, the **communication** at institutional level is vital.
- **Lack of incentive** and **coherent legislation** - Need to find incentive way to oblige economic actors to take into account externalities.
- **Encourage a system approach** via **Multi-stakeholder initiatives** – initiatives need to be encouraged via coherent policies, adapted to local specificity to develop more systemic

approach and include all actors in food systems (farmer, industry, citizens etc.) and all points in between and back again.
- Need research to **substantiate trends** and to understand trends in their primary phase and provide scientific evidence for policy measures.
- **Lack of investment** - Current system needs to put extra money for environment and health.

Q2: What is the added value of FSP to tackle these challenges?

Collaboration:

- Bring all actors around table and Member States together to ensure common framework
- Using the momentum of partnership rather than acting alone
- Enhancing collective approach- Multi-disciplinary and multi-national
- Open and inclusive to different actors, allowing exchange between them.
- Strengthen the collaboration with current initiatives such as PRIMA initiative[4], FACCE-JPI, JPIs OCEANS and HDHL, EIT FOOD etc.
- Better cooperation, ensuring alignment between actors currently working towards sustainable food systems.
- Good synergies between initiatives and projects – avoid duplication
- Enabling treatment of increasing complexity
- International cooperation and approach to overcome lack of trust (cross border)
- Data sharing including joint methods for collecting the comparable data

Food systems:

- Increase importance of food system in general
- Embed systems thinking and systemic approach,
- Good to focus on "Food" to frame research on primary production. Ensuring what we produce is sustainable and needed to feed our population.
- Focus on health

R&I

- Bridging the gap between research and innovation
- Bringing together different research and present holistic policy advice. Gather all expertise and best practices.
- Research and partnership outcomes would influence other spheres (e.g. production)
- Increase knowledge and foster knowledge transfer (also among different projects and activities to increase impact)
- Produce new knowledge to be used in better education and awareness

Education and Communication

- Good communication strategy
- Universities, school –education modules

[4] **PRIMA Initiative** - consists of EU Member States, Horizon 2020 Associated Countries and Mediterranean Partner Countries on an equal footing basis (co-ownership, co-management and co-funding) with the Participation of the European Commission, under the framework of an art.185 TFEU; www.prima-med.org

Resources:

- Mobilizing resources
- Creating critical mass of funding to optimize resources.

Q3: What are the expected impacts for policy/consumers?

Consumers

- Building consume trust and restoring confidence
- Tools and skills for making more sustainable choices. Engaging schools.
- Solution to raise awareness via education
- "Selling" sustainable food systems to some areas of society.
- Answering the societal demand for change.
- Shift in expectations; direct or indirect impact on their life and health, engagement into R&I, better health, ecosystem

Policy

- Integrated advice for policy makers.
- Addressing identified barriers; positive feedback (having effect)
- Innovation in policymaking, sharing best practices. Learning from each other. Knowledge transfer.
- Alignment of R&I programme
- Better regulation.
- CO_2 footprint/more coherent policies
- Reducing food waste
- Improving food security

Q4: What is the best type of partnership for the selected challenge in view to achieve these impacts (public/public or public/private)?

Regarding the type of partnership, participants think that both types of partnerships (public/public and public/private) are possible.

In the area of **Food safety,** the public- public partnership is the preferred option.

However, some participants think that there could be value in having industry involvement but with full disclosure. The role for public-private partnerships in food safety could work on the basis that the public good must be prioritised against the financial contribution or research influence of private partners. Engagement with industry partners can be a hugely positive experience however, the research agenda needs to stand grounded and focused toward public health and food safety contribution first and foremost.

The Food industry has also commented on the workshop outcomes and it is interesting to have a look at their feedback in annex 2, on page 20.

As for the other areas (dietary shift, food waste, consumers etc.) both types of partnerships, Public-Public and Public-Private, are possible.

The question is what kind of partnership we need, because obviously including industry and having a public-private partnership could create a conflict of interest. Therefore:

- Public-public, preferably co-programmed, phase-in of industry at certain time points may be an option

- Co- funded could be difficult for some organisations because they have to pay in advance. The delay in funding could a problem.
- We could also consider co-programming if we can identify one clear gap or we have a specific target that can be tackled by one clear partnership including industry.
- The industry maybe included via calls.

Finally, the type of partnership will dependent on instruments and details of roles that can be different regarding Technology Readiness Levels (TRL).

The real challenge is how to involve all actors. It would be difficult to manage many partners and a compromise is needed. A RRI approach is also important.

Q5: Which partners should be involved?

Food Safety: food safety agencies, risk assessment, regulatory bodies, Governments/research, linked to SMEs/start-ups

Other areas **(dietary shift, food waste, consumer etc.):** All actors are relevant (NGOs, Research, farmers-fishermen). We should think about different ways to include the different stakeholders, such a stakeholder panels etc.

The question that remains is how many actors/ partners should be involved?

Conclusion:

A strong and ambitious Food Systems partnership would contribute to address the global pressing challenges. However, it should be co-created with all actors and based on already existing networks.

To meet the three dimensions of sustainability (environmental, economic and societal), we need to understand the food systems complexity. We also need to include the Food Systems in a sustainable circular bioeconomy thinking. A system approach should be maintained through multi-actor initiatives to facilitate transparent collaboration from producer to consumer and including the policymakers.

One of the main messages that came out from the discussions is that the consumer should be involved as much as possible since they play a key role in the transformation process. The communication and education are vital to change the consumer behaviour. In addition, the consumer trust should be also boosted by fostering safety and quality.

The discussion outcomes show that the dietary shift and related issues such as micronutrient deficiency, protein shift, decreasing meat consumption, consumer behaviour and related socio-economic factors, is a kind of umbrella. The participants recognise that the role of dietary shift in addressing food's environmental impacts should be taken into consideration.

Finally, policy coherence is required to find impactful solutions and carry out relevant analysis and research responding to real needs and contributing to achieve a safe and sustainable Food Systems for all citizens. To achieve this ambitious it is necessary to allocate sufficient investments in R&I. An alignment from European to local level must also be promoted.

IV. Additional information on Future Food Systems and Partnership in Horizon Europe – a "post meeting" contribution to clarify the overarching principles (source: Barna Kovacs PhD, HU)

What is a "systems" approach to research?

1. It seeks to understand and document the key interactions between a multitude of actors (individuals and communities), government levels (local, regional, national and international), policy fields, and processes (production, processing, distribution, purchasing, consumption and disposal of waste)
2. It is the only way to recognize all the important public good impacts of these interactions.

The biggest challenge of the food systems is the shift from product-oriented systems to application and service oriented systems.

The biggest challenge for a partnership to exclude the individual/private interests and to define the characteristics and mobilize shared, safe, sustainable and nutritious food systems.

Systems/characteristics	Product oriented	Application oriented
Output of the food systems/ center of the systems	food products	societal just, safe and sustainable diets
Interest of actors	to sell more products, inherently to buy more products	to optimize the resources, sell less products but more sustainable, therefore buy or share the food
Sustainability interest	Economic: individual/private and personal Environmental: minimal Societal: no	Economic: shared Environmental: big Societal: per definition
Circularity	little interest, the waste is on society	the waste is sought to be reduced to minimal or zero
Responsibility of actors in the value chain	it is pushed from one actor to the other through the levels of the chain	there is an overall responsibility in a value chain, each actor is aware
(Negative) externalities	no responsibility for the externalities (ex. health), pushed to the end-user/society	the public good aspects are sought to be considered, each actor should have its share from responsibility.
Costs and profits	capitalizing profits socializing costs	capitalizing costs socializing profits
Main actors	segregated systems, individual actors, bottleneck of the value chain on retailers	integrated system, interconnected actors, no bottleneck
Challenges	BAU*	Identification of: - responsibilities of different actors - common indicator(s) - measures - responsible authority for inspection
Role of policy and legislation	several policies and accordingly silo legislations according to the responsibilities	one policy legislation for regulation of the overall responsibility
Role of research and innovation	BAU*	Identification of the: - early bird systems where the change could emerge

		- relevant research results, transmit to innovation/digitalization and to practice
Role of Partnership	silo approach: separately tackle the diets, nutrition, safety etc.	1. mobilization under the same challenge and shared responsibility 2. develop the characteristics of the new food system 3. data and evidence base development for policy

* BAU –Business as usual

V. ANNEX

1. **Workshop report on Food Safety Systems for the Future** – output from the workshop held on 17th January 2019, in Brussels

Version1.1 – prepared by Pamela Byrne, FSAI and based on notes from Razvan Anistoroaei, Research Policy Officer, DG RTD

Number of participants: 76
Number of MSs and associated countries represented by at least one stakeholder: 20
Format: Plenary session and participatory workshop with breakout groups

Background:
The workshop was the first exploratory meeting in the development of a platform to define the Food Safety Systems of the future based on science and the infrastructures required to support the development of evidence-based policies. In fact, the workshop brought together relevant actors from most Member States, from food safety authorities as well as actors active in food systems. The meeting further convened representatives from NGO's, industry, academia and risk communicators.

The meeting provided a platform for engaging relevant actors to support DG RTD in defining the long term direction in the food safety area to address the food safety research and innovation challenges within the context of food and nutrition security which is experiencing rapid technological developments in food systems in an environment where there are increasing public concerns regarding the risk assessment process and high expectations of consumers with respect to the safety, authenticity and integrity of their food.

Plenary session:

The **first part** of the event was dedicated to various views from Commission Services (DG RTD, DG AGRI, DG SANTE, DG JRC, EFSA), a MS Food Safety Authority and from the Food Industry. All presentations from the plenary session were circulated to participants after the workshop. In summary, the main key messages from the speakers in the plenary session were:

- All stakeholders from production to consumption should be consulted;
- Food safety is essential to food and nutrition security;
- There are significant benefits from close interaction between funders, EU agencies and relevant food safety actors:
    - access to expert networks in MS, pre-accession and neighbourhood countries
    - avoid duplication / redundancy of research efforts
    - strengthening science policy interface and help research to deliver impact
    - exploit outcomes of research projects and provide sustainable follow-up
    - disseminate research results: engage regulators, public bodies, civil society
- There is a need to link research and policy and ensure that also future policies are based on independent and high quality science
- There should be a balanced portfolio of investments in food safety research – from farm to fork.
- Addressing the issue requires truly multi-sectorial approaches, where food safety actors work closely together with food system experts.

Breakout Sessions:

The **second part** of the workshop was organised in 4 parallel breakout sessions which highlighted a number of challenges and opportunities to be addressed in future research and innovation agendas for serving the food safety systems of the future. Simon More, chair of EFSA's Scientific Committee,

introduced the first break-out session to define the main challenges and opportunities for food safety, discussing where R&I can make a difference. He referred to three research streams (Safe Food Systems, Innovation in risk assessment and Holistic risk assessment) that were being formulated by EFSA, in consultation with its partners, and that were tabled as background document. The challenges and opportunities coming back from the break-out session were as follows:

Challenges & opportunities: non-exhaustive list

- There is a lack of public trust in the current system of risk assessment, however the refit of GFL described above seeks to address this issue in the longer term. In this context, need to facilitate a better engagement of the various actors, other than the common stakeholders (in particular the citizens). The dialogue should consider how to engage all stakeholders to enable cooperation and collaboration between them.
- Initiatives to facilitate collaboration between the public and private sector;
- Effective dialogue and education in the areas of responsibility/ accountability; ethical and moral issues associated with food safety research.
- There is a lack of infrastructure to facilitate data sharing as well as a lack of infrastructure capacity for the storing of large volumes of data emerging from investments in new technologies. There is also a lack of data analytical capability. This is compounded by the perception that the General Data Protection Regulation (GDPR) is stifling data sharing.
- Need for data sharing and standardisation – incentivise open data and sharing in the context of GDPR and the public good;
- Better mechanisms / processes for the collection and collation of the existing information to generate new knowledge and enable innovation;
- Innovation in the food chain needs requires harmonised enforcement of EU regulations in MSs.
- Risk assessment models need to evolve to facilitate in vitro and in silico models thus investment in their development is needed;
- Focussed R&I investments in food safety regulatory science are lacking as many of the investments are driven by bottom up approach and are not necessarily directed towards evidence base policy developments.
- There is a perception that food safety research is not as important as investments in new ingredients and new technologies.
- Need to consider how to deal with the public good and non-competitive nature of food safety research in the context of a drive towards public private partnerships in the trust environment within which we are living.
- Need for a transition towards a systematic approach to investments in food safety research to underpin future food safety systems. Investments should consider the following (non-exhaustive list) elements such as the systematic risk-benefit assessment (holistic approach in the risk assessment) and the development of new models of science communication in food safety;
- New ingredients and technologies have to be considered in risk assessment.
- Need for digital innovation to improve traceability and authenticity. However, pitfalls are to be considered as these technologies are also "human controlled"
- Need to address emerging risks: e.g. allergenicity from eating insects or novel foods, better monitoring of the impact of climate change on food safety, better monitoring systems for

emerging risk and threats, identification of new toxins arising due to migration, globalization, and climate change;

- Better ways to communicate risk and the uncertainty and probabilities associated with risk.

Concluding remarks:

Based on the significant activities at global, European and national level, over the last 5 years, with respect to food and nutrition security, and the outcomes of this workshop, it is now time to rethink how we ensure the safety, integrity and authenticity of our food supply system. This will require a different approach to how we work together. It is clear from the outcomes of the breakout sessions that there is a need to work collaboratively to address the many factors that contribute to a safe, secure and nutritious food supply system and to solve the challenges we face. The food safety system of the future, therefore, needs to be a strong partnership, with the appropriate governance arrangements in place, of all actors in the food safety system – academia, government (policy makers and regulators), and the private sector. International partnership initiatives in food safety should be considered when designing the appropriate partnership model to deliver on the food safety system that will protect consumers health and interests for generations to come.

Recommendations:

- Mapping of the investments in food safety research over the last 10 years should be carried out against the key areas of research identified through the Platform established via this workshop to avoid duplication; identify opportunities for scaling up and adding value; identify barriers to the success of policy initiatives; and capture new areas for investment and innovation.
- Reviewing the international food safety partnership models to inform the design of a potential food safety partnership in Europe.

Further steps:

Convene a 2nd workshop with food safety and food system actors to further explore the research areas identified above (including partnership models), the research areas identified by EFSA in their research paper, and the research areas identified in the JRC report.

Background information

The policy context for Food Safety Systems for the Future – why is this important and why now?

"Foodborne diseases are an important cause of morbidity and mortality, and a significant impediment to socioeconomic development worldwide, but the full extent and burden of unsafe food, and especially the burden arising from chemical and parasitic contaminants, has been unknown" WHO, 2015. The report identified 31 foodborne global hazards that caused 600 (95% uncertainty interval [UI] 420–960) million foodborne illnesses. Every year, foodborne disease cause 1 in 10 people to fall ill; result in 33m healthy life years lost; and 420,000 deaths of which one third are in children under the age of 5 years – but there are data gaps. The WHO states that "all stakeholders can contribute to improvements in food safety throughout the food chain by incorporating these estimates into policy development at national, regional and international levels".

In 2014, the European Commission, launched a fitness check of the General Food Law Regulation 178/2002/EC to assess whether the legislative framework for the entire food and feed sector was "fit for purpose". The GFL Fitness Check evaluation was completed in January 2018 and it concluded that the regulation is still relevant, that the systemic implementation of the risk analysis principle in EU

Food Law has raised the level of protection of public health overall, and that the creation of EFSA has improved the basis of EU measures, and that the Regulation met the objectives of ensuring a high level of food safety and harmonisation of the internal market. However, differences in relation to information to the public on food safety incidents; variable approaches to the implementation of official controls; and a perceived lack of transparency in risk analysis, including risk assessment and risk communication were considered to be areas for further consideration. Following an intense period of negotiations by the Commission, the Council and the Parliament reached a provisional agreement on the Commission proposal for the revision of the GFL and eight sectoral legislations. The two co-legislators are expected to formally adopt the agreement by the end of April 2019 the latest.

Also in 2015 after the Expo in Milan, Food 2030 - an EU research and innovation policy response to the recent international policy developments including the SDGs and COP21 commitments - is built on key Food and Nutrition Security priorities:

- Nutrition for sustainable and healthy diets
- Climate smart and environmentally sustainable food systems
- Circularity and resource efficiency of food systems
- Innovation and empowerment of communities

Since 2015, a number of events and reports have strengthened the business case for investment in food systems through a multi-actor and multi-stakeholder approach.

In 2016, the Joint Research Centre published its foresight study "Delivering on EU Food Safety and Nutrition to 2050" which set out the future challenges and policy preparedness' aims to aid policy makers in their assessment of the resilience of the current food policy and regulatory framework with a time horizon to 2050, contributing to ensuring that EU citizens continue to enjoy high standards of safe, nutritious and affordable food. However, access to safe and nutritious food to meet individual citizens' choices is a key element of health and well-being; but striking the balance between facilitating the widest possible choice of foodstuffs and guaranteeing the safety of an ever-growing variety of origins, ingredients and production methods is a delicate task.

In 2017, the Future of Food and Farming – a white paper of the common agricultural policy was published and it stated "The future CAP will also need to continue to address societal expectations regarding sustainable food production, in particular concerning food safety, food quality, environmental and animal welfare standards".

In 2018, the Standing Committee of Agricultural Research published the output of a working group on Food Systems which recommended that "Research and innovation (R&I) is key to developing high-impact solutions to future-proof our food systems" and that "there is a pressing need to avoid fragmentation, ensure policy coherence, and align programmes in order to adopt a food system approach that can effectively address multiple objectives".

Most recently, and after the workshop in February 2019, the report by the Task Force on Rural Africa "An Africa- Europe agenda for rural transformation" recommended 4 strategic areas for collaborative action including one on the development of the African food industry and food markets based on value chain development with a focus on enhancing food safety and quality. This report set against the reality that the African workforce will grow by 800m over the next 30 years, also recommend investment of research and innovation as a key driver of economic and societal development.

The above, individually and collectively, present a strong framework for now asking what the food safety systems for the future should be and more specifically, what are the research and innovations investments that need to be made in order to decrease the global burden of foodborne disease.

The JRC captures the essence of the significant challenge as follows: " food safety cannot be taken as automatically granted, despite the fact that today, our regulatory system in the EU guarantees a very high level of food safety. The key to ensuring food safety also in the future is a forward-looking approach. This involves anticipating challenges and developing strategies promptly to tackle emerging risks – both biological and chemical – as well as addressing regulatory and market failures, while also considering overarching challenges such as climate change, migration flows and the declining biodiversity. Looking into the major drivers of future developments should help identify the areas of highest future risks and provide the basis to analyse the existing legal and policy framework within the context of future vulnerabilities and foreseeable challenges. A longer-term perspective should help seek solutions in a proactive and anticipatory manner, pre-empting preventable crises and complications, and also defining the main problematic areas related to the healthy nutrition of future generations". The JRC report also provides valuable insights into the research needs to provide evidence for future policy making.

The argument for why and for why now is strong and the workshop sought to begin a dialogue between all actors – policy makers; academia; regulators; risk assessment organisations; risk managers; - from Europe and Member States.

The existing research landscape in food safety and food and nutrition security

There has been a significant amount of research funding invested over the last 10 years by the European Commission through the Framework Programmes and by the Member States that has led to an increase in new knowledge, capacity, capability and infrastructure. Much of this is captured in the SCAR Working Group report of Food Systems. However the report points to challenges in the capture of accurate data from the member state investments. The report states the following: *Food safety R&I represents a group of sub-categories, i.e. production, processing, distribution and consumption. Food safety was of interest to the countries: 9% to 33% of all food system funds were allocated to food safety R&I. For Austria (33%), Denmark (20%), Hungary (27%) and Lithuania (33%) food safety was the second biggest receiver of R&I funds. The key interest areas varied between countries. Food safety at production was the main interest for the majority (BE, EE, HU, IE, LT, RO, SE). Food safety at processing was of main interest to Spain. To Austria focus was on food safety at consumption.*

The report concludes that "Food safety is of interest to all of the countries. Allocation of funds in the food system sub-categories (production, processing, distribution and consumption) varies according to national priorities, but food safety at the production was the most prevalent. Food safety is a major health factor as eating contaminated food is an important cause of illness, disability and deaths around the world.

2. Feedback from the food industry

The food industry has provided some insights after reading the workshop report via the European Technology Platform (ETP) 'Food for Life'.

1) Co-funded / Co-programmed: The food industry advocates for a co-programmed scheme. We do not see a multi-stakeholder approach if industry is not a funder and co-designer of the R&I agenda of the partnership. We would not agree with the statement of a co-funded scheme first, or a co-funded frame for food safety.

2) Food Systems: As it is stated in the report, food systems has to be inclusive of the overall food sector, including processing, packaging, distribution and consumer. It is clear in some areas of the document, but in others advocates for a production approach, which in our opinion would not be aligned with the concept of food systems.

3) R&I Policy and food policy: We should separate clearly our recommendations on what is R&I policy and directly food policy. Our feeling is that very often, those are mixed on the discussions.

4) Pre-competitive research: This partnership should address Sustainable Development Challenges and therefore should address pre-competitive issues. Therefore, as food industry, we do not foresee conflict of interest with the themes and the data management.

5) Areas of interest: The food industry strongly supports areas such as food safety, health and nutrition, food waste, digitalisation (see ETP SRIA here). Of particular high relevance consumer trust, which is mentioned in the thematic areas. Small and Medium enterprises should also be addressed in the programme.

6) Areas of interest but not central: The food industry supports, but thinks that are of interest for only a smaller amount of industries, areas such as microbiome, Africa food systems, or personalised nutrition.

7) Areas of lowest interest: Some areas will not be aligned with food industry interest such as urban farming.

8) Specific notes: Some areas would need refining on the contents. For example, the dietary shift is of high interest, but farmers and the animal related producers would be departed. The statement of Zero pesticides would be too ambitious, the relevant topic would be pesticide reduction or research on pesticide alternatives.

3. Workshop Agenda

Brussels, 18th September 2019
From 13.30 to 17.00
AGENDA

Venue: European Commission,
8, Square Frères Orban , 1040 Etterbeek, Brussels

Room: 11 Floor

***CHAIR**: Monique Axelos, FR*
***CO-CHAIR:** Minna Huttunen, FI*

EUROPEAN PARTNERSHIP "SAFE AND SUSTAINABLE FOOD SYSTEMS FOR PEOPLE, PLANET AND CLIMATE"

WORKSHOP

13:30 – 13.45 General presentation on the EU Partnerships – *Maria Reinfeldt (DG RTD)*

13:45 – 14:00 Background and main developments of the Food Systems Partnership (FSP) – *Hans-Jörg Lutseyer (DG RTD C.2)*

Q&A

Roundtable – 4 working groups

14.00 – 15.00 Roundtable 1:

Q1: What are the main challenges to be addressed by the FSP?

- Provide at least 2 challenges for a safe and sustainable FS (e.g. food safety, food waste, etc.)
- Identify the specific gaps that can be addressed by the partnership (e.g. food safety: risk assessment methodologies, traceability, emerging risks, crisis management,…)

Q2: What is the added value of FSP to tackle these challenges?

15:00-15:45 Roundtable 2:

Q3: What are the expected impacts for policy/consumers?

Q4: What is the best type of partnership for the selected challenge in view to achieve these impacts (public/public or public/private)?

Q5: Which partners should be involved?

15:45 -16:00- *Coffee break*

16:00-16:45 – Findings from the 4 working groups

16:45 – 17:00 AOB

4. List of Participants

EUROPEAN PARTNERSHIP "SAFE AND SUSTAINABLE FOOD SYSTEMS FOR PEOPLE, PLANET AND CLIMATE"
WORKSHOP
18th September 2019

European Commission 8, Square Frère Orban, 1040 Etterbeek, Brussels Room: 11 Floor

List of participants				
	Family Name	**First Name**	**Nationality**	**Organisation/ Institution**
1	De-Froidmont-Goertz	Isabelle	EC	DG RTD, C.2 Bioeconomy & Food Systems, Food2030
2	Lutseyer	Hans-Jörg	EC	DG RTD, C.2 Bioeconomy & Food Systems, Food2030
3	Fabbri	Karen	EC	DG RTD, C.2 Bioeconomy & Food Systems, Food2030
4	Reinfeldt	Maria	EC	DG RTD, A.4 Partnerships
5	BRZEZINA	Natalia	EC	DG AGRI, B2 R&I
6	TUIJTELAARS	Alexandra	EC	DG SANTE, D.1 Food chain science and stakeholder relations
7	BALOGH	Attila	EC	DG SANTE, C.4 Health determinants and international relations
8	BODENBACH	Stephanie	EC	DG SNATE, E.1 Food information and composition, food waste
9	Albouy	Isabelle	FR	INRA, FACCE-JPI
10	Alonso de Blas	Angeles	ES	INIA
11	Axelos	Monique	FR	INRA
12	Basinskiene	Loreta	LT	Kaunas University of Technology
13	Chmieliński	Paweł	PL	Institute of Agricultural and Food Economics (IAFE-NRI)/ BIOEAST FOOD SYSTEMS WG
14	Colombo	Giovanni	IT	EIT FOOD
15	Corekoglu	Barbaros	BE	EIT FOOD/ FIT4FOOD2030
16	Cotillon	Christophe	FR	ACTIA
17	De Ruyck	Hendrik	BE	Instituut voor Landbouw-, Visserij- en Voedingsonderzoek (ILVO)
18	Divanach	Françoise	NL	SCAR CWG SAP/ Ministry of Agriculture, Nature and Food Quality
19	Gravningen Rygh	Mona	NO	The Research Council of Norway
20	Hassan (Schulz)	Nikola	DE	Forschungszentrum Juelich GmbH (for BMBF)// SUSFOOD2
21	Huttunen	Minna	FI	Ministry of Agriculture and Forestry
22	Kovács	Barna	HU	BIOEAST
23	Lang	Eva- Claudia	AT	Federal Ministry of Labor, Social Affairs
24	Lazaro Mojica	Jonas	ES	FoodDrinkEurope/ Fit4Food2030
25	McDonald	Noeleen	IE	Department of Agriculture, Food and the Marine
26	Mckhann	Heather	FR	FACCE-JPI

27	Redd	Tom	UK	JPI OCEANS
28	Saggau	Elke	DE	SCAR FORESIGHT/ Federal Office for Agriculture and Food (BLE)
29	Schubert	Sebastian	DE	BMEL
30	Szűcs	Viktória	HU	Hungarian Chamber of Agriculture
31	Terzieva	Anastasiya	FR	INRA
32	Turrini	Aida	IT	CREA
33	Tueros	Itziar	ES	AZTI - Tecnalia
34	Valk	Evelien	NL	The Ministry of Agriculture, Nature and Food Quality
35	van Ansem	Wilke	NL	JPI HDHL