



HORIZON 2020

Work Programme 2016-2017 Societal Challenge 2

**Food security, sustainable agriculture and
forestry, marine, maritime and inland water
research, and the bioeconomy**





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WP 2016/2017- proposing solutions to these challenges

- **Feed 9 billion people by 2050**, by improving farming and food systems' capacity to sustainably supply sufficient and healthy food
- **Unlock the potential of seas and oceans**, which cover 70% of the Earth's surface and host 50% of known species
- **Raise the sustainable growth potential of rural areas**, (which account *for 55% jobs in the EU*) and their ability to cope with demographic, climatic and economic change
- **Boost bio-based markets**, to create for example over 3% growth/ year in the bio-based chemistry sector



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Societal Challenge 2

Four Calls 2016-17

**Sustainable
food security**

**Blue
Growth**

**Rural
Renaissance**

**Bio-based
innovation
for
sustainable
goods and
services**

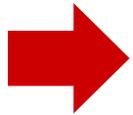




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Sustainable Food Security CALL

a global €431,5 million budget to:



Improve farming and food systems' capacity to sustainably supply sufficient and healthy food , while safeguarding natural resources



Ensure global food and nutrition security





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Sustainable food security TOPICS summary

Resilient, resource- efficient value chains

- Abiotic stresses
- Biotic stresses
- Operationalising the resilience concept
- Optimising use of critical inputs
- Specific actions for organic farming
- Sustainable fisheries and aquaculture
- ERANETs/ SCAR

25 topics 206 M€

Climate- smart primary production

- Carbon and nitrogen cycling in agro-ecosystems
- Specific production systems
- Ecosystem services
- Socio-economics, demography and resilience of farms

7 topics 64 M€

Competitive food industry

- Resilient, sustainable and transparent value chains
- Food losses
- Resource efficient processes in food chain
- Food packaging; labelling

3 topics 24 M€

Healthy food and diets for all

- One Health co-fund (zoonoses)
- Dietary choices of children; consumers and food safety;
- Diet/impulsivity/compulsivity; obesity; sweeteners

5 topics 85,5M€



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Sustainable food security TOPICS

EU-Africa Partnership

- ERANET Cofund
- Innovation for promoting food and nutrition security and sustainable agriculture in Africa
- Earth observation services for the monitoring of agricultural production in Africa

3 topics – 25 M€

EU-China Flagship

- Water retention in soils
- Breeding of protein crops
- Urban agriculture
- Food safety
- Authentication and traceability

5 topics – 27 M€



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Blue Growth CALL

€ 129 million from different parts of Horizon 2020 to:

 Demonstrate the innovative potential of the oceans by bringing technologies to the market

 Ensure a healthy ocean for healthy people

 Seize the opportunities of integrated sea basin Strategies (the Mediterranean and the Arctic)





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Blue Growth TOPICS summary

Boosting innovation for emerging Blue Growth activities

- Large-scale integrated algae bio-refineries
- High value-added specialised vessel concepts
- Multi-use of the oceans marine space, offshore and near-shore:
 - Legal and environmental issues
 - Enabling technologies
- ERANET cofund on Marine technologies

5 topics 57 M€

Linking healthy oceans and seas for healthy people

- Interaction between people, oceans and seas:
- Blue green innovation for clean coasts and seas
- Innovative sustainable solutions for improving the safety and dietary properties of seafood

3 topics 21 M€

The Arctic Dimension

- An integrated Arctic observing system
- Impact of Arctic changes on the weather and climate of the Northern Hemisphere
- Climate impacts on Arctic permafrost and its socio-economic impact, with a focus on coastal areas

3 topics 40 M€

Valorising the Mediterranean Sea basin

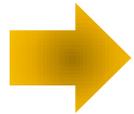
- Towards an integrated Mediterranean Sea Observing System
- Support to the **BLUEMED Initiative: Coordination of marine and maritime research and innovation activities in the Mediterranean**

2 topics 11 M€

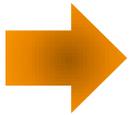


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Rural Renaissance CALL a global € 128 million budget to:



grasp promising opportunities to boost rural growth and jobs



Develop rural and coastal areas through new territorial approaches and business models





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Rural renaissance TOPICS summary

Policies & governance

Territorial interactions: enhance synergies, adapt policies, foster cross-sectorial cooperation

- Rural-urban
- Land-sea

• **'Towards 2030': policies and decision tools for an integrated management of natural resources**

• **Economic benefits from ecosystem services:**

- Farming & drinking water
- Forest ecosystem services (IA)

5 topics 32 M€

Value chains & business models

• **Crop diversification systems for delivery of food, feed, industrial products and ecosystem services**

• **Resource-efficient and profitable industrial crops on marginal lands**

• **Demonstration of integrated logistics for food and non-food applications**

• **Business models for modern rural economies**

4 topics 47 M€

Innovation and skill development

• **Thematic networks**

• **Experimental and demonstration farms:**

• **Building a future science and education system**

• **Advisors' role in AKIS**

• **Working together in EU countries where cooperation level is low**

• **Optimising interactive innovation projects and policies for innovation**

7 topics 49 M€



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Bio-based Innovation for Sustainable Goods and Services CALL **a global € 27 million budget to:**

- ➔ Boost bio-based markets (ex: to create over 3% growth/year in the bio-based chemistry sector)
- ➔ Re-industrialise the EU through new bio-based value chains, securing sustainable biomass



Activities of this call are complementary to the Joint Technology Initiative on Bio-based Industries 2016-17 Indicative Budget €300 million"



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Bio-based innovation TOPICS summary

Securing Sustainable biomass supply

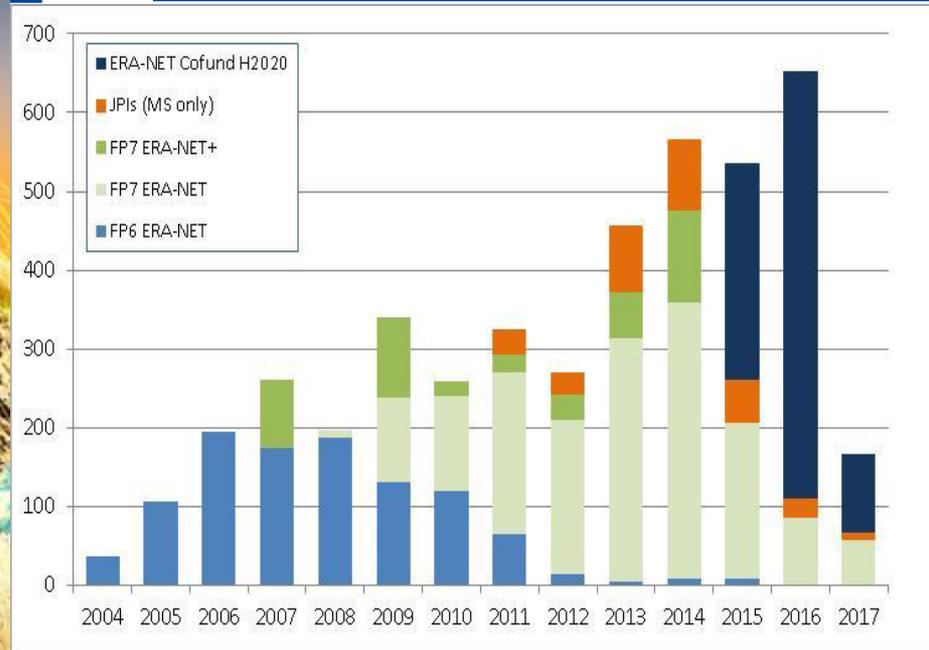
- Tree breeding strategies and tools
- Forest production systems
- Sustainability schemes
- Data on bio-based industries and products

- Circular economy – Potential of urban waste

Building the bio-based markets of the future

- Mobilisation and mutual learning
- Widening regional dimension

ERA-NETs 2016



ERANET COFUND

- Public-Public Partnerships in the Bioeconomy

- *Organic farming and food production*
- *Sustainable food production and consumption*
- *A knowledge platform for the intestinal microbiome*

- Marine Technologies



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Bio-based Industries Joint Undertaking (BBI – JU)

Public Private Partnership supporting R&I for bio-based industries:

- Partners: European Commission and Biobased Industries Consortium (BIC)
- Budget: € 3.705 billion (about 75% from industry)
- Implementation:
 - Principles of **openness, transparency and excellence**
 - Horizon 2020 rules for participation
- Objectives: At least **5 new bio-based value chains** for Europe based on **2nd generation/advanced biorefineries**

The screenshot shows the homepage of the BBI Europe website. At the top left is the logo for 'BIO-BASED INDUSTRIES' with a green leaf icon and the text 'Public-Private Partnership'. To the right is a 'Contact' button. Below the logo is a headline: 'BBI Joint Undertaking: a new €3.7 billion partnership between the EU and the Bio-based Industries Consortium'. A navigation menu includes 'Home', 'About BBI', 'Participate', 'News', 'Events', and 'Multimedia'. The main content area features a large image of a field with hay bales under a blue sky. To the right of this image is a blue box with the text: 'Welcome to the BIO-BASED INDUSTRIES Joint Undertaking' and '€3.7 billion to convert biological residues and wastes into greener everyday products'. Below this are three smaller images: 'About BBI' (green grass), 'Participate' (chemical elements), and 'Partnering Platform' (industrial building). At the bottom, there are sections for 'News' (dated 09 July 2014), a 'Twitter' feed from Resource Media Ltd, and 'Events' (dated 02 September 2014).

www.bbi-europe.eu

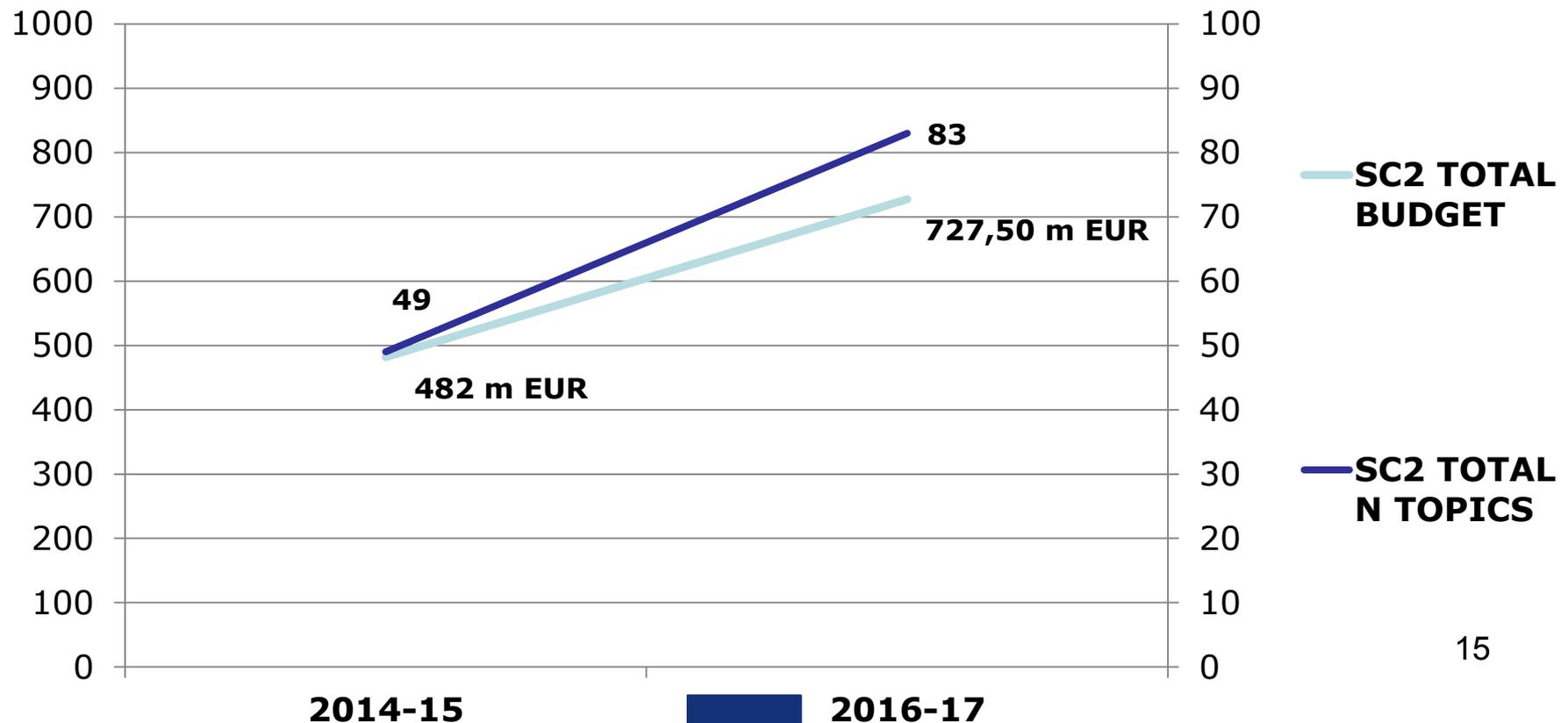


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SC2 Topics & Budget : 2014-15 to 2016-17

Whole Societal Challenge 2: four Calls, 83 topics, 727.5M €

Proportional increase in budget and topics vs 2014-15





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SC2 Calls 2016 - DATES

| Publication | Submission | | <u>Deadlines</u> | Information to applicants | Grant Agreements |
|--------------------|--|---------------------|-------------------------|----------------------------------|-------------------------|
| 14 OCT 2016 | two-stage submission (RIA with some exceptions) | 1st stage | 17 Feb 2016 | May 2016 | - |
| | | 2nd stage | 13 Sept 2016 | Nov 2016 | May 2017 |
| | single stage submission (IA, CSA, ERA Net) | Single stage | 17 Feb 2016 | May 2016 | October 2016 |

WP 2016/17 Societal Challenge 2 at a glance

4 challenges

Increase our global agricultural production to feed 9 billion people by 2050

Unlock the potential of seas which cover 70% of the earth's surface & host 50% of known species

Raise the sustainable growth potential of rural areas and their ability to cope with demographic, climatic and economic change.

Boost bio-based market to create over 3% growth / year and 90.000 new jobs in bio-based chemistry

4 objectives

Ensure food & nutrition security by fostering resilient and resource efficient primary production and related industry

Demonstrate the innovative potential of the oceans by bringing technology to market

Develop rural and coastal areas through new territorial approaches and business models

Re-industrialise EU through new bio-based value-chains, securing sustainable biomass

4 calls

Sustainable food security
€431,5M

Blue Growth
€129M

Rural renaissance
€128M

Bio-based innovation for sustainable goods and services
€27M

4 deliverables

Resource-efficient value chains, climate smart primary production, healthy/safe food & diets

Innovation for emerging Blue growth activities, healthy oceans for healthy people

New governance, new value chains and business models, rural innovation and skills

Sustainable biomass supply, biobased markets of the future



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Work Programme pre-publication

Draft versions of the Horizon 2020 work programmes for 2016-2017 are made public just before the adoption process.

These versions are not yet endorsed by the Commission and they do not in any way prejudge the final decision of the Commission.

The adoption and the publication of the work programme by the Commission are expected in mid-October 2015.

Only the adopted work programme will have legal value.

<https://ec.europa.eu/programmes/horizon2020/en/draft-work-programmes-2016-17>

This presentation shall neither be binding nor construed as constituting commitment by the European Commission



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**Thank you
for your attention!**



**Find out more:
www.ec.europa/research/horizon2020**