

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 2016-2017, 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 Marine Board

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

info@marineboard.eu

- * 4 Please indicate the type of organisation represented:

Non-research international organisation

- * 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)?

Yes

* 8

If so, please specify under which programme(s) (e.g. FP7 - KBBE)

H2020-SC, FP7-ERANET, KBBE

* 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]

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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)

Female

* 14

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

1976

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

Two critical areas are highlighted for SC2 2018–2020 Work Programme: Deep Sea Research and Ocean–Climate Research.

Commercial interests and growing human presence at the deep sea are moving at a pace that outstrips governance discussions and the knowledge generation through scientific research. There are serious deficiencies in the basic knowledge of deep-sea biodiversity, ecosystem functioning, resilience and connectivity. Increasing our fundamental knowledge of the deep-sea system is essential to underpin all societal, environmental and economic activities in the deep sea.

The role of the ocean in climate regulation and climate change has been greatly underestimated, to the detriment of climate change adaptation and mitigation policy. Research and observing efforts are needed to enhance our understanding of fundamental process and to develop observational and modelling frameworks that will allow an integrated assessment of the interconnected ocean–climate–human systems.

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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

SC2 has the potential to significantly enhance sustainable food production and exploitation of resources from terrestrial and aquatic environments. This requires improved understanding of natural systems, new technologies and processes, and risk response mechanisms addressing issues such as climate change adaptation.

In this context, EU research needs to focus on newly emerging challenges. The deep sea is an almost entirely unexplored domain, yet is the largest biosphere on the planet. Commercial interest in deep sea resources is rapidly expanding, including oil and gas production, fisheries, blue biotechnology, and deep sea mining. The potential environmental impacts of activities such as deep sea mining raise huge questions and challenges. Societal Challenge 2 is well placed to support international collaborative research on mapping and understanding the vast deep sea domain. This can, for example, help set environmental baselines against which future impacts can be measured.

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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

The primary sectors are essential to support economic growth in Europe and are also at the forefront of the development of circular economy models. While commercial interests are bringing our attentions to the deeper ocean, an inadequate knowledge and legal framework could cause irreversible damage to ocean's precious ecosystems and resources. Scientific studies of the deep sea system and ocean-climate observation will help to define a science-based policy with a long-term perspective that sets guidelines for sustainable commercial activities in the ocean. Many European Marine Board working group discussions have demonstrated that an early engagement with industry can be a game-changer for scientific and technological advancement as well as public perception. Such collaboration will also encourage entrepreneurship and promote spin-offs from the research products. Further identified gaps can be found in the EMB publications. (<http://www.marineboard.eu/science-strategy-publications>)

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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

Offshore hazards, triggered by human activities and natural geological events, can impede the development of a blue economy. While energy and resource exploration move further offshore, it is essential to improve the tools and knowledge for identifying risks and set strategy for hazard mitigation. The climate and the ocean are the global commons that give rise to pacifying and unifying projects for humanity as a whole (EU Strategic Foresight, 2015). Fundamental deep sea research and ocean-climate observations are two pillars that can enforce global governance related to environment, resource use and climate change, required by the UN Sustainable Development Goals. The EU plays an important role to catalyze an environment-conscious society and to maintain Europe's leading position in setting sustainable regulation. It is therefore paramount to secure Europe's intellectual capital through supporting fundamental and collaborative research in deep-sea study and ocean-climate observation.

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.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote co-creation of knowledge as well as new mechanisms and models of knowledge exchange (i.e. partnerships between science, farming, other businesses, consumers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote Open data to drive knowledge creation, management and sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foster science-policy and science- societal interfaces at all stages of the research and innovation cycle (agenda setting, activity implementation, outreach activities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foster international cooperation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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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= highly important; 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building a climate and global change-resilient primary production system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementing sustainability and circular economy principles across the whole food system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boosting innovation and investment, while empowering communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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