



1. WHAT IS BIOECONOMY



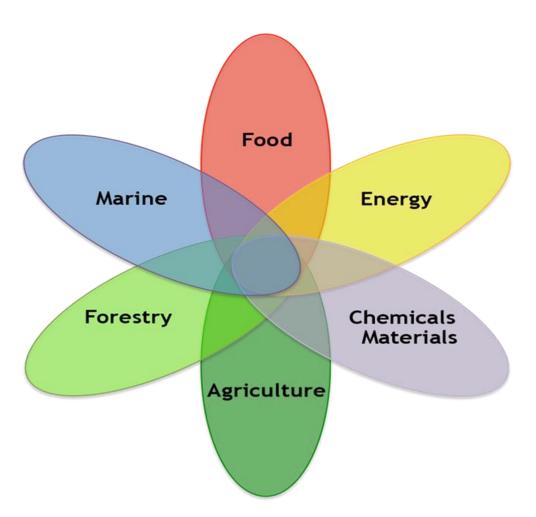
"The Bioeconomy encompasses those parts of the economy that <u>use</u> **renewable biological resources** from land and sea to <u>produce</u> food, biomaterials, biomenergy and biomproducts."

EU bioeconomy strategy, 2012





Bioeconomy



Using biological resources to produce "more and better, from less"

Oil dependency
CO2 emmissions

Wastes (agriculture, fisheries, food)

> NEW REVENUE GAINS

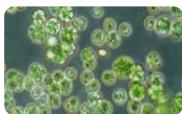


Life sciences enable the creation of new bio-based value chains

Primary production

Waste







INTO





Sugar beets

Algae

Wood residues

Biological waste

Fish waste



Cosmetics



Plastic bottles Natural colourants for candy



Dashboards



Bio-based plastics



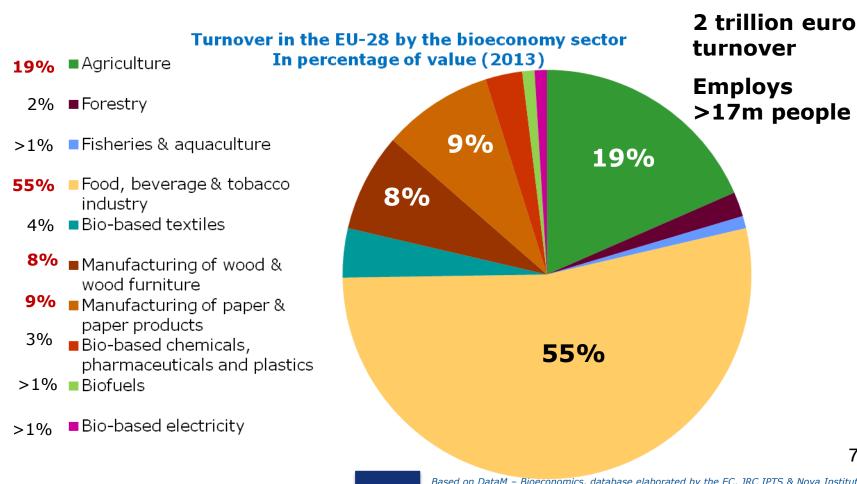
Pharmaceuticals



Bioeconomy - EU & regions



Bioeconomy is key for Europe





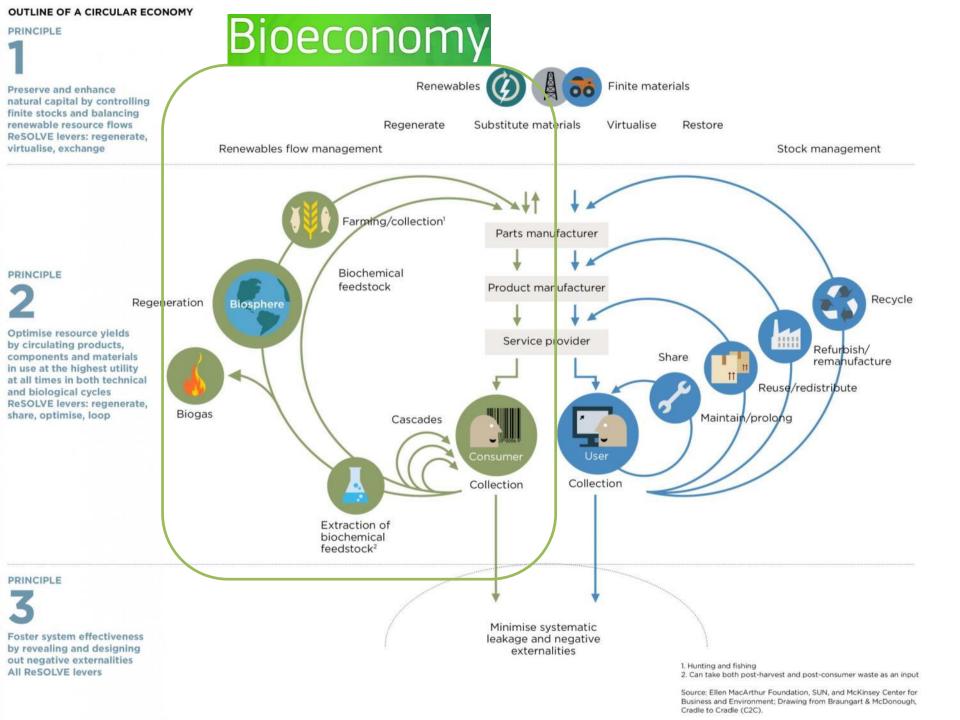
2. EU CONTEXT

2. EU context



- 1. A new boost for jobs, growth and investment
- 2. A connected digital single market
- 3. A resilient Energy Union with a forward looking climate change policy
- 4. A deeper and fairer internal market with a strengthened industrial base
- 5. A deeper and fairer EMU
- 6. A reasonable and balance free-trade agreement with the U.S.
- An area of justice and fundamental rights based on mutual trust
- 8. Towards a new policy of migration
- 9. A stronger global actor
- 10. A Union of democratic change







3. EU BIOECONOMY POLICY





EU Bioeconomy Strategy introduced in 2012



EU Bioeconomy Action Plan

Investment in R&I



Policy interaction & stakeholder engagement



Enhancement of markets and competitiveness in bioeconomy



- Horizon 2020
 - 3.8 bn €
- Increase multidisciplinary & cross-sectoral R&I
- Smart Specialisation
- EFSI

- Bioeconomy Panel
- Bioeconomy observatory
- EU Policy coherence
- Development of regional and national bioeconomy strategies
- International cooperation

- Sustainable intensification of primary production
- Expansion of new markets
- Increase EU competitiveness
- BBI JU
 - 3.5 bn €





Bioeconomy Policies around the World

Source: German Bioeconomy Council, Maisei/fotolia.com (flags), jktu_21/fotolia.com

- dedicated bioeconomy strategy
- bioeconomy-related strategy
- be-related strategy; dedicated be-strategy is under development
- dedicated be-strategy is under development ent

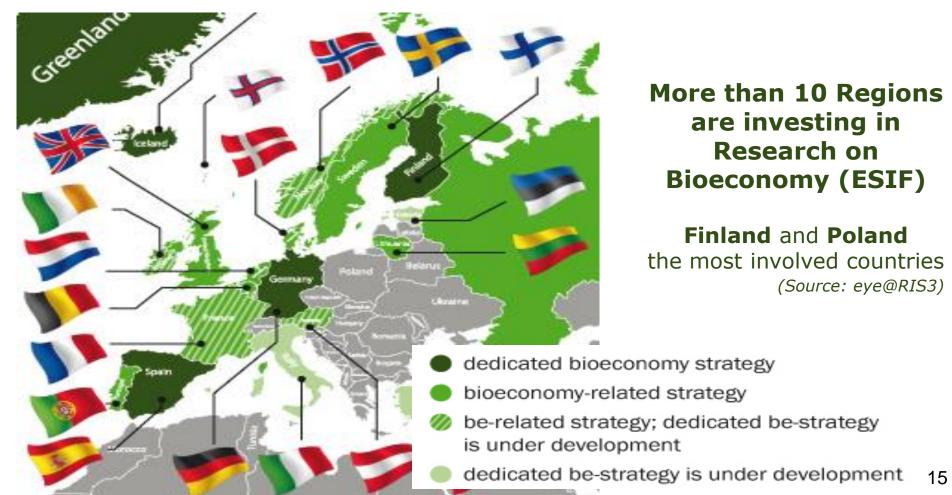




Source: German Bioeconomy Council, Maisei/fotolia.com (flags), jktu_21/fotolia.com

IN EUROPE:

Several MS have adopted national Bioeconomy Strategies.





Global production capacities of bioplastics in 2014 (by region)

Total:

1.7 million

tonnes

in%

14.0

12.0

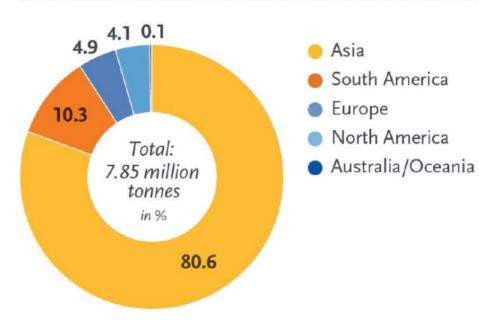


58.1

Australia/Oceania

Europe

Global production capacities of bioplastics in 2019 (by region)

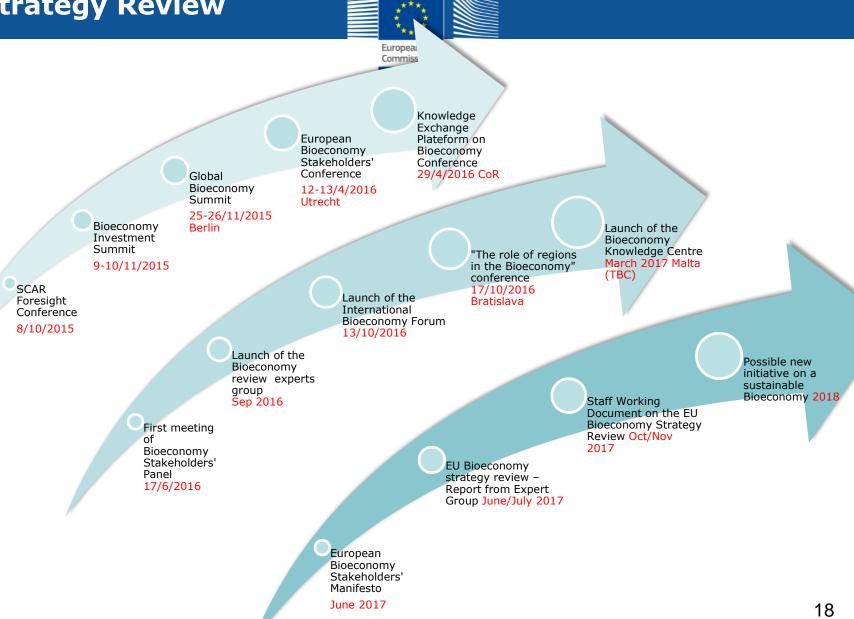


Europe needs to act to remain competitive for industrial production and attract investment in the bioeconomy



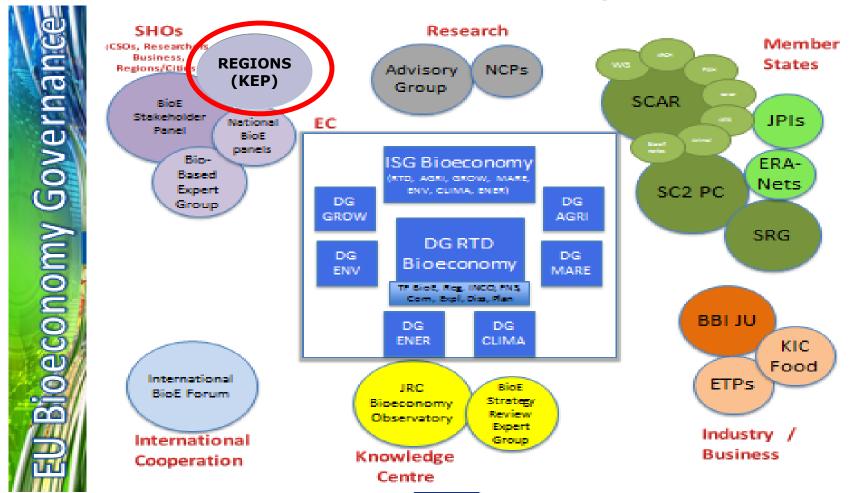
4. EU BIOECONOMY STRATEGY REVIEW

The EU Bioeconomy Strategy Review





We count on EU regions for the review of the Bioeconomy Strategy





STAKEHOLDERS MANIFESTO

BIOECONOMY UTRECHT 2016



CHALLENGES & OPPORTUNITIES FOR EU REGIONS: (POINT 8)

- Need to revitalise rural and coastal areas.
- Bioeconomy for high-value production in the <u>regions</u>,
- New opportunities & jobs for farming, forestry and aquaculture.
- The marine environment potential as part of the circular bioeconomy.

GUIDING PRINCIPLES: (POINTS 16 & 17)

- Europe's cities & regions should play a key role for the BioE.
- We should fully utilise the available biomass and better valorise the use of agricultural land...
- Marine production and aquaculture offer new possibilities.

ACTIONS: (POINT 22)

- Mutual learning within & between regions, peer-to-peer exchanges at the EU
- Link between regional bioeconomy strategies and smart specialisation
- Creation of new value chains, stairways of excellence, jobs and growth
- Redesign current agricultural-, energy and waste policies



5. EU REGIONS ARE KEY PLAYERS FOR THE BIOECONOMY

REGIONAL ASPECTS & BIOECONOMY H2020-ESIF SYNERGIES / SEAL OF EXCELLENCE



What areas are EU regions going to invest in? (RIS3)



Food Security & Safety 34 regions (15%)

Sustainable Agriculture

24 regions (11%)



& Renewables

Industrial Biotechnology 50 regions (22%)



20% 45 regions

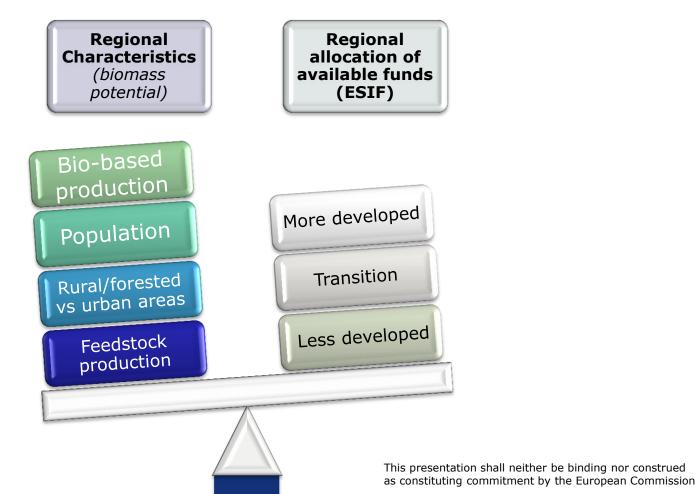
Aquaculture: 7 regions (3%)

Blue Renewable Energy: 9 regions (4%)

Marine Biotechnology: 2 regions (1%)



EU Regions' diversity is their advantage!





Regional Bioeconomy Strategy Development 4 fundamental ingredients





SUGGESTED ACTIONS ON THE GROUND FOR EU REGIONS:

→ Provide market **Supply** by **exploiting local biomass**



-> Create market **Demand** by investing in **new value chains** (ESIF)

EU & regions needs to act fast to remain competitive & attract investments



REGIONAL ACTIONS & BIOECONOMY - EXAMPLES - ESIF

URBAN - RURAL INTER-LINKAGES:

Investment in <u>local</u> economic activities to support production of **regional quality agriproducts & foodstuff** (PDO, PGI)

WASTE: Reduction of food waste (biodegradable), waste treatment, reuse and Recycling channels. – CIRCULAR ECONOMY

REDUCE ENVIRONMENTAL IMPACT

(agric./forestry) e.g. new technologies for utilization of water resources

LOW-C: new low-C technologies and logistical solutions in rural context for conversion of biomass & sustainable use of biofuels

BIOENERGY:

Developing biorefineries networks

- Scale-up of biorefineries (pilot/demo)
- Networks of small and large biorefineries
- New supply chains & logistics for feedstock (including residues and waste)
- Bio-based industries with dedicated PPPs

INNOVATION FOR AGRO-FOOD INDUSTRY:

Food packaging innovative solutions Converting food waste into bio-based plastics Improving resource efficiency & sustainability

BIO-BASED PRODUCTS MARKETING COMMERCIALISATION - Public procurement

AWARENESS RAISING:

use of new bio-materials & products in everyday life

SMEs BIOECONOMY Helpdesk:

structures / business support services clusters

access to information on BE investments and new technologies (e.g. IPR, labelling, standardisation)



BIOECONOMY TOOLS, INITIATIVES

PRIORITIES

TOOLS/INITIATIVES

- 1. NATIONAL BIOECONOMY STRATEGIES
- 1. Bio-based Industries Joint Undertaking (BBI JU)
- 2. Horizon 2020 / Societal Challenge 2
- **3. FOOD 2030** 13/10 conference (policy tool)
- 4. Bioeconomy Knowledge Centre
- 5. Bioeconomy Cities 6/10 workshop

www.bbi-europe.eu/

BERST project
http://www.berst.eu/
S2Biom project
http://www.s2biom.eu/en/

https://ec.europa.eu/jrc/en/scien tific-tool/bioeconomyobservatory

2. COOPERATION

- inter-regional
- cross-regional
- macro-regional
- 6. Smart Specialisation Platform Agro-Food 6-7/12 kick-off, joint investments
- 7. Knowledge Exchange Platform (KEP)
- 8. Tools to link EU regions, clusters and networks

(study, eye@ RIS3, SCAR, BioE Stakeholders Panel, ERRIN, ERRIAF, Bio-NCPs, EIP - AGRI, Vanguard)

9. Macro-regional Strategies (policy tool)

http://s3platform.jrc.ec.europa.eu/a
gri-food

Next event: 16/11 [Czech Rep]

EYE @RIS tool http://s3platform.jrc.ec.europa.eu/ map http://www.s3vanguardinitiative.eu

BONUS, BLUEMED

3. FINANCIAL TOOLS

- 10. H2020-ESIF Synergies on Bioeconomy
- 11. InnovFin
- 12. Juncker Package ESFI

Seal of Excellence (SoE) Guides:

https://ec.europa.eu/research/regio ns/index.cfm?pg=publications





Eye@RIS3 – an online database - RIS3 priorities

Wide variety of specific RIS³ priorities, cross-sectoral and cross-technology sub-areas:

101 results for 'Agriculture, forestry & fishing'

Bio-economy products additives packaging natural recycling distribution bio-energy agro linevative chemistry husbandry foodstuffs environment production Marine crops energies Environmental fisheries efficiency exports cultures economy molecules agricultural life form animal livestock horticulture equipment industrial life form cosmetic value energy Biodiversity farming Dairy waste Blue forest change continental green clean crop materials bio-resources Agro-Industry services Growth Biogas based future RETs health chemical precision hybrid healthy Gastronomy cosmetics security conservation healthy Gastronomy cosmetics security industries chain organic sustainability precision processing forestry numbers sustainability precision processing forestry numbers security precision bioenergy bioenergy numbers security precision processing forestry numbers security numbers number

167 EU regions (from 19MS)

- + 18 EU MS at national level
- + observers from Norway, Serbia, Turkey, Moldova

YOU MAY USE TO:

- √ to identify your niches
- √ to enable benchmarking
- √ to seek partners

Register here:

http://s3platform.irc.ec.europa.eu/registration



Bioeconomy EU successful projects - For regions' inspiration!











Source photo: metsaboard.com

EFSI Aanekoski – FINLAND:

Next generation

bio-product mill

for boxboards

and white

linerboards

production made

from <u>fresh forest</u> fibres

FIRST 2 RUN
PROJECT:

(17m€, Sardinia)

An abandoned

oil refinery

transformed

into a biorefinery

uses dry crops

for the production of chemicals used for food/feed, energy MIRACLES
PROJECT
(12m€)

New technologies
that uses <u>algae</u>
to produce useful
products for
food, aqua-feeds
& non-food
production

CHIMIO PROJECT:

Facial
creams &
bioplastics
made from
crab-shell
waste

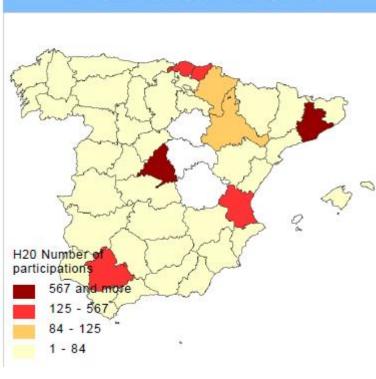
AQUARIS - Brussels:

(2011, 1st industrial prototype)

Bioplastic production from municipal wastewater

VALENCIA AND SPAIN PARTICIPATION IN H2020

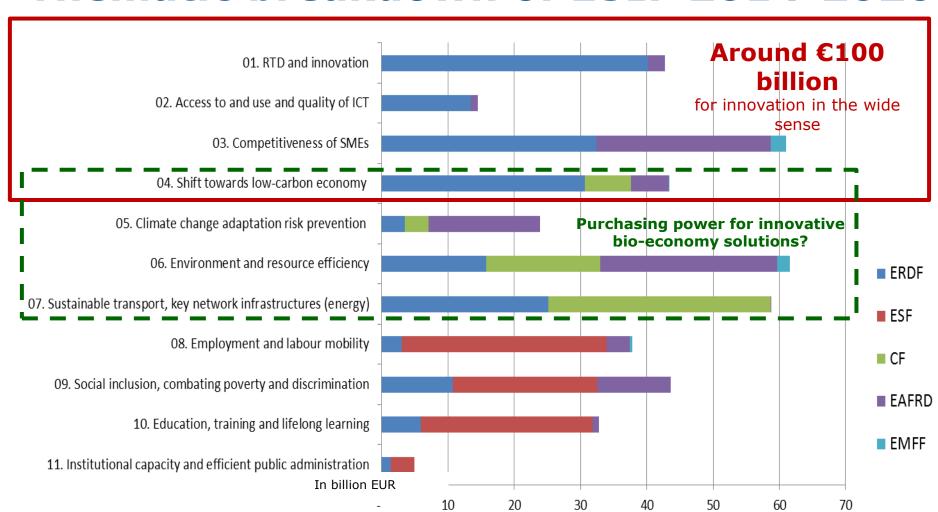
ES - Spain - H2020 participation (NUTS3)



Valencia / Valencia (ES523) at Glance			
Region Profile Indicators	Valencia / València	Spain	EU-28*
Nr. of H2020 applicants	2.270 (6,55% of ES, 0,78% of EU-28*)	34.633 (11,86% of EU-28*)	291.954
Req. EC contribution by H2020 applicants in EUR million	873,26 (6,17% of ES, 0,66% of EU-28*)	14.154,15 (10,68% of EU-28*)	132.533
Nr. of successful H2020 applicants	252 (5,51% of ES, 0,62% of EU-28*)	4.577 (11,24% of EU-28*	40.738
Req. EC contribution by successful H2020 applicants in EUR million	88,18 (5,17% of ES, 0,51% of EU-28*)	1.706,15 (9,81% of EU-28*)	17.396,21
Success rate H2020 applicants	11,1%	13,2%	13,1%
Success rate H2020 EC contribution	10,1%	12,1%	13,1%
Nr. of H2020 grant holders	235 (5,73% of ES, (0,65% of EU-28*)	4.098 (11,26% of EU-28*)	36.392
EC contribution to H2020 grant holders in EUR million (% EU-28*)	75,83 (5,19% of ES, 0,50% of EU-28*)	1.459,65 (9,54% of EU-28*)	15.305,24
Nr. of H2020 coordinators (% of grant holders)	6 1 (25,96%)	1.155 (28,18%)	8.886 (24,42%)
Nr. of H2020 SME grant holders (% grant holders)	107 (45,53%)	1.082 (26,40%)	8.069 (22,17%)
EC contribution to H2020 SME grant holders in EUR million (% of grant holders)	32,39 (42,71%)	302,55 (20,73%)	2.591,57 (16,93%)



Thematic breakdown of ESIF 2014-2020

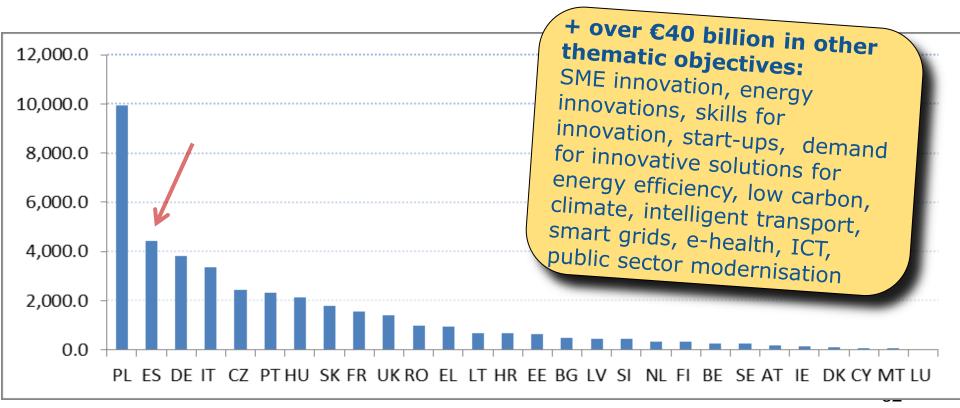


Source: Final ESIF partnership agreements as of December 2014



ESIF budget for research and innovation (TO1)

- € 43,7 billion + € 22 national/regional co-financing
 + over €10.2 billion Private investment matching public support in R&I
- Including € 10 billion in financial instrument





SYNERGIES....WHY?

Scarce resources:

LEGAL BASIS: H2020 & ESIF REGULATIONS

POLITICAL MANDATE: JUNCKER TO MOEDAS & CRETU



- More efficiency
- Best use of public funds
 - ✓ Synergies between Horizon 2020 and ESIF aim at maximising quantity, quality and impact of R&I investments through interactions between the two policy frameworks

SYNERGIES....HOW?

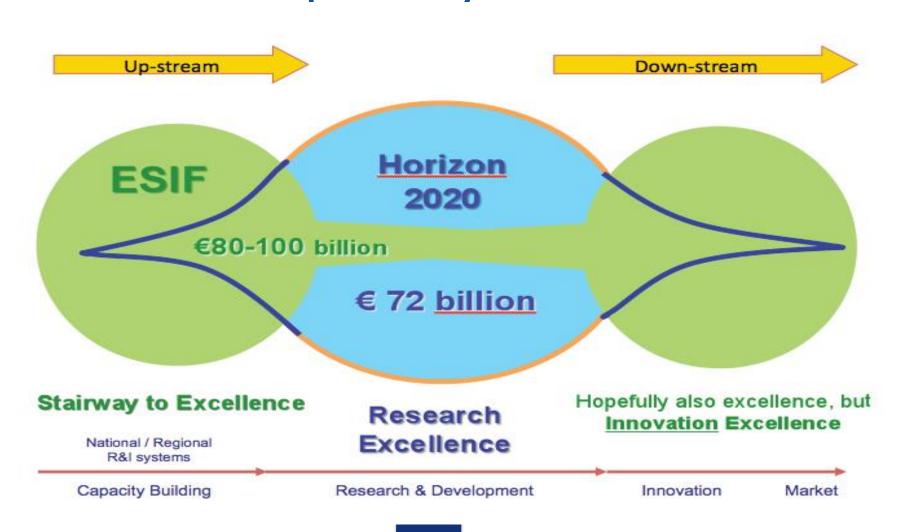
In the <u>same</u>, <u>successive</u> or <u>parallel</u> projects

- ✓ NO double funding of the same cost
- ✓ NO substituting of national/regional or private co-funding to projects/programmes from other instruments (cumulative funding).
- ✓ NO diversion of funding away from the purpose (RIS3)

SYNERGIES H2020-ESIF



ESIF – H2020: Complementary role in innovation chain



SYNERGIES CASE STUDIES: R&I actions - Pilot facilities

1) Bio Base Europe - Flanders and The Netherlands

Europe's 1st open innovation and training centre for bio-based economy www.bbeu.org

Co-Funded by ESIF (Interreg IV 2007-2013)





2) Bioprocess Pilot Facility - Biotech Campus Delft / The Netherlands 5,000 m2 - pilot production, scale-up processes www.biotechcampusdelft.nl

Co-funded by ESIF/ERDF







- 3) AdiTech / Navarra, Spain www.aditechcorp.com
- Regional Technology/R&I Centers + industry (agrifood, Renewable Energies, Industry, and Biomedicine)

Experimental
Biorefinery 2nd Generation
Biofuels
Center-CB2G
(ESIF)

Further DemoJoint pilot action
with the industry
(H2020)

Upscale to larger facilities (ESIF, H2020/BBI JU)



The Seal of Excellence (SoE): example of Synergies H2020 – ESIF

Declaration on "Seal of Excellence" (SoE)

Declarations of the Commission (Framework Programme) 2013/C 373/02 of 20.12.2013

'Union level intervention enables EU-wide competition to select the **best proposals**, thereby raising levels of excellence and providing visibility for leading research and innovation.

The Commission considers that **positively evaluated** European Research Council, Marie Sklodowska-Curie, teaming actions, phase-2 **SME instrument** or collaborative project **proposals** that could not be funded for budgetary reasons, have still met the Horizon 2020 criterion of excellence.

Upon approval of the participants, this information can be shared with the responsible authorities.

The Commission therefore **welcomes any initiatives to fund such projects** by national, regional or private sources. In this context, **cohesion policy also has a key role to play** through building capacity.'





Horizon 2020 evaluation:

Punding threshold due to H2020 budget availability

Punded

Meriting funding

Quality threshold:

Rejected: not ready for funding

<u>Excellent proposals</u> receive the SEAL OF EXCELLENCE certificate



Pilot using the SME Instrument

- Close to intervention logic of ESIF authorities:
- ✓ Single company
- ✓ Small scale R&I actions
- ✓ Close to market



Regions/MS taking-up 'seal of excellence' proposals:

- ✓ Benefit from pre-screening by H2020
- ✓ Make the most of a unique, high quality evaluation process
- ✓ Better use the resources
- ✓ Invest on high local impact proposals

The SME Instrument: Seamless Rusiness Innovation Support from Mature Idea to Market **≡ EU** Grant of € 500,000 to 2.5 m **U**3 (indicative amount) **EU** Grant of € 50,000 Commercialisation (lump sum) support measures toward commercialising SMEs' innovative **Demonstration** products activities developing, testing, Market Success prototyping, piloting **Technical and market** innovative processes, feasibility products and services assessment of technical feasibility and market potential of new ideas Commercialisable Output **Elaborated Business** Plan DEMO (TRL 6) • No grant, but... Coaching support Market and Investment Idea > Business Plan Readiness support • Promotion / networking with financiers & clients Source: RTD B3 ... and more indirect support!





Certificate delivered by the European Commission, as the institution managing Horizon 2020, the EU Framework Programme for Research and Innovation 2014-2020

The project proposal 662526, ECO-MAT

Develop XXXXXXXXXX TITLE XXXXXXXXXXXXXXXXXXX

Submitted under the Horizon 2020's SME Instrument call 2020-SMEINST-1-2014 of 15 September 2015 in the area of

Boost XXXXXXXXXXXXX TOPIC XXXXXXXXXXX

Xx Legal name xx

Xx Legal address xx

following evaluation by an international panel of independent experts

WAS SUCCESSFUL IN A HIGHLY COMPETITIVE EVALUATION PROCESS*
AS AN INNOVATIVE PROJECT PROPOSAL

This proposal is recommended for funding by other sources since Horizon 2020 resources available for this specific Call were already allocated following a competitive ranking.

* This means passing all stringent Horizon 2020 assessment thresholds for the 3 award criteria (excellence, impact, quality and efficiency of implementation) required to receive funding from the EU budget Horizon 2020.

Corina Cretu, Commissioner for Regional Policy

Carlos Moedas, Commissioner for Research, Science and Innovation

Crete

Brussels, 11 March 2014

The SEAL OF EXCELLENCE:

- □ Awarded to ALL qualifying SME instrument PROPOSALS
- □ **Downloadable** only by the SME/s from 'My area' in Participants Portal
- ☐ Informs
- Builds reputation
- **□** Explains
- Shows Political committment
- Fraud-proof
- □ Accompanying letter



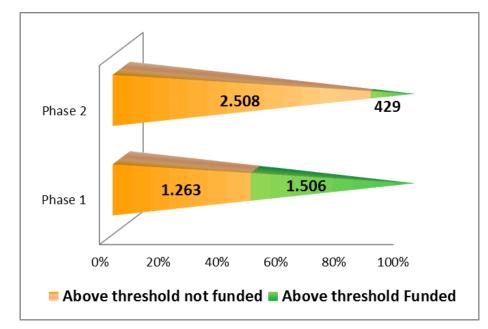


SME INSTRUMENT:

HIGHLY POPULAR AND COMPETITIVE SCHEME

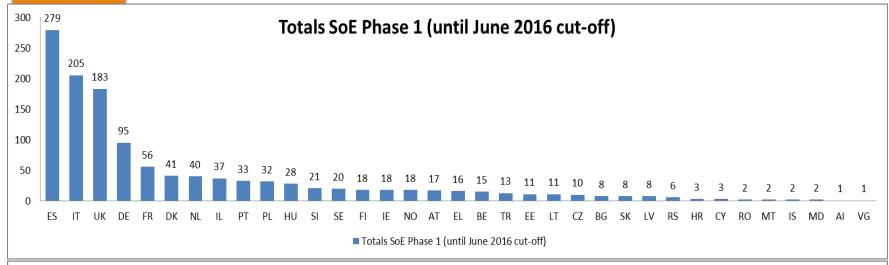
Phase 2 4.606 2.937 Phase 1 15.719 2.769 % 20% 40% 60% 80% 100% Proposals below quality threshold Proposals above quality threshold

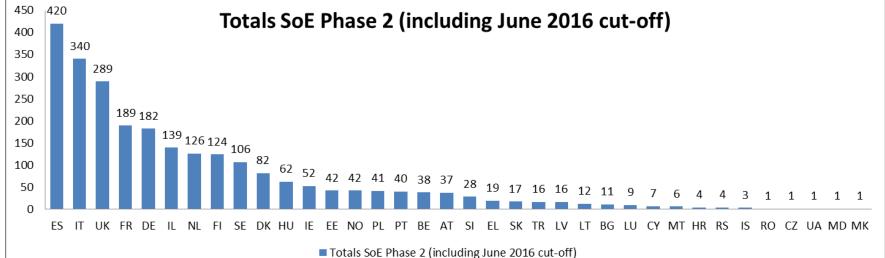
MANY DESERVING, FEW FUNDED...





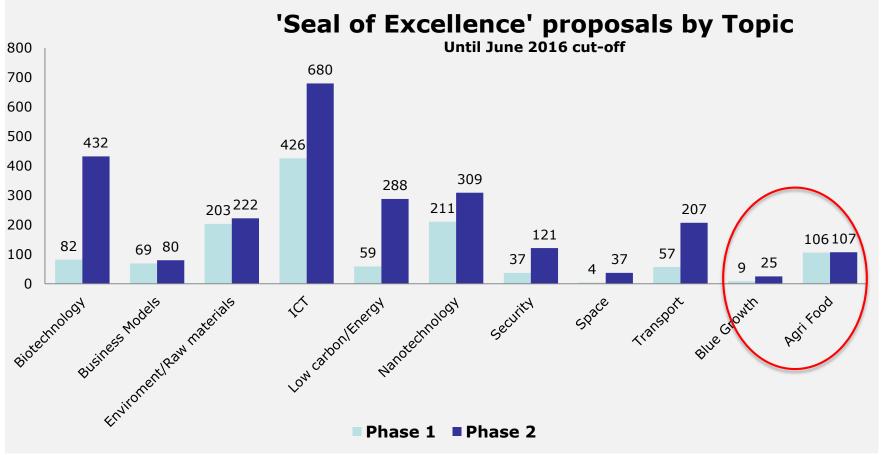
★ SEAL OF ★ EXCELLENCE









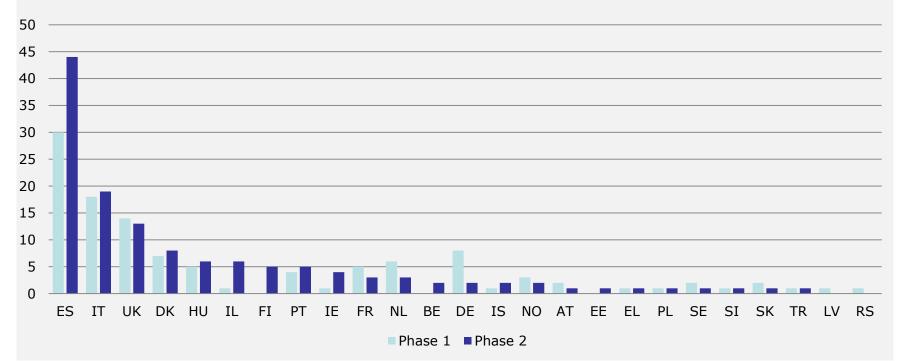






'Seal of Excellence' on BioEconomy by countries

Until June 2016 cut-off





SoE in numbers (all proposals including BioE) - SPAIN - allocation per region

SoE by NUTS-2 until June 2016 cut-off

* Data includes only coordinators in the country (not partners)

		Phase 1	Phase 2	Totals
ES	ESPAÑA	279	420	699
ES11	Galicia	7	10	17
ES12	Principado de Asturias	4	7	11
ES13	Cantabria	4	6	10
ES21	País Vasco	20	23	43
ES22	Comunidad Foral de Navarra	13	8	21
ES23	La Rioja	4	18	22
ES24	Aragón	11	27	38
ES30	Comunidad de Madrid	49	87	136
ES41	Castilla y León	9	12	21
ES42	Castilla-La Mancha	2	1	3
ES43	Extremadura	0	2	2
ES51	Cataluña Cataluña	80	129	209
ES52	Comunidad Valenciana	47	54	101
ES53	Illes Balears	1	1	2
ES61	Andalucía	18	12	30
ES62	Región de Murcia	7	19	26
ES63	Ciudad Autónoma de Ceuta	0	0	O
ES64	Ciudad Autónoma de Melilla	0	0	0
ES70	Canarias	3	4	7
ESZZ	Extra-Regio NUTS 2	0	0	O
TOTAL IN EU		1,183	2,301	3,484



"Seal of Excellence (SoE)" bring excellent R&I proposals to regions

https://ec.europa.eu/research/regions/index.cfm?pg=soe

IN EUROPE - EU28:

Total SoE proposals: >3.500
Bioeconomy SoE proposals (SFS, BG): ~230

In SPAIN:

Total SoE proposals: **699** (279 Ph-1, 420 Ph-2)

Bioeconomy SoE proposals (SFS, BG): **74** (44 Ph-1, 30 Ph-2)

In VALENCIA:

Total SoE proposals: **101** (**47** Ph-1, **54** Ph-2) of which, Bioeconomy SoE proposals (SFS, BG): **3**

(1 Ph-1, 2 Ph-2, 2.358.815 €)

7% of all SoE proposals go to Bioeconomy

20% of all SoE proposals go to SPAIN (all fields including BioE)

30% of all BioE proposals go to SPAIN

3% of all SoE proposals go to VALENCIA



Calls/funding Phase 1 - 'seal' proposals

Available now:

Spain:

Call 2015: €8.6m, Phase-1, 136 SoE supported, <u>closed</u>: 10/2015 Call 2016(Horizonte PYME): €3.7m, <u>closed</u>: 18/5/2016

Under preparation:

Asturias:

Call for Asturias SoE: €350K, 7 SoE proposals; in June 2016

http://ec.europa.eu/research/regions/index.cfm?pg=soe_cases#case2Spain





KEY MESSAGES TO SMEs:

SMEs usually welcome the seal, BUT <u>Expectations have to be managed</u>:

- A great opportunity, but process just starting: be patient!
- No guarantee of 'automatic' alternative funding and/or to the funding intensity of H2020 / Not to be used for DOUBLE FUNDING
- It's up to the applicant/SME to use it (no obligation!)
- Make available to the funder ALL documents at your disposal (Full Proposal, Evaluation Summary Report,...)
- DIVERSIFY your search for funding (NOT ONLY ESIF!)
 - In terms of <u>sources</u> (public ESIF or own resources)
 and <u>type</u> (grants / <u>financial instruments</u>)



KEY MESSAGES TO FUNDING BODIES:

(Managing Authorities, nat/reg agencies, private foundations, banks, VCs, bus.angels)

- SoE are excellent projects, not left-overs from Horizon 2020 (strict criteria, international panel, transparent and competitive evaluation)
- Great opportunity to exploit H2020 first-class evaluation system
- **Keep the process as simple as possible: no need to re-evaluate the content**
- **ESIF** can be used, just foresee it in the Selection Criteria!

EXCELLENCE

- Different support can be provided: grants/loans/guarantee/... general support
- 'Seal'- under-performing MSs: consider the learning curve and incentive effect!

You are not alone: join the COMMUNITY OF PRACTICE!



OUR PROPOSAL TO SUPPORT YOU:

The Community of Practice Official launch: 12/10/2015 (Open Days)

- ➤ MEMBERSHIP: funding bodies interested in invest in SoE
- > PURPOSE: Exchange of practices, address / solve bottlenecks
- > TOOLS: Intranet (Sinapse) + regular meetings in Bruxelles
 - → Next meeting: 20 October 2016
- In SEPT 2016: 175 members from 25 MSs+Norway and Serbia

ES members: Catalonia, Aragon, Asturia, Galicia, Cantabria, Andalucia

FUNCTIONAL MAILBOX FOR YOUR EXPRESSION OF INTEREST Or MORE INFO:

RTD-SEAL-OF-EXCELLENCE@ec.europa.eu

Useful for you











Bio-Based Industries Joint Undertaking (BBI-JU)

http://www.bbi-europe.eu/

SYNERGIES & SEAL OF EXCELLENCE (<u>new website</u>!)

http://ec.europa.eu/research/regions/

GUIDE FOR AUTHORITIES ON ESIF-H2020 SYNERGIES

http://ec.europa.eu/regional policy/activity/research/index en.cfm

AGRI-FOOD SMART SPECIALISATION PLATFORM

http://s3platform.jrc.ec.europa.eu/agri-food (new initiative!)

VANGUARD INITIATIVE/ Bioeconomy Pilot Project

http://www.s3vanguardinitiative.eu/cooperations/bioeconomy-interregional-cooperationinnovative-use-non-food-biomass

GUIDES ON ESIF-H2020 SYNERGIES

http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/other/index.html http://www.bbi-europe.eu/sites/default/files/documents/Guidelines BBI-ESIF-Final.pdf

S3 KNOWLEDGE REPOSITORY

http://s3platform.jrc.ec.europa.eu/knowledge-repository

More info: Christina Nanou (DG RTD)

christina.nanou@ec.europa.eu





Bioeconomy: A new opportunity for EU regions!