Public consultation on Horizon 2020 ‘Food Security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy’ Work Programme 2018-2020

Fields marked with * are mandatory.

HORIZON 2020 SOCIETAL CHALLENGE 2 STAKEHOLDERS’ CONSULTATION 2016

Building on the first two Horizon 2020 work programmes 2014-2015 and 2016-207, this consultation will feed into the preparation of the next work programme.

This will enable a more integrated approach, particularly important for areas that cut across different Horizon 2020 parts and for linking key enabling technologies to their application in addressing societal challenges and vice versa.

In particular, the consultation is aimed at providing input towards the priority setting for EU research and innovation funding on the most relevant and urgent challenges for Food and Nutrition Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research as well as the bio-based industries and the Bioeconomy in the coming years, identifying the main opportunities and bottlenecks, as well as highlighting possible outputs and defining criteria to measure success.

Stakeholders should quote where relevant any available evidence such as foresight and other assessments of research and innovation trends and market opportunities.

With regard to agricultural research (activity 2.1 of the specific programme for Societal Challenge 2), the present consultation will be complemented with results obtained through recent stakeholder engagement via online surveys and events, notably in the context of a major conference held in January 2016[1].

[1] Conference: "Designing the path: A strategic approach to EU agricultural research and innovation", 26 – 28 January 2016

Information about the respondent

* 1 Are you responding to this questionnaire on behalf of/as:

A network of organisations

* 2 Please enter your name or the name of your organisation:

Text of 1 to 300 characters will be accepted

European Sustainable Phosphorus Platform (ESPP)

* 3 Please enter your e-mail address (this data will not be made public):

info@phosphorusplatform.eu

* 4 Please indicate the type of organisation represented:

Non-research private non-profit

* 6 Transparency Register ID

If you are answering as an organisation/institution, please provide your Register ID number. If your organisation/institution responds without being registered, the Commission will consider its input as that of an individual and as such, will publish it separately.

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* 7 Have you or your organisation applied for funding under the current and/or any previous EC Framework Programmes for Research (e.g. H2020, FP7, FP6)?

No

* 9
Please enter your country of residence or where your organisation is based.

Belgium

* 11
Language of your contribution

English

* 12
Do you agree to your contribution being published under your name or the name of your organisation?

Note that whatever option is chosen, your contribution may still be subject to requests for 'access to documents' under Regulation 1049/2001[1]

Explanations about the Protection of Personal Data are available on: http://ec.europa.eu/geninfo/legal_notices_en.htm#personaldata

My contribution can be published including my personal information / name of my organisation

* 13
Gender (this data will not be made public but used for statistical purposes only)

Male

* 14
Year of birth - e.g. 1975 (this data will not be made public but used for statistical purposes only)

1961

Open questions

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What are the challenges in the areas covered by Societal Challenge 2 that require urgent action under the Work Programme 2018-2020?

1000 character(s) maximum

• Reduce dependency of EU agri-food system on imported phosphate and natural gas (N fertiliser), and so geopolitical risks related to global food security, by improving use efficiency and recycling nutrients. P rock is on EU list of 20 Critical Raw Materials and EU is dependent on imports
• Circular Economy for bioresources and nutrients will create distributed, rural jobs, in processing organic secondary materials, in marketing and valorizing recycled nutrient products, and improve farmers' net incomes, reducing costs of fertiliser purchase and manure treatment.
• Improve compatibility of EU farms economic viability with environmental protection. Sustainable use of nutrients can address water quality (e.g. Water Framework Directive), ammonia emissions (air quality, climate change. Synergy with restoring soil carbon and renewable energy from bio-resources.
• Levels of meat and dairy in diet are a key driver for nutrient consumption and environmental impacts of agriculture.

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What are the desired output and long term-impacts that could be foreseen for Societal Challenge 2? Which innovation aspects would be needed to respond to our societal needs and market development within the next 5-7 years?

1000 character(s) maximum

New bio circular economy systems involving farmers, local communities, agri-food chain, making value from biowastes: reduce dependency on imported raw materials and energy, improve soil carbon, reduce ammonia emissions and nutrient losses (eutrophication, ground water nitrates), improve food security
Full-scale implementation of bio circular economy systems integrating the agri-food business (food processing industries, supermarkets) by e.g. new value chains, quality standards, purchasing policy
Implementation of economically sustainable regulatory / fiscal / incentive mechanisms, regulatory/voluntary quality standards
Integrated management of contaminants in bio-wastes, upstream at-source reductions, use of recycled products without risk to health or environment.
EU world leader both in technologies of nutrient recycling technologies and in bio-waste value chain systems (societal systems, business models, appropriate regulation and standards), with global export potential

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In the areas covered by Societal Challenge 2, which gaps (scientific and technological, innovation, markets, policy, societal) and potential game-changers, including the role of the public and private sectors in accelerating changes, need to be taken into account?

1000 character(s) maximum

New economic & business models for the Bio Circular Economy, covering the specific nature of nutrients and organic carbon, decentralised logistics, enable farmers to pass on costs and monetarise societal benefits, keep EU farming competitive.
Better information about contaminants present in bio-wastes (pharmaceuticals, antibiotics, consumer chemicals, hormones) and implications for recycling.
Full-scale testing and demonstration of new systems for nutrient management and recycling: source separation of urine and faecal matter in livestock production, technologies to remove & reuse nutrients from agricultural drainage waters, P recycling in bioenergy production, P use in animal feeding, new processes for nutrient recycling.
Full scale and long-term (5+ years) field tests of recycled nutrient products: recovered nutrients, composts, digestates ….
Use of IT connected systems to monitor nutrients: knowledge of nutrient flows, nutrient application efficiency, traceability.

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Which of the areas covered by Societal Challenge 2 could benefit from integration of horizontal aspects such as the social sciences and humanities, responsible research and innovation, gender aspects, and climate and sustainable development?

1000 character(s) maximum

- Interactions between nutrient use efficiency and recycling and organic carbon and environmental objectives: resources and energy efficiency, water quality, ammonia emissions, greenhouse emissions, climate change resilience
- Importance of collaborative platforms to ensure the links between different actors concerned: wastewater treatment companies and engineering, manure and waste processing operators, regulators, NGOs/society, knowledge institutes, end-users of recovered nutrient products (industry, including innovation SMEs, fertiliser sector, farmers) and to ensure transfer of knowledge and technologies from one sector to another (e.g. waste water treatment, manure management, food waste, bio-energies …)
- Need for social and economic sciences in development of new business and fiscal/collective models for bio materials circular economy
- Systemic approach to nutrients in food chain: human health, food security, resources and impacts, jobs and circular economy, farmer incomes

Closed questions

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Agriculture is a crucial sector when it comes to tackling major challenges such as food security, safeguarding natural resources, protecting climate as well as the development of food/non-food industries and rural areas. A number of cross-cutting issues are suggested to implement a broad research agenda which takes into account the numerous challenges as well as the diversity and different needs of the agricultural sector. Please categorise the following list of issues according to their relevance for delivering innovations in agriculture and rural areas (1= low relevance; 2= relevant; 3 = highly relevant):

	1	2	3
Focus on "systems approaches", i.e. taking into account dynamic interactions of the different components of systems and value chains (e.g. agro-ecosystems, food value chain) at various temporal and spatial scales.	○	○	◉
Focus on "smart" innovations, i.e. delivering tailor-made solutions and capitalising on specificities of local conditions (e.g. taking advantage of novel ICT driven tools)	○	○	○
Promote co-creation of knowledge as well as new mechanisms and models of knowledge exchange (i.e. partnerships between science, farming, other businesses, consumers)	○	◉	○
Promote Open data to drive knowledge creation, management and sharing	○	○	○
Foster science-policy and science- societal interfaces at all stages of the research and innovation cycle (agenda setting, activity implementation, outreach activities)	◉	○	○
Foster international cooperation	○	○	○

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What is the most pressing marine challenge to be addressed through research and innovation in the next Work Programme:

- ○ Upscaling and commercialising innovations from marine products and services?
- ○ Preventing and reducing marine litter?
- ○ Investigating and managing land-sea interactions?
- ○ Studying the carbon cycle in coastal regions?
- ○ Analysing ocean circulation changes and other changes such as caused by acidification on fisheries and aquaculture?
- ○ Providing food security – fisheries/aquaculture aspects?

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Food and nutrition security is about building sustainable ‘Food systems’, which include the entire 'value chain' from inputs (land, soil, water), to primary production (agriculture, aquaculture & fisheries), harvesting, storage, processing, packaging, distribution, waste streams, to consumer intake – and back. Food and nutrition security goes beyond the production of sufficient food for all, but also respond to the need to provide safe and nutritious food for healthy and sustainable diets. Please rank each of these food and nutrition security priorities in order of importance with respect to future research and innovation needs (1= most important; 2= higly importnat; 3= slightly important; 4= least important):

	1	2	3	4
Reducing hunger and malnutrition, addressing food safety and diet-related illnesses, and helping citizens adopt sustainable diets and healthy lives	○	○	◉	○
Building a climate and global change-resilient primary production system	○	◉	○	○
Implementing sustainability and circular economy principles across the whole food system	◉	○	○	○
Boosting innovation and investment, while empowering communities	○	○	○	◉

Contact

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