

RETO SOCIAL 2 en HORIZONTE 2020 y más ...
28 de noviembre 2018, CITA - ARAGÓN

Jesús Escudero

Relaciones Internacionales

Punto Nacional de Contacto H2020-RS2

Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria – INIA

jesus.escudero@inia.es

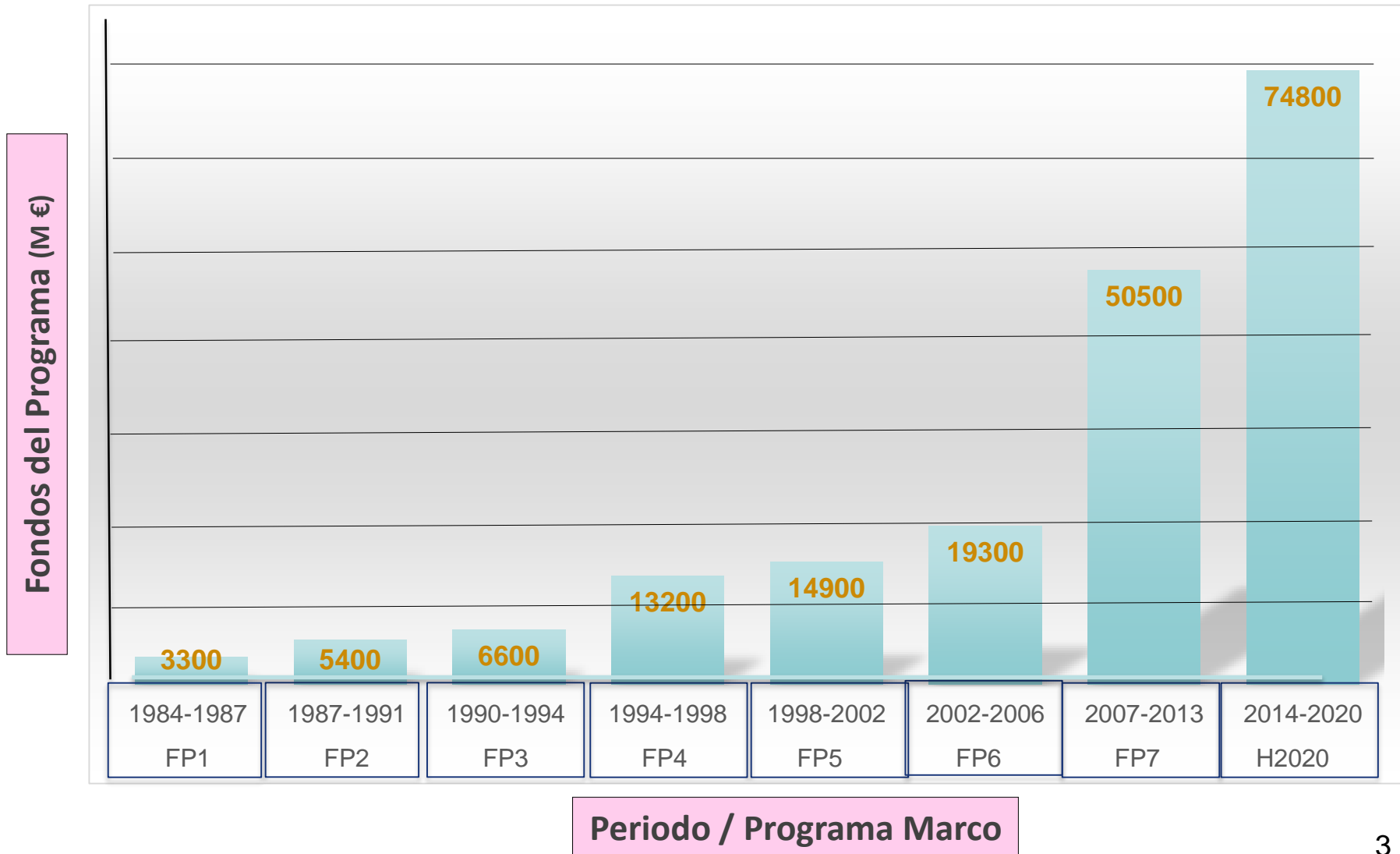


CONTENIDO DE ESTA PRESENTACIÓN

- Programas Europeos de Financiación I+D+i
- Bioeconomía en el Contexto Económico
- Plan de Acción para Bioeconomía Europea
- Herramientas de Financiación y Oportunidades
- Programa Horizonte 2020
- Reto Social 2 en Horizonte 2020
- Consejos Básicos para el Éxito
- Resumen del Nuevo Programa Horizon Europe

FINANCIACIÓN - PROGRAMAS EUROPEOS 1984-2020

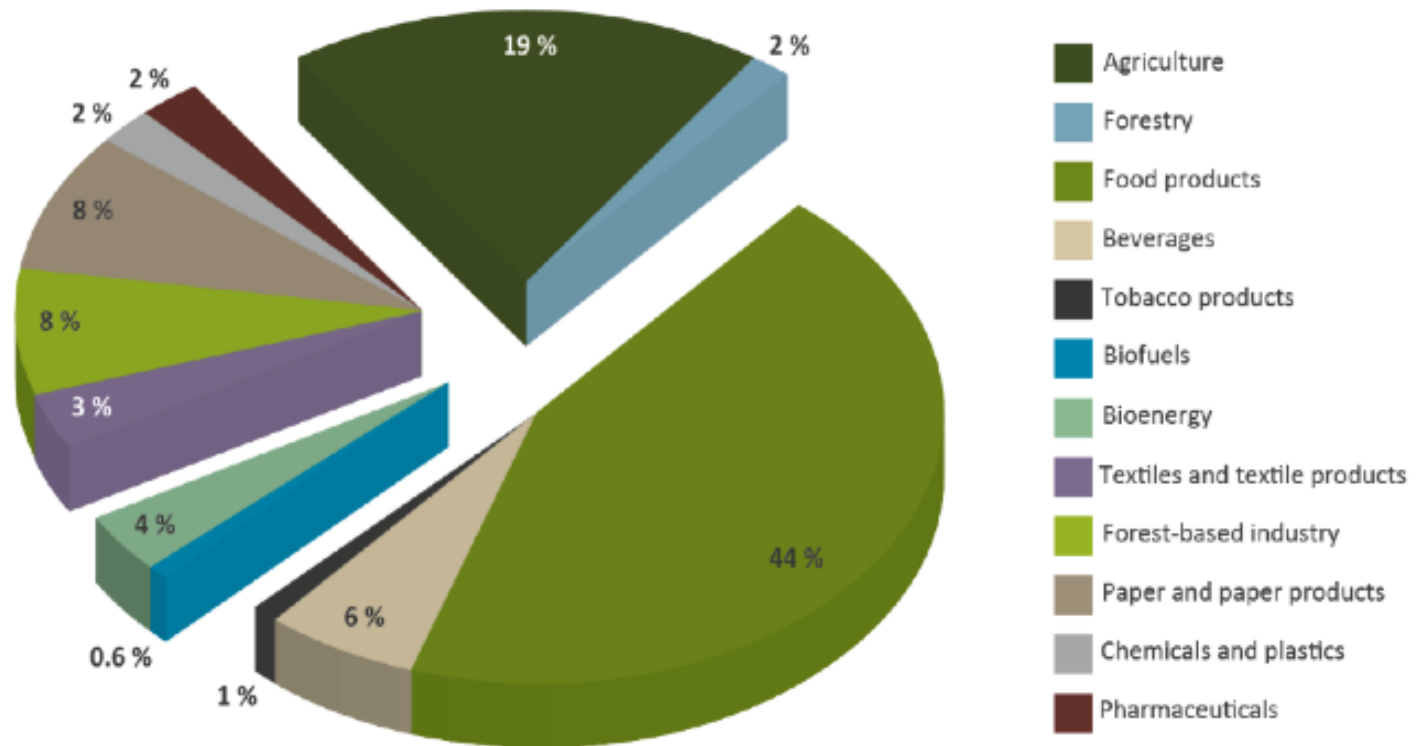
Previsión Horizon Europe: **100.000**



(Source: European Parliament, based on European Commission data)

BIOECONOMÍA EUROPEA

Turnover in the EU bioeconomy (EU-28, 2013)
Total: 2.1 trillion Euro



BIOECONOMÍA EUROPEA


EMPLOYMENT
(MILLION JOBS)
18


TURNOVER
(TRILLION EUR)
2.3


VALUE ADDED
(BILLION EUR)
621

		EMPLOYMENT (MILLION JOBS)	TURNOVER (BILLION EUR)	VALUE ADDED (BILLION EUR)
	AGRICULTURE	9.2	380	174
	FORESTRY	0.5	50	24
	FISHING AND AQUACULTURE	0.2	12	7
	FOOD, BEVERAGES AND OTHER AGRO-MANUFACTURING	4.5	1 153	233
	BIO-BASED TEXTILES	1.0	103	28
	WOOD PRODUCTS AND FURNITURE	1.4	174	47
	PAPER	0.6	187	46
	BIO-BASED CHEMICALS AND PHARMA- CEUTICALS, PLASTICS AND RUBBER	0.4	177	56
	LIQUID BIOFUELS	0.03	12	3
	BIOELECTRICITY	0.01	11	3

DATA 2015

Joint
Research
Centre

Source: based on Ronzon & M'Barek, 2018
<https://doi.org/10.3390/su10061745>

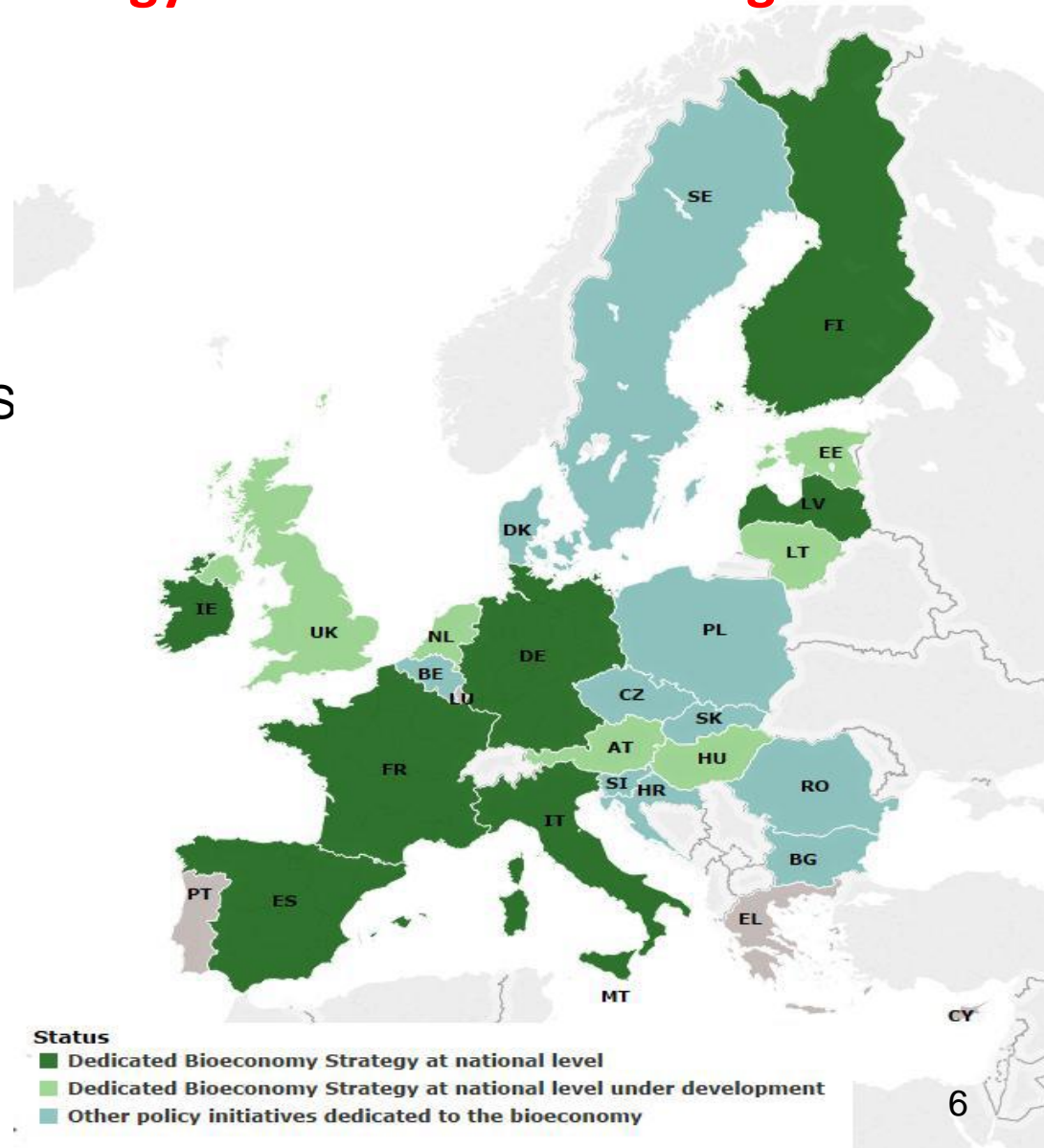
2017 Bioeconomy Strategy Review – Main Findings

DELIVERY

- BE R&I investment doubled from FP7 to Horizon 2020
- Bio-based-industries partnership developing transformative technologies for circular BE
- Bioeconomy policies taken up in MS regions, cities
- Bioeconomy Manifesto established

BUT

- Further mobilisation of investment needed
- Better address policy coherence
- Current policy context (CE, SDGs, Paris,..) calls for a sustainable, circular bioeconomy
- Better monitoring and assessment frameworks needed (indicators; biomass supply & demand; ...)



Una Bioeconomía para Europa

Action Plan: A new Opportunity for the Regions.

(President Jean-Claude Juncker, Commissioner Carlos Moedas and Director John Bell)

- Updated Bioeconomy Strategy: A sustainable bioeconomy for Europe. Strengthening the connection between economy, society and the environment.
- New Bioeconomy Strategy to boost jobs, growth and investment in the EU. It aims to improve and scale up the sustainable use of renewable resources to address global and local challenges such as climate change and sustainable development.
- The EU aims to lead the way in turning waste, residue and discards into high value products, green chemicals, feed and textiles. Research and innovation plays a key role in accelerating the green transition of the European economy and in meeting the United Nations Sustainable Development Goals.
- Using resources from land and sea for a post-petroleum economy.



A SUSTAINABLE

BIOECONOMY

FOR EUROPE:

STRENGTHENING THE CONNECTION BETWEEN
ECONOMY, SOCIETY AND THE ENVIRONMENT

OPORTUNIDADES A LA VISTA

PRIORITIES	TOOLS AND INITIATIVES	
A) NATIONAL / BIOECONOMY STRATEGIES	1. Bio-based Industries Joint Undertaking (BBI JU) 2. Horizon 2020 / Societal Challenge 2 3. FOOD 2030 Initiative (policy tool) 4. Bioeconomy Knowledge Centre 5. Bioeconomy Cities	www.bbi-europe.eu/ http://ec.europa.eu/programmes/horizon2020/en/how-get-funding BERST project http://www.berst.eu/ S2Biom project http://www.s2biom.eu/en/ https://ec.europa.eu/jrc/en/scientific-tool/bioeconomy-observatory
B) COOPERATION - cross-sectoral - inter-regional - cross-regional - macro-regional	6. Smart Specialisation Platform – AgroFood 7. Knowledge Exchange Platform (KEP) 8. Tools to link EU regions, clusters and networks [<i>study, eye@ RIS3, SCAR, BioE Stakeholders Panel, ERRIN, ERRIAF, Bio-NCPs, EIP – AGRI, Vanguard, H2020 Widening of participation (Twinning, teaming..)</i>] 9. Macro-regional Strategies (policy tool) e.g. PRIMA Initiative	EYE @RIS tool http://s3platform.jrc.ec.europa.eu/map BONUS, BLUEMED http://prima-med.org
C) FINANCIAL TOOLS	10. H2020–ESIF Synergies on Bioeconomy 11. InnovFin 12. Juncker Package – ESFI	Seal of Excellence (SoE) Guides: https://ec.europa.eu/research/regions/index.cfm?pg=publications

OPORTUNIDADES A LA VISTA

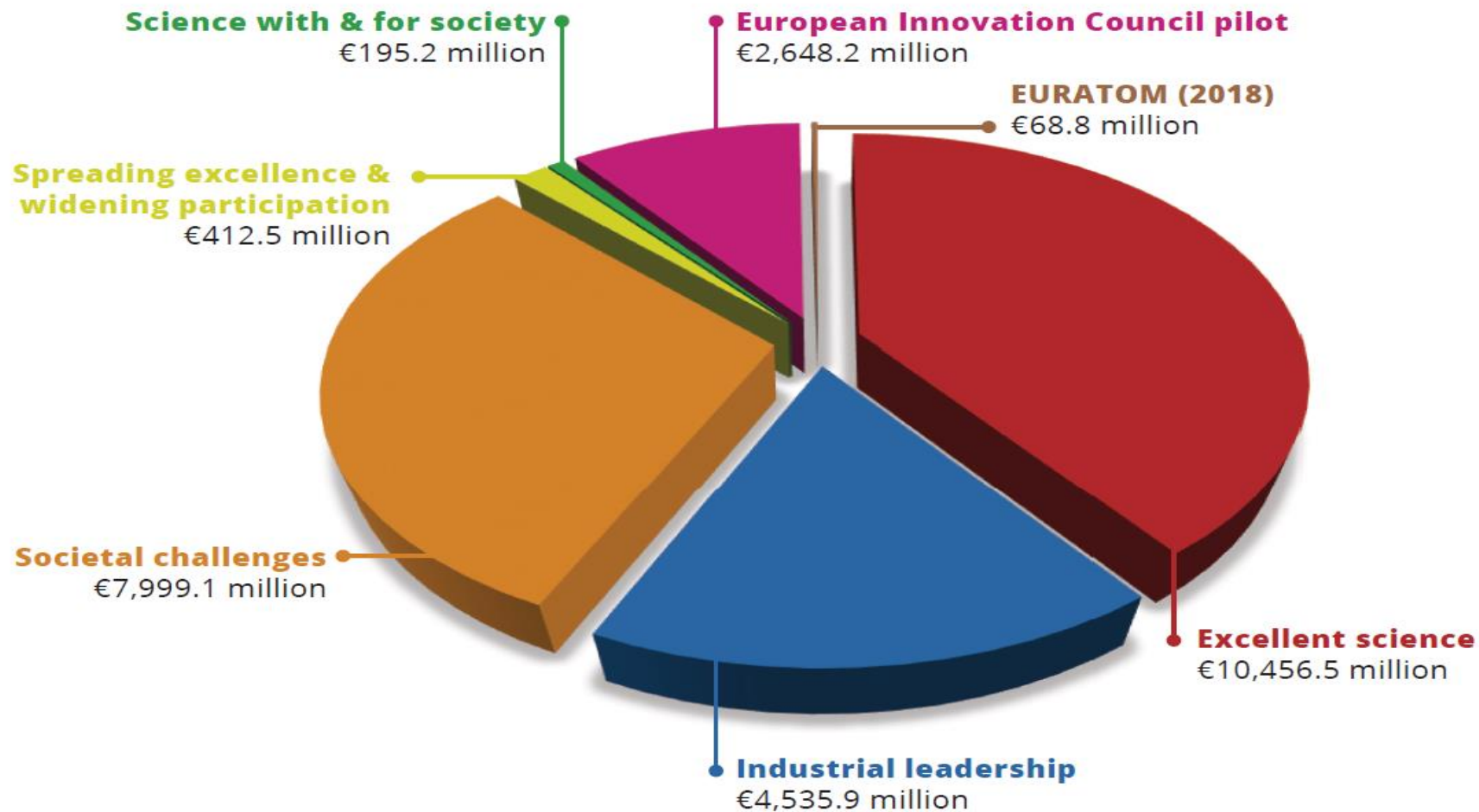
Crecimiento Económico Esperado para 2030
Inversión I+D+i vs. Mercados Futuros en Biotech

	Total de gastos de negocio en I+D+i biotecnológica en la zona OCDE en 2003	Estimación del valor añadido bruto (VAB) potencial del sector biotecnológico en la zona OCDE para 2030
Sanidad	87%	25%
Agricultura	4%	36%
Industria	2%	39%
Otros	7%	-

Fuente: La evolución de la bioeconomía hasta 2030 - Diseño de una agenda política, OCDE

HORIZONTE 2020

PPTO General I+D+i - Periodo 2018-2020



Contexto Político en H-2020

• Compromisos Globales



United Nations
Framework Convention on
Climate Change

• Políticas Europeas



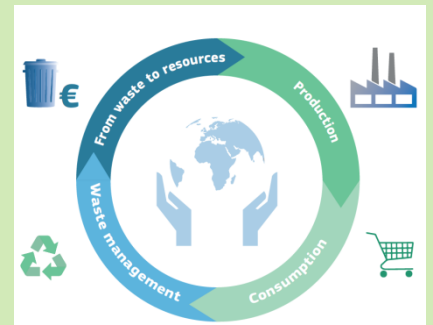
CAP & EIP-AGRI



Climate & Energy



Bioeconomy Strategy



Circular Economy

INVESTING IN THE BLUE ECONOMY
Unlocking the potential of the ocean to create jobs and boost the economy

If the ocean were a country, it would be the world's **SEVENTH LARGEST ECONOMY**.

The situation

The output of the ocean is an estimated **€1.3 trillion**, forecast to double by 2030.

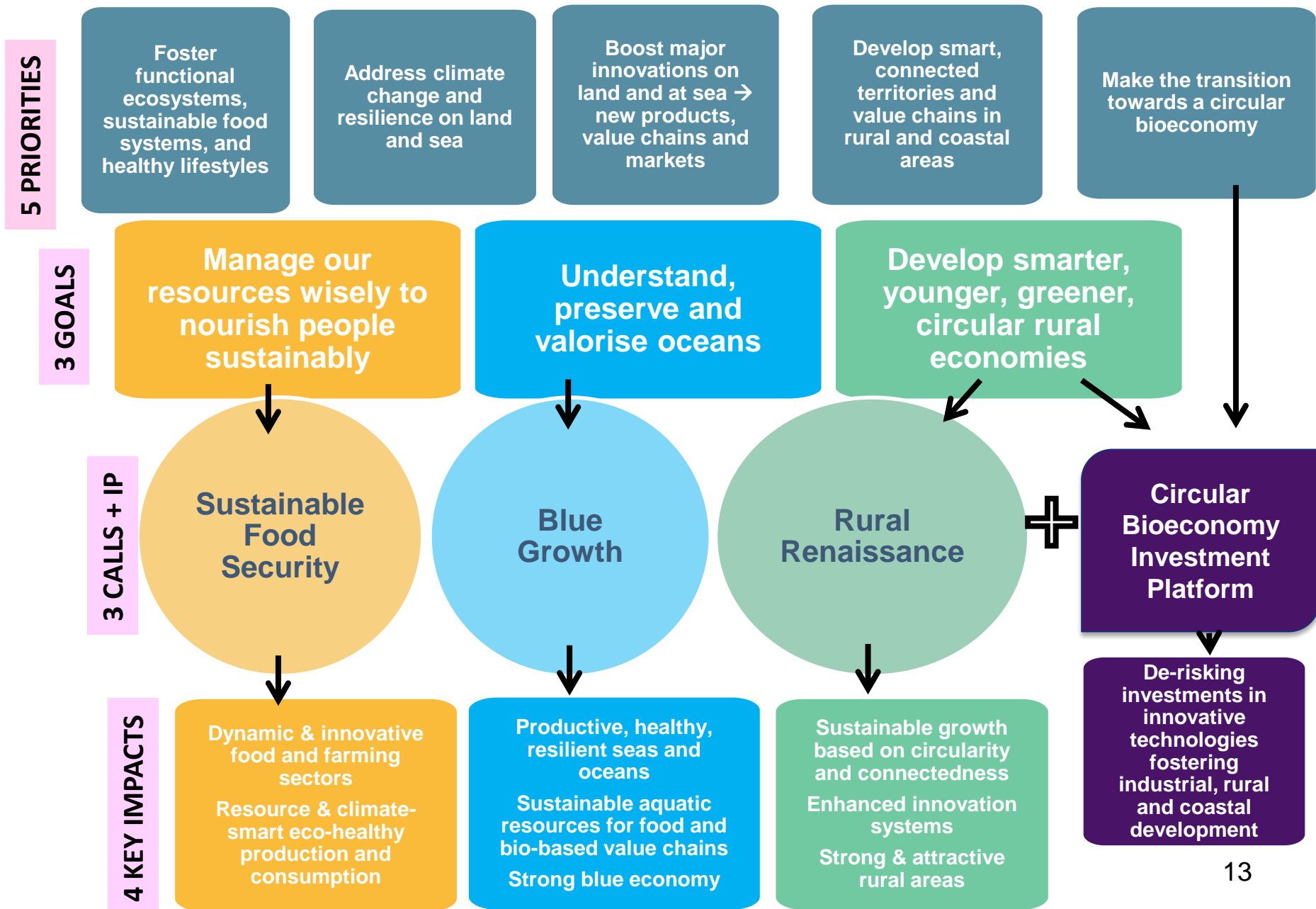
Around **350 million jobs** worldwide are linked to the ocean.¹

Integrated Maritime & Common Fisheries



Digital Single Market

HORIZONTE 2020 RETO SOCIAL 2



Open innovation, Open science, Open to the world

• Open Innovation

- **€500 mio for multi-actor projects** (interactive innovation linked to EIP-AGRI)



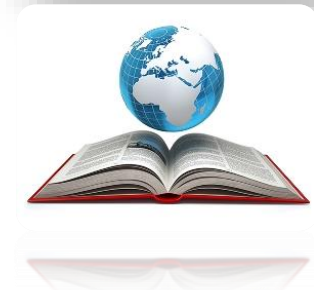
• Open Science

- Research data sharing **by default**
- **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
- **PRIMA**



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 requirement
 - 2 topics with a gender dimension
- **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

HORIZONTE 2020 RETO SOCIAL 2

CAP /Rural development
(regional/national level)



Funding for:

OG preparation

OG projects

Innovation support services



**Unique EU knowledge repository
of contacts and practice abstracts**



(European projects)

- **Research Projects**
- **Multi-actor Projects and Thematic Networks**
(interactive innovation)



**Involvement of OGs is
strongly recommended**

**Spread
the results**

HORIZONTE 2020 Reto Social 2

Programa de Trabajo I+D+i 2018-2020

BUDGET: 1.300 M€

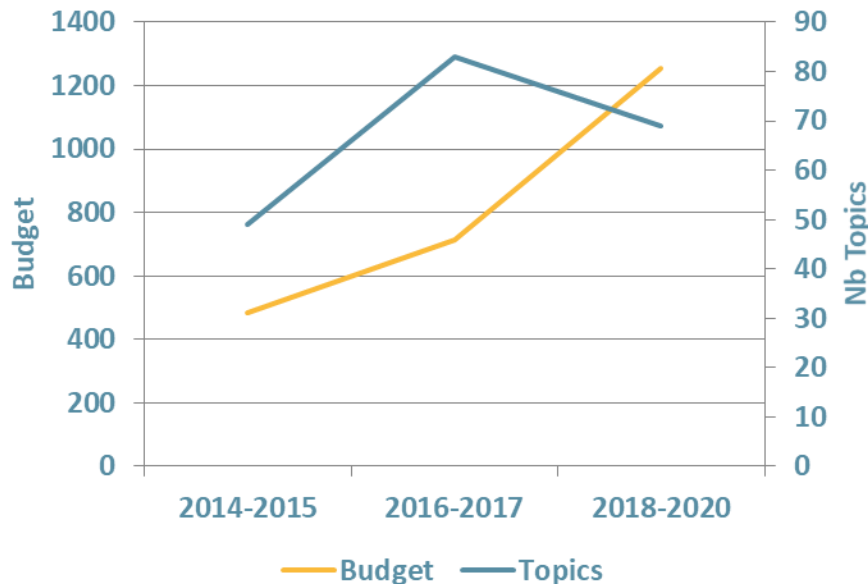
- Food Security
- Sustainable Agriculture & Forestry
- Marine + Maritime + Inland Water Research
- Bioeconomy



HORIZONTE 2020 RS-2 / 2018-2020

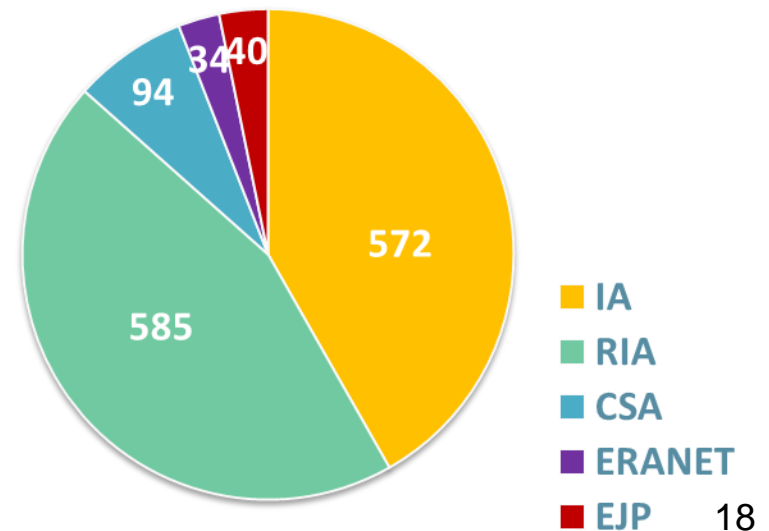
Menos Topics, más presupuesto
→ más Proyectos por Topic

Evolution of SC2 calls budget and topic counts



Más inversión en acciones de nuevo conocimiento cercano al mercado

Budget by type of action (M€)



Sustainable Food Security

753 M€ 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: 112 M€ for joint actions with Africa and China

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
- Personalised 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€

Blue Growth 2018-2019

166,5 M€ 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

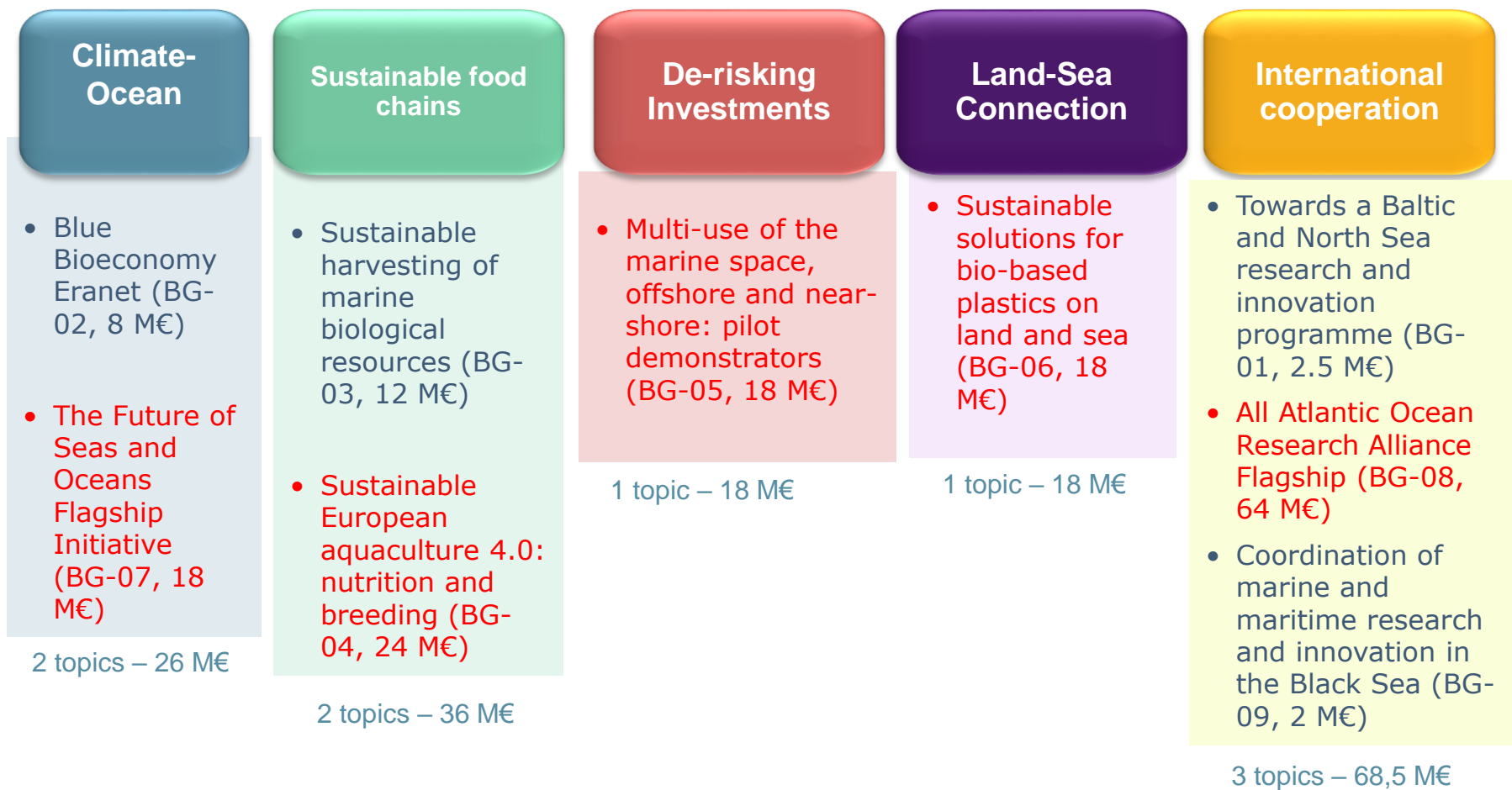
Preserve and sustainably exploit marine and coastal ecosystems, and biological resources to deliver improved nutrition and health

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

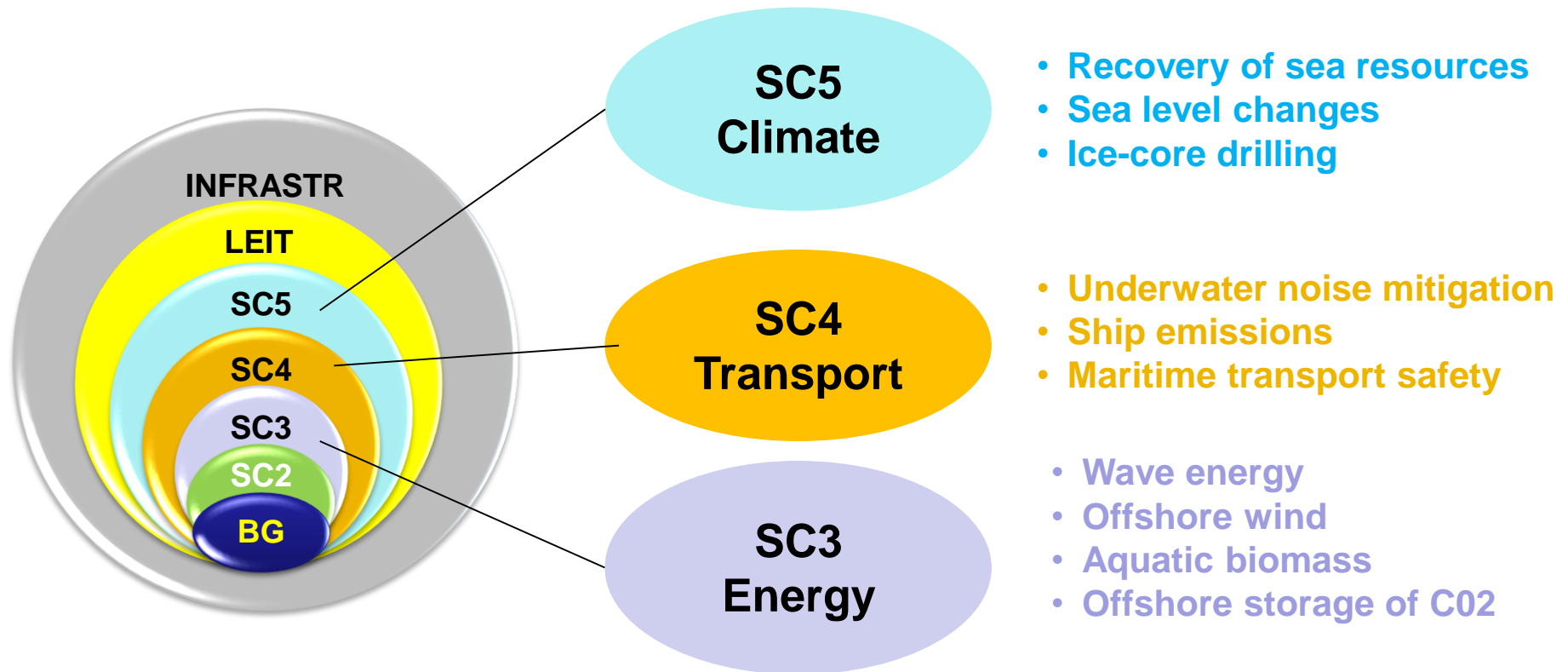
Strengthen international cooperation, to promote a globally sustainable blue economy

Blue Growth Topics (2018-2019): Examples



Type of Actions: RIA, IA, CSA, ERANET

Blue Growth Flags across Several H2020 Work Programmes



Rural Renaissance - Our Territories

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



Invest in businesses:

125 M€ for developing small scale refineries, boosting regional bioeconomy and innovative supply chains



Invest in people:

41 M€ to boost innovation, co-creation and exploitation of knowledge by improving skills and innovation systems



Invest in policies fit for the future:

60 M€ to modernize policies to favour generation renewal and greater resilience and public goods delivery



Go digital:

37 M€ to take make the promises of the digital revolution come true for farmers and rural people

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€

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 topics – 15 M€
4 RUR+ICT topics – 52 M€

Innovation and human capital

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

2 topics – 27 M€

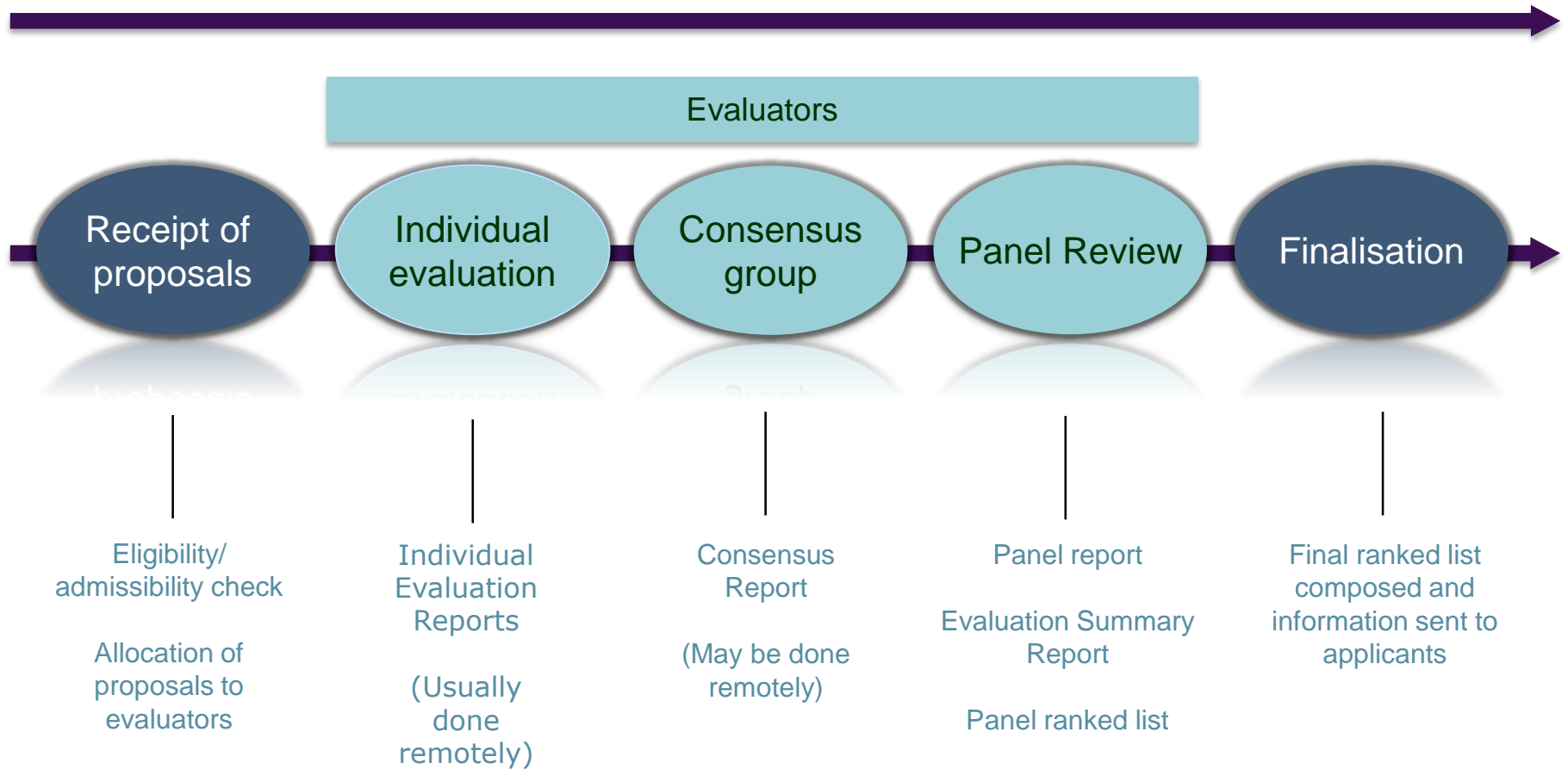
Type of Actions: RIA, IA, CSA

Call Deadlines

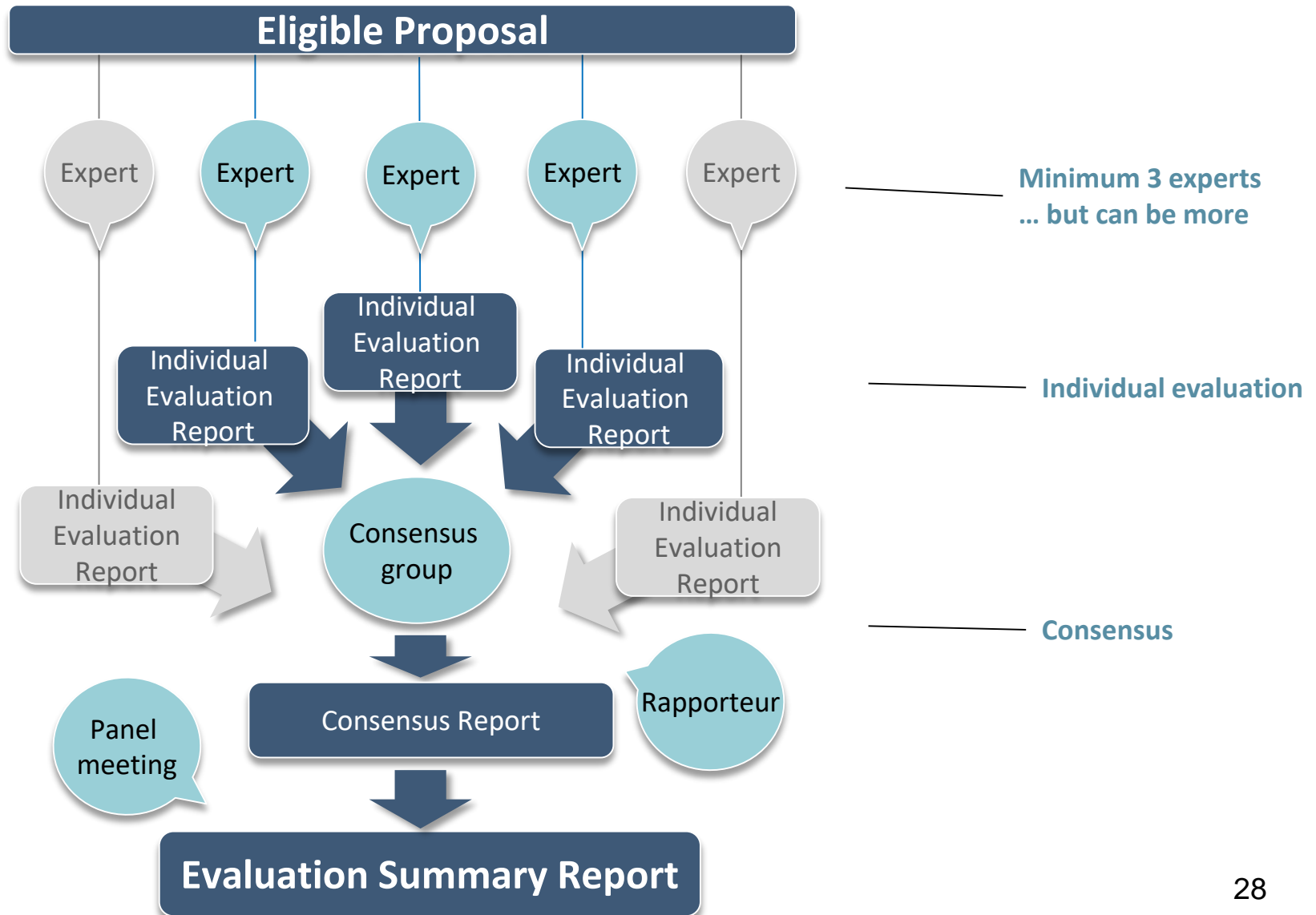
Opening	Submission procedure	Stage	Deadline	Info to applicants	Grant Agreements
16 Oct. 2018	Single Stage	Single stage	23 Jan. 2019	June 2019	Oct. 2019
	2-Stages	1 st stage	23 Jan. 2018	May 2019	-
		2 nd stage	04 Sept. 2019	Nov. 2019	May 2020

Evaluation Process (as usual) for Each Call

Max. 5 months



Evaluation Process (as usual) for Each Call



Evaluation of Proposals

STANDARD AWARD CRITERIA

EXCELLENCE

IMPACT

**QUALITY &
EFFICIENCY
OF THE ACTION**

- ✓ **Innovation actions** >> Higher Weighting for "IMPACT"

Scores

0

The proposal **fails** to address the criterion or cannot be assessed due to missing or incomplete information.

1

Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.

2

Fair. The proposal broadly addresses the criterion, but there are significant weaknesses.

3

Good. The proposal addresses the criterion well, but a number of shortcomings are present.

4

Very Good. The proposal addresses the criterion very well, but a small number of shortcomings are present.

5

Excellent. The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

CONSEJOS BÁSICOS PARA EL ÉXITO



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. Make sure the cost/benefit ratio is sound. Keep in mind that all costs should be reasonable in the light of the foreseen outcomes.

- 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.
- 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.



“HORIZON EUROPE”

THE NEXT EU RESEARCH & INNOVATION PROGRAMME (2021 – 2027)

Budget: €100 billion

- The vision:
"a Europe that Protects,
a Europe that Empowers,
a Europe that Defends"
(Jean-Claude Juncker)
- Tackling **climate change**
(35 % budgetary target)
- Helping to achieve **Sustainable Development Goals**
- Boosting the Union's
Competitiveness and Growth



HORIZON EUROPE

“Evolution not Revolution” Specific objectives of the Programme

Support the creation and diffusion
of high-quality knowledge

Strengthen the impact of R&I
in supporting EU policies

Foster all forms of innovation and
strengthen market deployment

Optimise the Programme’s delivery for impact in a strengthened ERA



Pillar 1
Open Science

European Research Council

Marie Skłodowska-Curie Actions

Infrastructures



Pillar 2
Global Challenges and
Industrial Competitiveness

Clusters

Health
Inclusive and Secure Society
Digital and Industry
Climate, Energy and Mobility
Food and natural resources

Joint Research Centre



Pillar 3
Open Innovation

European Innovation Council

European innovation ecosystems

European Institute of Innovation
and Technology

Strengthening the European Research Area

Sharing excellence

Reforming and Enhancing the European R&I system

HORIZON EUROPE

Clusters in 'Global Challenges and Industrial Competitiveness'

Clusters	Areas of intervention	
Health	<ul style="list-style-type: none"> * Health throughout the life course * Non-communicable and rare diseases * Tools, technologies and digital solutions for health and care 	<ul style="list-style-type: none"> * Environmental and social health determinants * Infectious diseases * Health care systems
Inclusive and Secure Societies	<ul style="list-style-type: none"> * Democracy * Social and economic transformations * Protection and Security 	<ul style="list-style-type: none"> * Cultural heritage * Disaster-resilient societies * Cybersecurity
Digital and Industry	<ul style="list-style-type: none"> * Manufacturing technologies * Advanced materials * Next generation internet * Circular industries * Space 	<ul style="list-style-type: none"> * Key digital technologies * Artificial intelligence and robotics * Advanced computing and Big Data * Low carbon and clean industry
Climate, Energy and Mobility	<ul style="list-style-type: none"> * Climate science and solutions * Energy systems and grids * Communities and cities * Industrial competitiveness in transport * Smart mobility 	<ul style="list-style-type: none"> * Energy supply * Buildings and industrial facilities in energy transition * Clean transport and mobility * Energy storage
Food and Natural Resources	<ul style="list-style-type: none"> * Environmental observation * Agriculture, forestry and rural areas * Food systems * Circular systems 	<ul style="list-style-type: none"> * Biodiversity and natural capital * Sea and oceans * Bio-based innovation systems

Clusters and Sustainable Development Goals

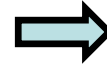
Cluster 5: Food and Natural Resources



Lessons Learned from H2020 Interim Evaluation



Support breakthrough innovation



European Innovation Council



Create more impact through mission-orientation and citizens' involvement



R&I Missions



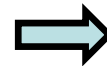
Strengthen international cooperation



Extended association possibilities



Reinforce openness



Open science policy



Rationalise the funding landscape



New approach to Partnerships



<http://www.lavazza.es>



www.Kaffeeform.com

MUCHAS GRACIAS

Jesús Escudero

Relaciones Internacionales

Punto Nacional de Contacto H2020-RS2

Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria – INIA

jesus.escudero@inia.es

