#InvestEUresearch

Horizon 2020 Work Programme for Research & Innovation 2018-2020

€1,3 billion

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

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This presentation does not engage the Commission, please refer to the official documents.

Research and Innovation

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Work Programme 2018-2020

R & I investment of € 30 billion for 3 years

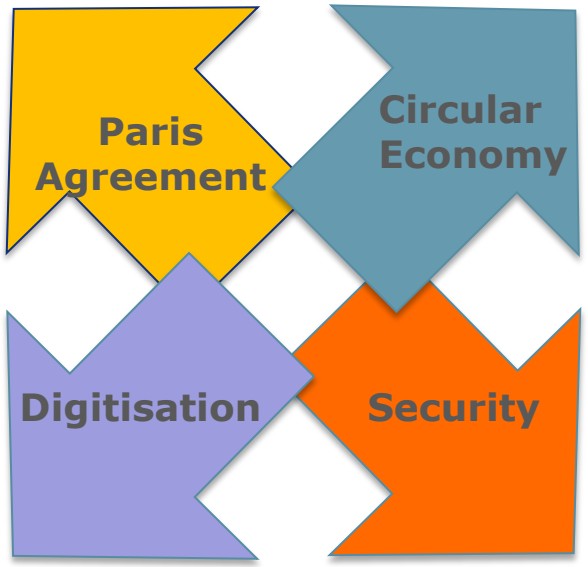
- **Addressing main concerns of citizens** such as security, migration and economic situation…
- **Focus on impact** (fewer & broader topics with sharpened impact statements, better dissemination of results, open access to data…)
- **Piloting new initiatives** and **flexibility for 2020**, with 'minimum' content of calls and other actions at this stage

European Commission

Focus Areas and other cross-cutting priorities

€ 7 billion for 4 mutually reinforcing focus areas

- aligned to political priorities
- expected to have exceptional impact
- implemented through 'virtual calls cutting across the programme (description in 'General Introduction', common call identifier)



Further cross-cutting priorities

- **Migration (€ 200M)**
- **Batteries (€ 100M)**
- **Blue Growth, Cities ……**

European Commission

Focus Area 'Building a low-carbon, climate resilient future' (LC)

Contributing to implement the **Paris Agreement**:

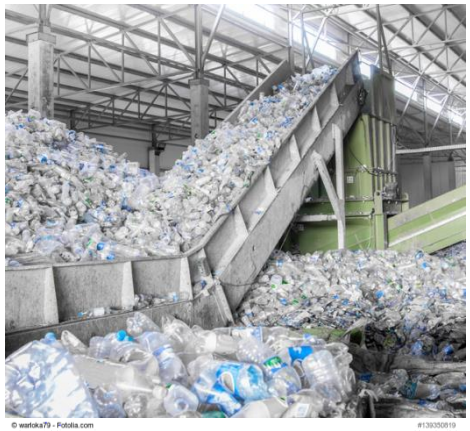
- **Accelerate transformation** towards carbon neutrality through **clean technologies**
- Enhance **climate resilience in Europe and beyond**
- Contribute to **long-term mitigation and adaptation planning**

€ 3.3 bn

SC2 Contribution: 203M€ (Plants, alternative proteins, climate-smart farming, soils, food systems, marine resources, wood value chains)

European Commission

Focus Area 'Connecting economic and environmental gains – the Circular Economy' (CE)



Supporting the **circular economy policy**:

- Ensure that **growth no longer requires increasing consumption of resources, energy, water and primary raw materials**
- **Reduce waste**, including from plastics
- Create **new business opportunities** and safeguard **competitive advantages**

€ 940 m

SC2 Contribution: 253M€ (Urban food systems, biowaste valorisation, bio-based plastics and fertilisers, bio-based models for rural communities)

European Commission

Focus Area 'Digitising and transforming European industry and services' (DT)

Enhancing the benefits from the **Digital Single Market Strategy**:

Foster **uptake** of digital technologies and innovations & **synergies** with other key enabling technologies through

- **Cross-sectorial digital platforms and large scale pilots** for co-creation with users (e.g. personalised health, ICT solutions in agriculture, automated driving)
- **Innovation hubs**

€ 1.7 bn

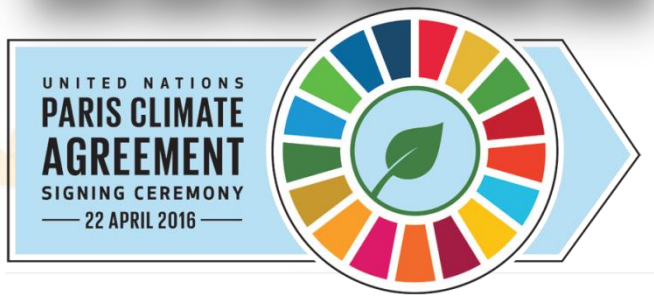
SC2 Contribution: 107M€ (Personalised nutrition, Blue and Food clouds, Aquaculture 4.0, Digital innovation hubs)

European Commission

SC2 WP at a glance

Policy context

- **Global commitments**

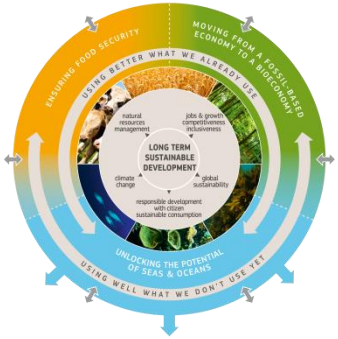


United Nations
Framework Convention on
Climate Change

- **European policies**

CAP & EIP-AGRI

Climate & energy

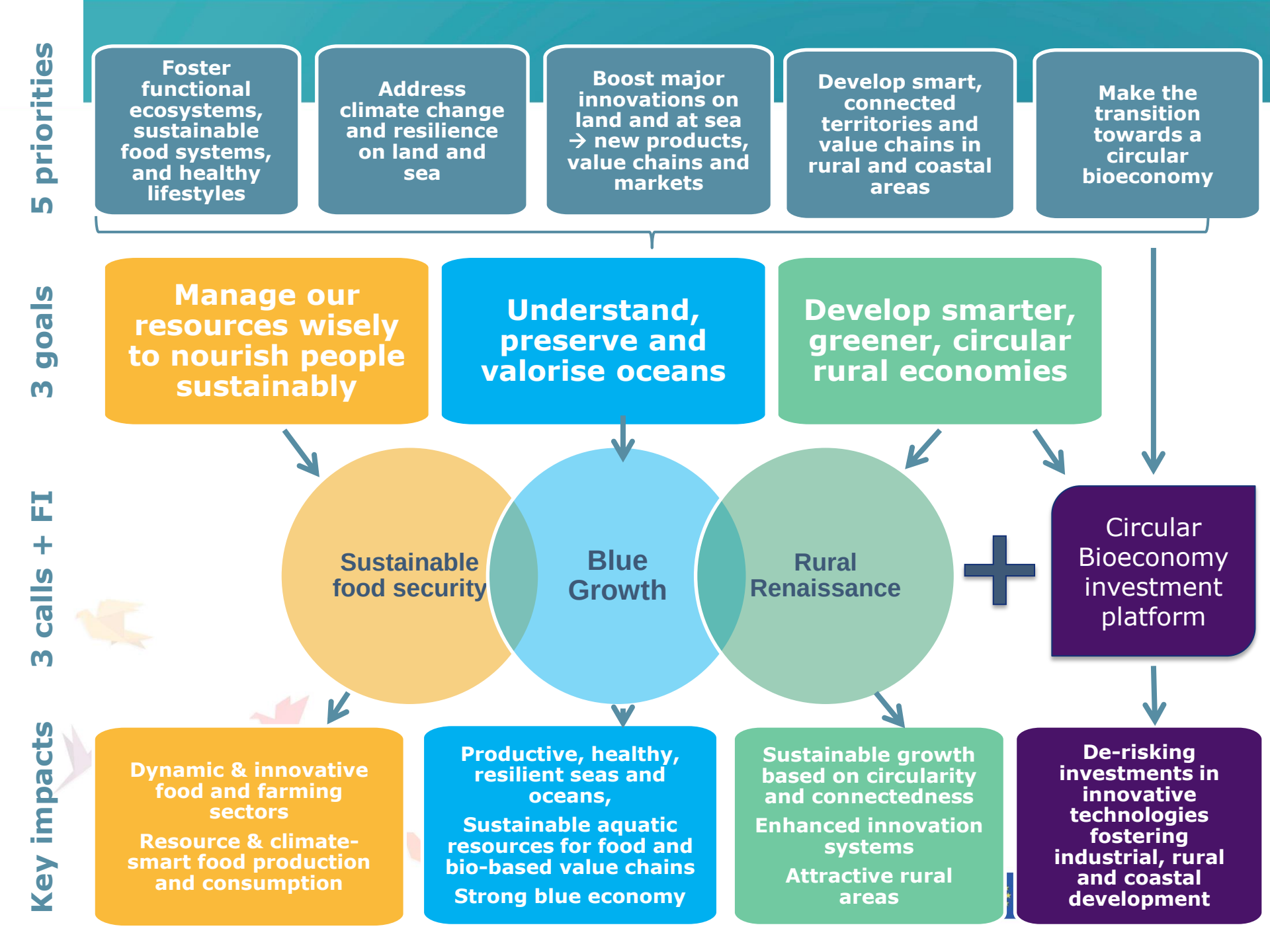


Bioeconomy strategy

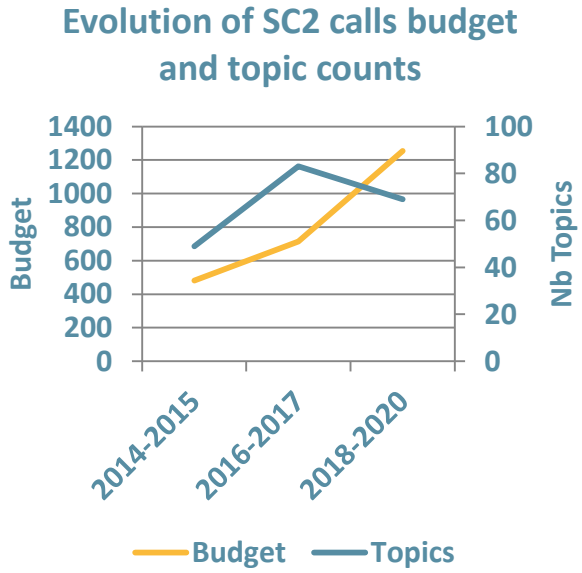
Circular economy

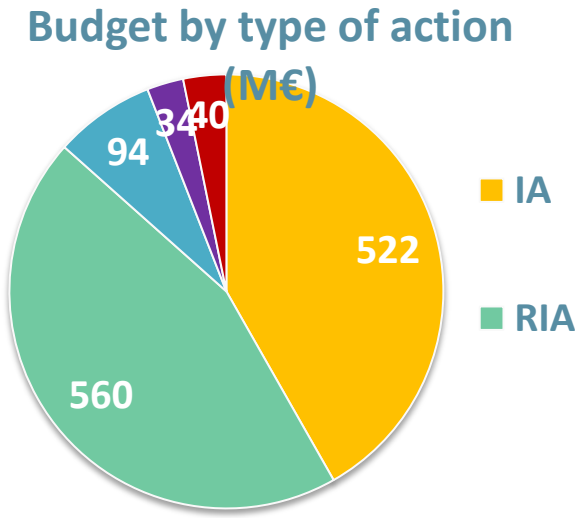
Integrated Maritime and common fisheries policies

Digital single market


5 priorities
Foster functional ecosystems, sustainable food systems, and healthy lifestyles
Address climate change and resilience on land and sea
Boost major innovations on land and at sea → new products, value chains and markets
Develop smart, connected territories and value chains in rural and coastal areas
Make the transition towards a circular bioeconomy
3 goals
Manage our resources wisely to nourish people sustainably
Understand, preserve and valorise oceans
Develop smarter, greener, circular rural economies
3 calls + FI
Sustainable food security
Blue Growth
Rural Renaissance
Circular Bioeconomy investment platform
Key impacts
Dynamic & innovative food and farming sectors
Resource & climate-smart food production and consumption
Productive, healthy, resilient seas and oceans,
Sustainable aquatic resources for food and bio-based value chains
Strong blue economy
Sustainable growth based on circularity and connectedness
Enhanced innovation systems
Attractive rural areas
De-risking investments in innovative technologies fostering industrial, rural and coastal development

A more strategic and focused approach





Less topics, more budget
→ more projects per topic

Close to market actions with investment in new knowledge

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Open innovation, open science, open to the world

- **Open innovation**
  - **€157 mio for European Innovation Council** (SME, FTI, FET, Prizes)
  - **€500 mio for multi-actor projects** (interactive innovation - EIP-AGRI)

- **Open science**
  - Research data sharing **by default** (with possibility to opt out)
  - **Open science clouds**: Food cloud demonstrators (10M€) & Blue cloud services (6M€)

- **Open to the world**
  - **89M€** on **EU-AFRICA** partnership on Food and Nutrition Security and Sustainable Agriculture (11 projects): food systems, sustainable intensification and income diversification
  - **23M€** on **EU-CHINA** (5 projects): food safety, soil management and bio-based fertilisers
  - **64M€** on **"All Atlantic Ocean Research Alliance"** (8 projects):coordination, marine ecosystems and new value chains
  - **100M€** (out of 220M€) on **PRIMA – P**artnership for **R**&**I** in the **M**editerranean **A**rea

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Cross-cutting elements

- **A strong commitment to Responsible Research and Innovation**
  - 31 topics under multi-actor approach (500M€ - over 80 grants)
  - 27 topics with strong public engagement

- **A wide space for Social Sciences and Humanities**
  - 55 topics flagged for SSH (75%)

- **Key contributions to global goals (Rio-markers)**
  - Climate
  - Sustainable development
  - Biodiversity

Funding for third countries

Applicants <u>automatically</u> eligible for funding:

- **EU Member States and the Overseas Countries and Territories linked to Member States**
- **Countries associated to Horizon 2020**
- **Countries identified in WP General Annex A (developing countries)**
- **International organisations of European interest**

Details:
http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-work-programmes-2018-20-annexes

In addition, eligible for funding:

- ✓ **When explicitly foreseen in the call**
- ✓ **when provided for under a bilateral scientific and technological agreement or similar**
- ✓ **when Experts deem participation essential for carrying out the action**

European Commission

Co-funding agreements with third countries

- **Co-funding for <u>all</u> thematic areas:**

  China, Hong Kong & Macao, Republic of Korea, Mexico, Russia, Taiwan

- **Co-funding for <u>selected</u> thematic areas:**

  Australia, India, Japan

- **Co-funding by a region:**

  Brazil, Canada

- **Countries where <u>no</u> jointly agreed mechanism for co-funding Horizon 2020 projects is currently in place:**

  New Zealand, USA

European Commission

CAP /Rural development
(regional/national level)

Funding for:

OG preparation

OG projects

Innovation support services

EIP network(s)

(European projects)

- **Research projects**
- **Multi-actor projects and thematic networks** (interactive innovation)

Involvement of OGs is strongly recommended

Unique EU knowledge repository of contacts and practice abstracts

Spread the results

Societal challenge 2 calls

Sustainable Food Security

€ 753 million to use our resources more wisely and nourish people more sustainably

Produce more **diverse and healthier food** from well-managed functional ecosystems

Increase resource **efficiency and environmental performance** of food systems

Understand the impact of climate change and design **adaptation strategies**

Going global: joint actions with Africa and China

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European Commission

Sustainable food security topics (2018-2019)

From functional ecosystems to healthy food

- **Biodiversity in action**
- Microbiome
- **Integrated health approaches**
- IPM
- Healthy beekeeping
- **Animal welfare**
- **Anti-microbials and animal production**
- **African Swine fever**
- Personnalised nutrition
- Plant breeding
- Healthy sust. food
- **Alternative proteins**

13 topics – 235 M€

Environment/ Climate-smart Food production and consumption

- **Climate-smart farming**
- **EJP soils**
- **Integrated water management**
- **Citizen-driven food system approaches in cities**
- Valorising urban biowaste

5 topics – 107 M€

Building capacities

- **Food cloud**
- Monitoring R&I investments
- **GenRes & pre-breeding**
- Plant-variety testing
- **Agri-Aqua labs**
- **ERANETs**

6 topics – 91 M€

Targeted international cooperation

- Microbiome coordination and IBF
- EU-Africa
  - ✓ Support FNSSA implementation
  - ✓ **Food systems**
  - ✓ **Sustainable intensification**
- EU-China
  - ✓ **Food safety controls**
  - ✓ Soils management
  - ✓ **Fertilisers from biogas digestate**

7 topics – 82 M€

Type of actions : RIA, IA, CSA, EJP, ERANET

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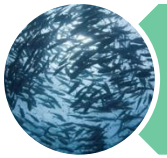
Blue Growth 2018-2019

€ 166,5 million to sustainably harvest the potential of aquatic and marine resources, while protecting biodiversity and enhancing climate resilience

Improve knowledge on impact of **climate change** on marine ecosystems and biological resources to effectively manage their response, mitigation and resilience capacities



Preserve and sustainably exploit **marine and coastal ecosystems** and biological resources to deliver improved **nutrition and health**

De-risk investments and boost blue innovations to develop new bio-based **marine value chains** and open up new markets

Develop smart and connected territories between **land and sea**

Strengthen **international cooperation**, to promote a globally sustainable blue economy

Blue Growth topics (2018-2019)

Climate-Ocean

- Blue Bioeconomy Eranet (BG-02, 8 M€)
- The Future of Seas and Oceans Flagship Initiative (BG-07, 18 M€)

2 topics – 26 M€

Sustainable food chains

- Sustainable harvesting of marine biological resources (BG-03, 12 M€)
- Sustainable European aquaculture 4.0: nutrition and breeding (BG-04, 24 M€)

2 topics – 36 M€

De-risking Investments

- Multi-use of the marine space, offshore and near-shore: pilot demonstrators (BG-05, 18 M€)

1 topic – 18 M€

Land-Sea Connection

- Sustainable solutions for bio-based plastics on land and sea (BG-06, 18 M€)

1 topic – 18 M€

International cooperation

- Towards a Baltic and North Sea research and innovation programme (BG-01, 2.5 M€)
- All Atlantic Ocean Research Alliance Flagship (BG-08, 64 M€)
- Coordination of marine and maritime research and innovation in the Black Sea (BG-09, 2 M€)

3 topics – 68,5 M€

Type of actions : RIA, IA, CSA, ERA-NET

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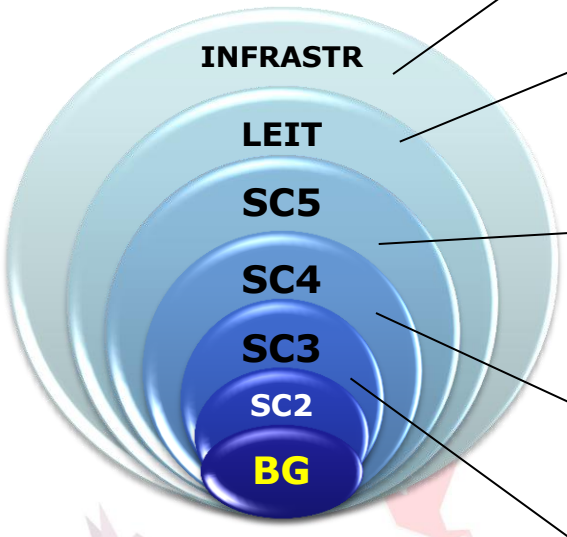
Blue Growth related topics beyond SC2



Infrastructures

- Research Vessels

LEIT

- SPACE – Copernicus Marine Services, ocean models
- NMBP: off-shore energy materials

SC5 Climate

- recovery of sea resources
- sea level changes
- ice-core drilling

SC4 Transport

- ships emissions
- Unmanned & autonomous activities
- maritime transport safety

SC3 Energy

- wave energy
- offshore wind
- renewable energy technologies

EXAMPLES

Rural renaissance

€ 263 million for rural territories to become smarter, greener, more circular and better connected

Invest in policies fit for the future:

Modernizing policies to favour generation renewal and greater resilience and public goods delivery

Invest in businesses:

Developing small scale refineries, boosting regional bioeconomy and innovative supply chains

Go digital:

Making the promises of the digital revolution come true for farmers and rural people

Invest in people:

Boost innovation, co-creation and exploitation of knowledge by improving skills and innovation systems

European Commission

Rural renaissance topics (2018-2019)

Dynamics & policies

- **Modern policies from long-term visions & societal engagement:**
  - ✓ Science-policy-society hub
  - ✓ Generation renewal
  - ✓ Mountain value chains and climate change
- **Socio-economic impacts of digitisation**
- **Contracts for effective agro-environment delivery inc:**
  - Land tenure
  - Result-based policies
  - Collective delivery
- **Analytical tools and models**
  - ✓ New models for policy
  - ✓ Modelling trade

4 topics – 60 M€

Type of actions : RIA, IA, CSA

Food & non-food Value chains

- **Closing nutrient cycles:**
  - ✓ Properties and impacts of biofertilisers
  - ✓ Bio-based fertilisers from manure
  - ✓ Bio-based fertilisers from other by products
- **Regional and local bio-based economies**
- **Circular bio-based business models for rural communities**
- **BIOEAST Support Action**
- **Sustainable wood value chains**
  - ✓ Building with wood
  - ✓ Resilient forest systems

4 topics – 57 M€

Taking advantage of the digital revolution

- **Digital innovation hubs for agriculture**
- **Preparing advisors for the digital age**
- **Digital solutions and e-tools to modernise the CAP**

3 topics – 37 M€

+ UNDER LEIT-ICT call

- **Agricultural cross-cutting integration platforms**

1 ICT topic – 15 M€

RUR+ICT: 4 topics – 52 M€

Innovation and human capital

- **Thematic networks compiling knowledge ready for practice**
- **Fuelling the potential of advisors for innovation**
- **AKIS support**

3 topics – 27 M€

European Commission

Evaluation of proposals

✓ **ERC** frontier Research actions » only EXCELLENCE

✓ **Innovation actions**» higher weighting for "IMPACT"

European Commission

Some tips on how to succeed

- Start in time & choose your partners well
- Avoid "recycling" of former projects or project partners which do not have a specific contribution to the topic
- Check for eligibility & read the evaluation criteria – imagine what the evaluator will think
- Excellent science is not enough: consider all the criteria & sub-criteria
- Impact matters as much as excellence! → Check the expected impacts and scope of the topic in detail
- Write clearly & respect the page limits - ask someone impartial to proof-read your proposal
- Be coherent! Make sure that the chosen objectives are coherent with the foreseen project activities, the competence of the partners and the planned budget per activity.

Some tips on communication & dissemination

- Communication and dissemination activities each have a specific scope
- Ensuring project results are widely known and used by those interested, including policy makers
- Ensuring uptake of project results enhances the added value of research & innovation funding
- **Dissemination & exploitation plan is mandatory**
- Communication and dissemination about the project and its results should start as soon as possible and be updated throughout the project's lifetime
- Consider including the right skills for communication & dissemination in the project consortium from the start

Resources, guidance and tools

- **Useful pages and documents**
  - Horizon 2020 online manual
  - Reference documents : work programmes, legal and guidance documents
  - Frequently asked questions (FAQ) on participant portal
  - IT Helpdesk for questions about the Participant Portal tools and processes
  - How to manage data: open data, open access, data management plans
  - Communication and dissemination: what's the difference?

- **You have a specific question?**
  - Contact your National Contact Point or the Horizon 2020 helpdesk for guidance, practical information and assistance on all aspects of participation in Horizon 2020.

Thank you!

#InvestEUresearch
#H2020SC2

www.ec.europa.eu/research/bioeconomy

www.ec.europa.eu/agriculture/research-innovation_en

Participant Portal

http://ec.europa.eu/research/participants/portal/desktop/en/home.html

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