



INTRODUCTION TO THE EUROPEAN BIOECONOMY STRATEGY AND SCAR

Liutauras Guobys

SCAR Secretary, Policy Officer – Bioeconomy Strategy,
Bioeconomy Directorate, DG RTD, European Commission

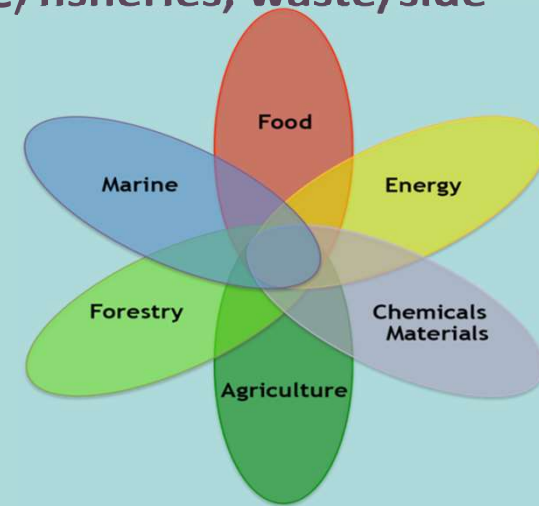
SCAR National Meeting in Poland
Ministry of Agriculture and Rural Development, Warsaw
14 November 2018

What is the EU's understanding of the Bioeconomy ...

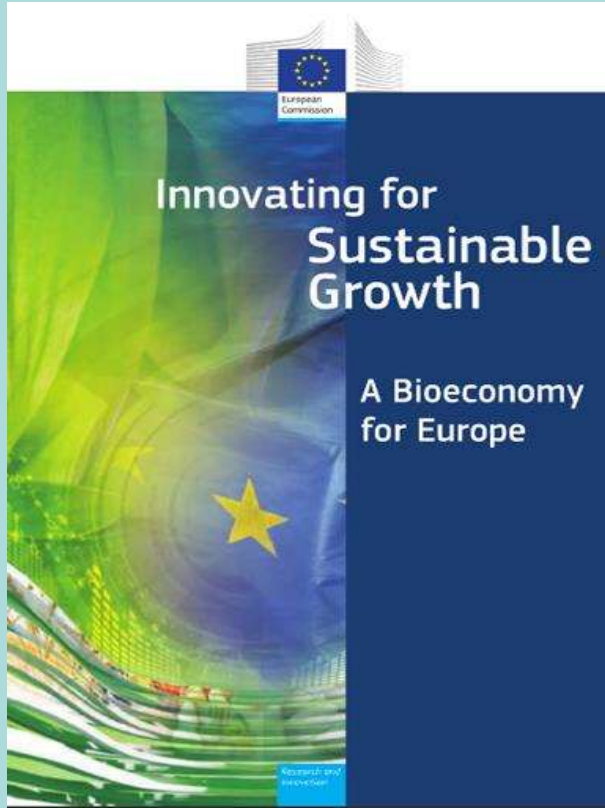
The next wave in our economic development

All sectors and systems that use, produce, process, are driven by biological resources - animals, plants, micro-organisms and derived biomass, including organic waste:

- **ecosystems - land and marine**
- **primary production sectors (agriculture, forestry, aquaculture/fisheries, waste/side streams)**
- **food, feed, bio-based products, energy and services**



Bioeconomy: the European way to use our natural resources



2012 EU Bioeconomy Strategy

COM/2012/060 Final; SWD/2012/011 Final

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The Bioeconomy Concept

Definition of the Bioeconomy Concept (EU BioE Strategy, 2012):

- The Bioeconomy encompasses the *production of renewable biological resources and the conversion of these resources and waste streams into value-added products, such as food, feed, bio-based products and bio-energy.*

Addressing cross-cutting societal and environmental challenges:

- increasing global *population*;
- rapid depletion of many *resources*;
- increasing *environmental* pressures;
- *climate* change.

Aim:

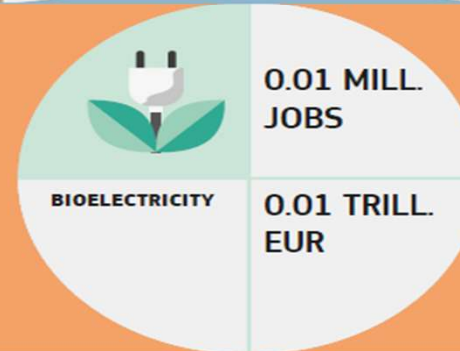
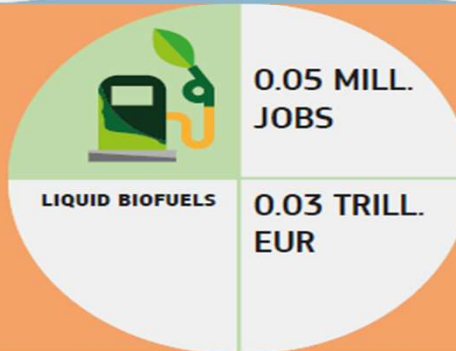
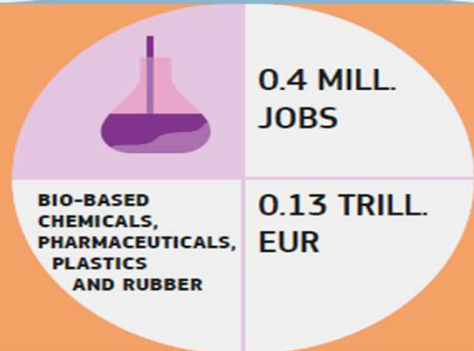
- To pave the way to a more *innovative, resource efficient and competitive society* that reconciles *food security* with the *sustainable use of renewable resources* for industrial purposes, while ensuring *environmental protection*.

In 2015:

- 18,5 million jobs (~8% of EU's workforce)
- 2,3 trillion Euro turnover
- 621 billion Euro value added

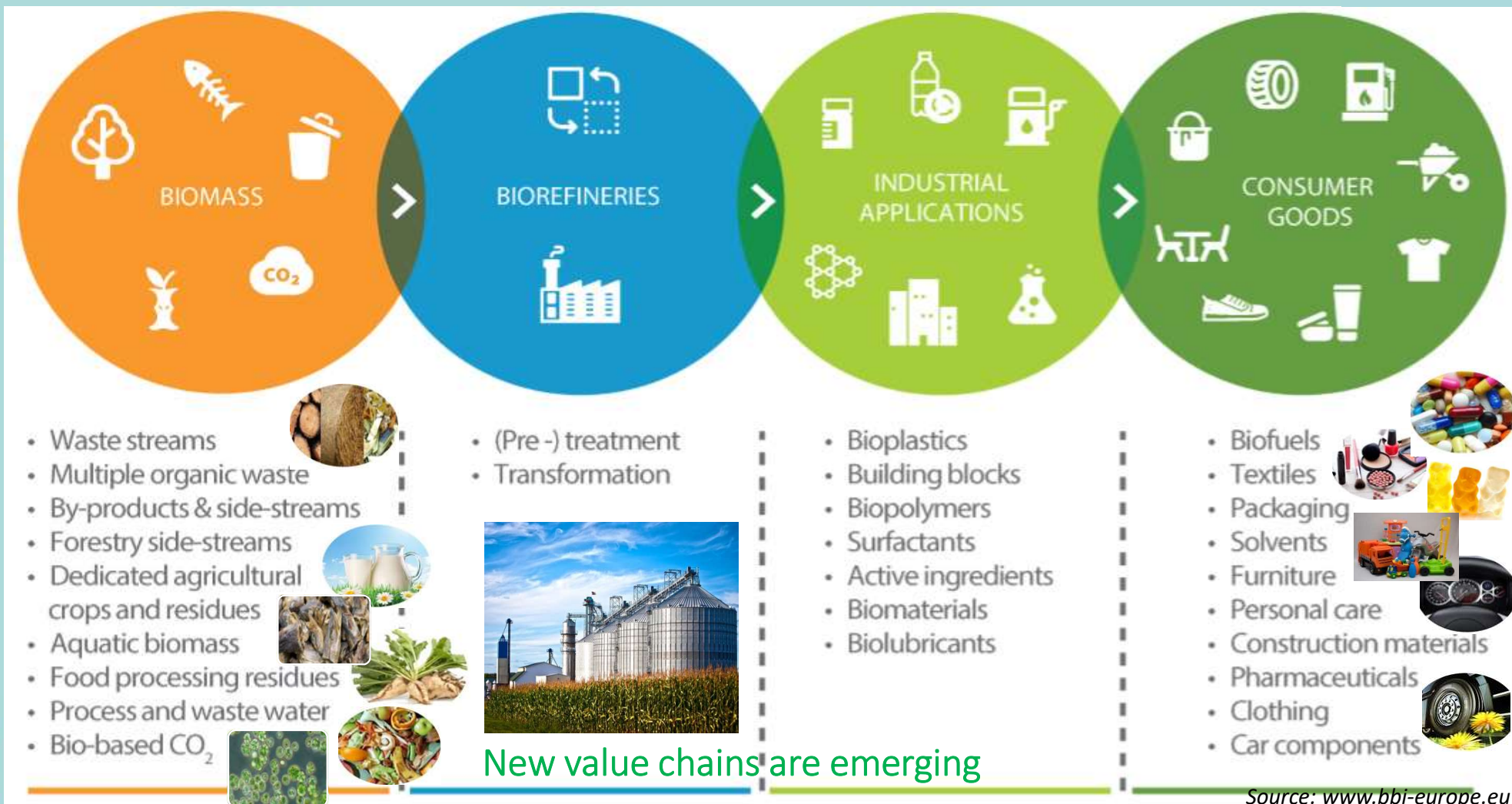
The Bioeconomy in the European Union

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Bio-based industries value chains

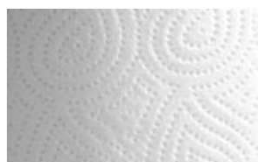


Next generation bio-product Mill in Finland



METSÄ GROUP | Sales EUR **5.0** billion | Personnel **10,500**

METSÄLIITTO COOPERATIVE | Group's parent company | Owned by 122,000 Finnish forest owners



METSÄ TISSUE
Tissue and cooking papers

Sales:
EUR 1.0 billion
Personnel:
2,800



METSÄ BOARD
Paperboard

Sales:
EUR 2.0 billion
Personnel:
3,100



METSÄ FIBRE
Pulp

Sales:
EUR 1.3 billion
Personnel:
850



METSÄ WOOD
Wood products

Sales:
EUR 0.9 billion
Personnel:
2,300



METSÄ FOREST
Wood supply and forest services

Sales:
EUR 1.6 billion
Personnel:
900

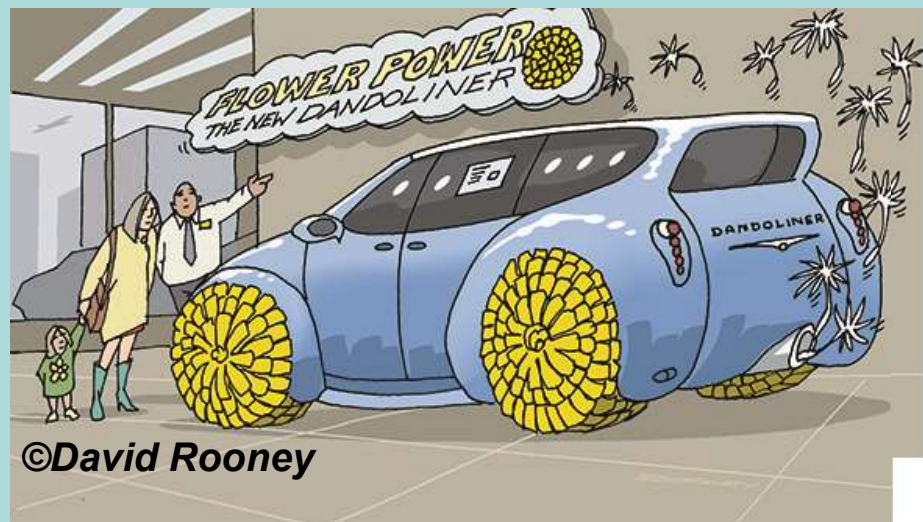


Source photo: metsaboard.com



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Bioeconomy in everyday life - The Innovation Opportunity



CAR TYRE



What can you do with a dandelion? They are weeds for most people. In the right sort of quantity, dandelions are an alternative source for a raw material in high demand: natural rubber, the fundamental ingredient in products, such as car tyres. Up until now, the European rubber industry has been dependent on fluctuating Asian supplies or synthetic rubber. Today, producers have developed the first prototypes of dandelion tyres.

T-SHIRT



Dutch company Avantium has developed a 100% bio-based polyester by turning carbohydrates into chemical building blocks. The bio-polyester can be melted down and turned into thin fibers for spinning and weaving using the same technology used to make polyester clothing. T-shirts are one of the most versatile products.

PAINTS



Until now, most additives in exterior paints were based on synthetic polymers, sourced, primarily, from oil. Within the BBI-funded project Exilva, Norwegian biorefinery specialist Borregaard has developed Microfibrillated Cellulose (MFC) as a natural paint additive. In doing so, it not only improves the CO₂ footprint of the product, but also strengthens the anti-cracking properties of paints.

The product ...



... is environmentally friendly



... is cost-efficient



... is energy-saving



... is innovative



... reduces the use of fossil resources

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Deliver the EU Bioeconomy

Horizon 2020 EU Research and Innovation Programme:
SC 2 (**3.8 billion € 2014-2020**) "Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy"



In 2018 the European Commission has proposed to allocate **10 billion €** in the future Horizon Europe EU Research and Innovation Programme (2021-2027) within the cluster on food and natural resources, including the bioeconomy.

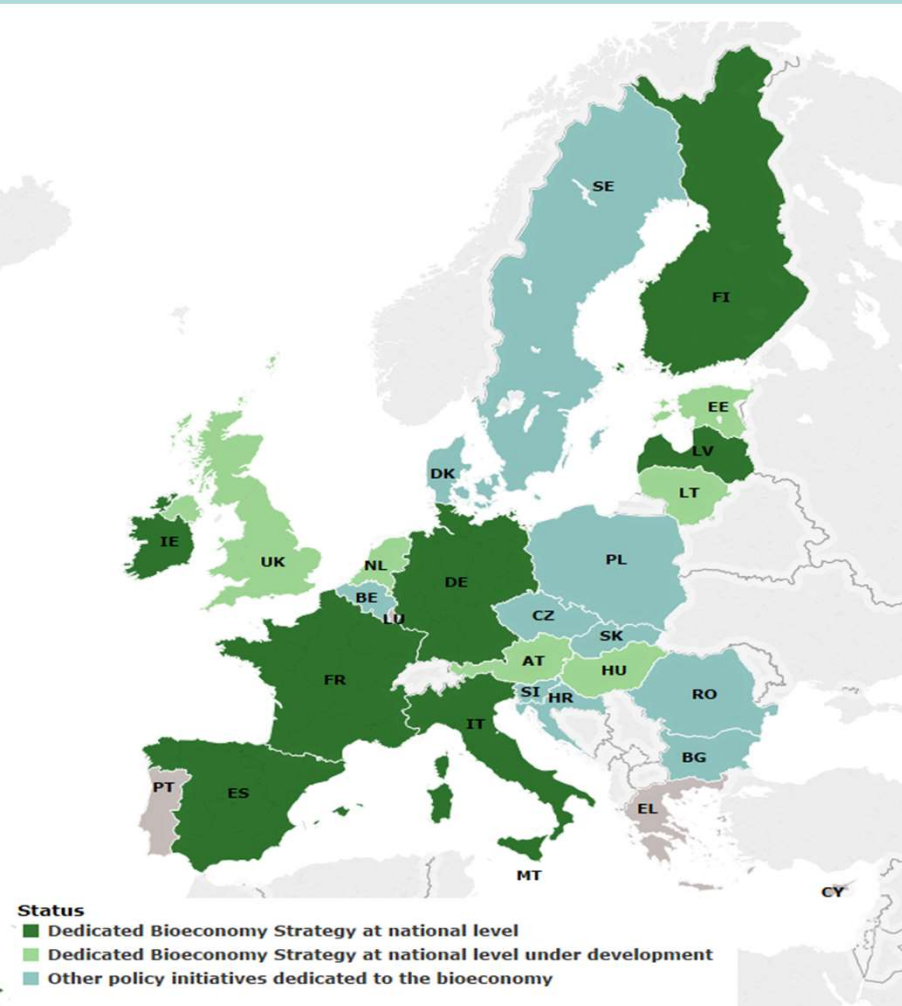


Bioeconomy in the EU

Great diversity... - Wide variety...

- **7 MS** have a dedicated bioeconomy strategy
(Finland, Latvia, Germany, Italy, France, Spain, Ireland)
- **6 MS** in the process
(Austria, Estonia, Hungary, Lithuania, the Netherlands and UK)
- **10 MS** from CEE plan to develop such a strategy under the **BIOEAST initiative**
(Bulgaria, Croatia, Czech Republic, Poland, Romania, Slovakia and Slovenia)
- **>50 regions** have a bioeconomy-related strategy
- **Only a few cities** have bioeconomy-related priorities in their policies

Source: European Commission's Knowledge Centre for Bioeconomy



EU context

• Communication on Bioeconomy – 2012

- Food security, sustainable management of natural resources, climate change mitigation, reduced fossil-dependence, jobs creation and EU competitiveness

• Review of Bioeconomy Strategy – 2017

- Good delivery, objectives still relevant, increasing importance, more focussed actions for evolved context (SDGs, renewed industrial policy, circular economy, ...)

• Communication on updated Bioeconomy – 2018

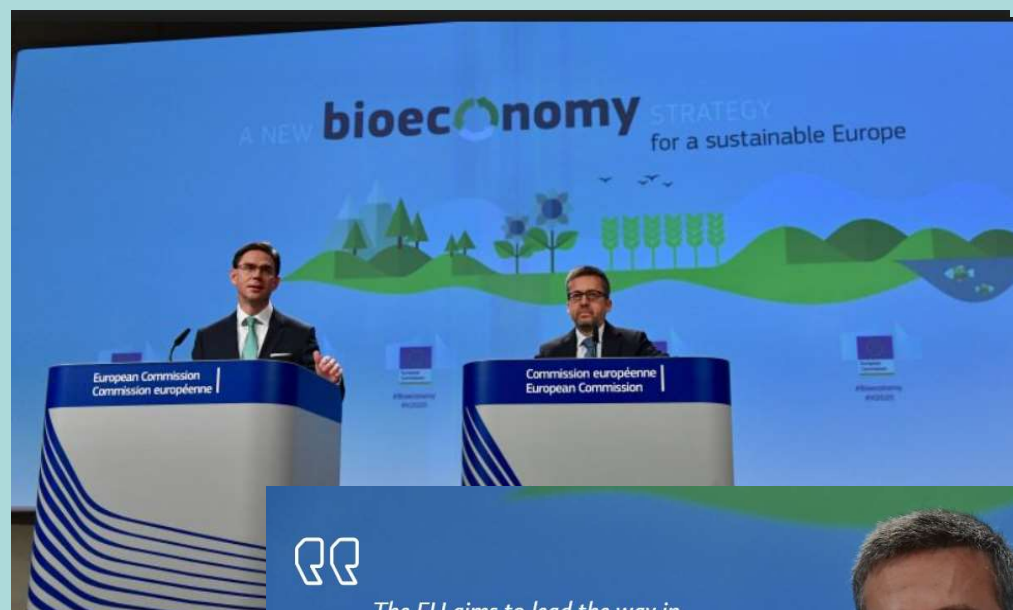
- Major initiative under the Commission's 2018 workplan
- Coordination by the Secretariat General and DG Research and Innovation together with the departments for agriculture, environment, marine, industry, energy and others (DGs AGRI, ENV, MARE, GROW, JRC, ENER...)

- Adopted on 11/10/2018

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Adoption of the 2018 Bioeconomy Communication



Key initiatives

Priority 1: A new boost for jobs, growth and investment

New initiatives

- Communication on the Investment Plan for Europe: stock-taking and next steps.
- Communication updating the 2012 Bio-economy Strategy.

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#BioEconomy



WHAT does the initiative aim to achieve?

- Link the sustainable use of renewable biological resources for food, feed, bio-based products and bioenergy, with the protection and restoration of biodiversity, ecosystems and natural capital across land and water.
- Step up action to ensure that the Bioeconomy provides a long-term balance of social, environmental and economic gains.

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... and HOW?

- A **SYSTEM**-wide approach,
- expanding beyond research and innovation,
- delivering on policies across sectors, addressing trade-offs
- strengthening **CIRCULARITY** and **SUSTAINABILITY**
- delivering for the citizens - on jobs, sustainable growth, well being - and on planetary health
- in **LOCAL** contexts, valorising local resources and adapted to local needs



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DRIVING EU POLICY PRIORITIES

- **Job creation** – e.g. Bio-based industries could create up to 1 million jobs by 2030 (industry estimate), in particular in rural and coastal areas
- **Climate mitigation** – through use of bio-energy/ bio-based materials/ecosystems services; e.g. the use of 1 ton of wood instead of 1 ton of concrete in construction can lead to 2.1 ton CO₂ reduction
- **A renewed and strengthened EU industrial base** – Global leadership position in bio-chemicals and substitutes for fossil raw materials (plastics, packaging, cosmetics, consumer goods) based on research and innovation
- **Circular economy** – e.g. cutting food waste, recycling of high value organic waste
- **Healthy ecosystems and biodiversity** – e.g. through restoring degraded soils



Actions

1

STRENGTHEN AND SCALE-UP THE BIO-BASED SECTORS, UNLOCK INVESTMENTS AND MARKETS



Mobilise stakeholders in **development** and **deployment** of **sustainable bio-based solutions**



Launch the **EUR 100 million** Circular Bioeconomy Thematic **Investment Platform**



Analyse enablers and bottlenecks for the deployment of **bio-based innovations**



Promote and develop **standards, labels and market** uptake of **bio-based products**



Facilitate the **development of new sustainable biorefineries**



Develop new biodegradable products, including bio-based plastic substitutes

Actions

2

DEPLOY LOCAL BIOECONOMIES RAPIDLY ACROSS EUROPE



Launch a Strategic Deployment Agenda for sustainable food and farming systems, forestry and bio-based products



Launch pilot actions for the development of **bioeconomies** in rural, coastal and urban areas



Support regions and Member States to develop Bioeconomy Strategies



Promote education, training and skills across the bioeconomy

Actions

3

UNDERSTAND THE ECOLOGICAL BOUNDARIES OF THE BIOECONOMY



Enhance **knowledge** on biodiversity and ecosystems



Monitor **progress** towards a sustainable bioeconomy



Promote **good practices** to operate the bioeconomy within **safe ecological limits**



Enhance the **benefits** of biodiversity in **primary production**



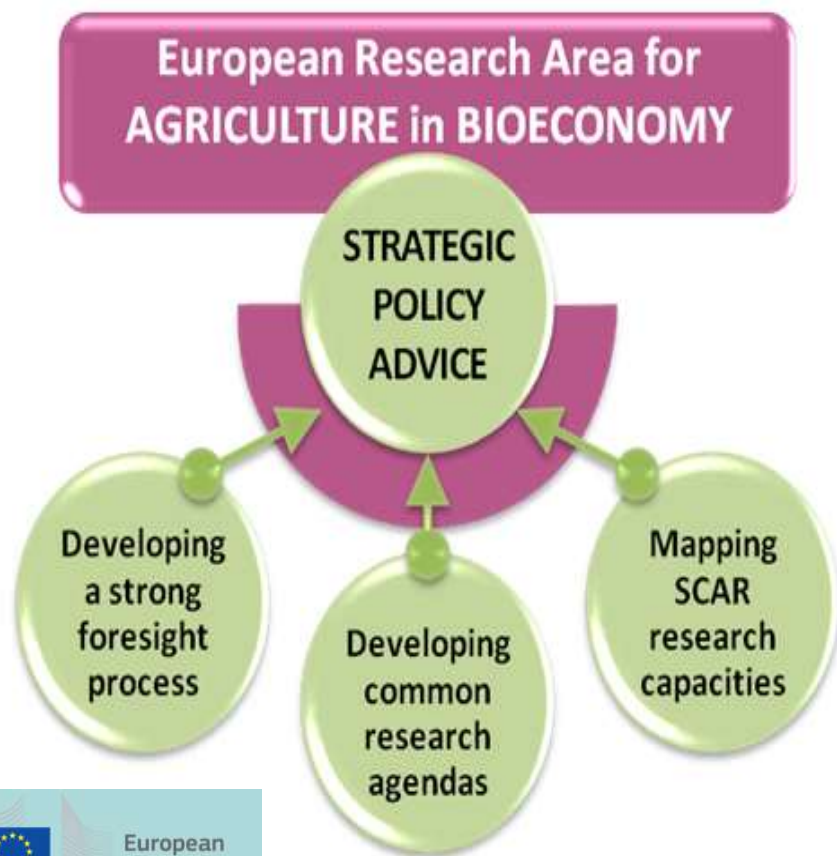
STANDING COMMITTEE ON AGRICULTURAL RESEARCH

- **1974:** SCAR established (Regulation (EEC) No 1728/74 of the Council of 27 June 1974 on the coordination of agricultural research)
- **2005:** Revised mandate by the Council
- **2012:** Widening of SCAR

Represents 37 different countries

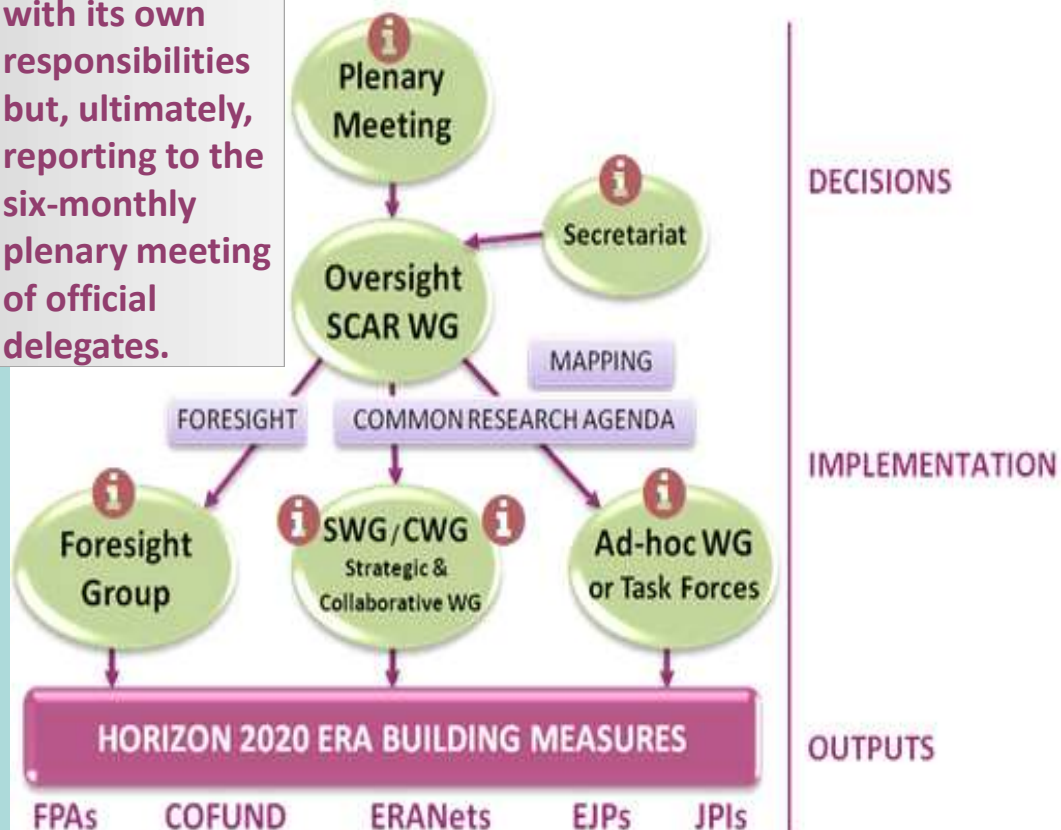
- **EU Member States**
 - Ministries (mainly of Agriculture)
 - Organisations such as research councils
- **Observers: Candidate and Associated Countries**
- **European Commission (secretariat and chair, DG RTD & DG AGRI)**

Main Activities and Structure



SCAR delivers through various groups, each with its own responsibilities but, ultimately, reporting to the six-monthly plenary meeting of official delegates.

SCAR ORGANISATION





Plenary Meeting

Meetings: 2/year

Participants:

- SCAR delegates from all EU MS
- Candidate MS
- Associated States

Main tasks:

- Creation of Working Groups
- Other initiatives proposed by the EC or SCAR SG
- Policy papers
- Actions



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Steering Group

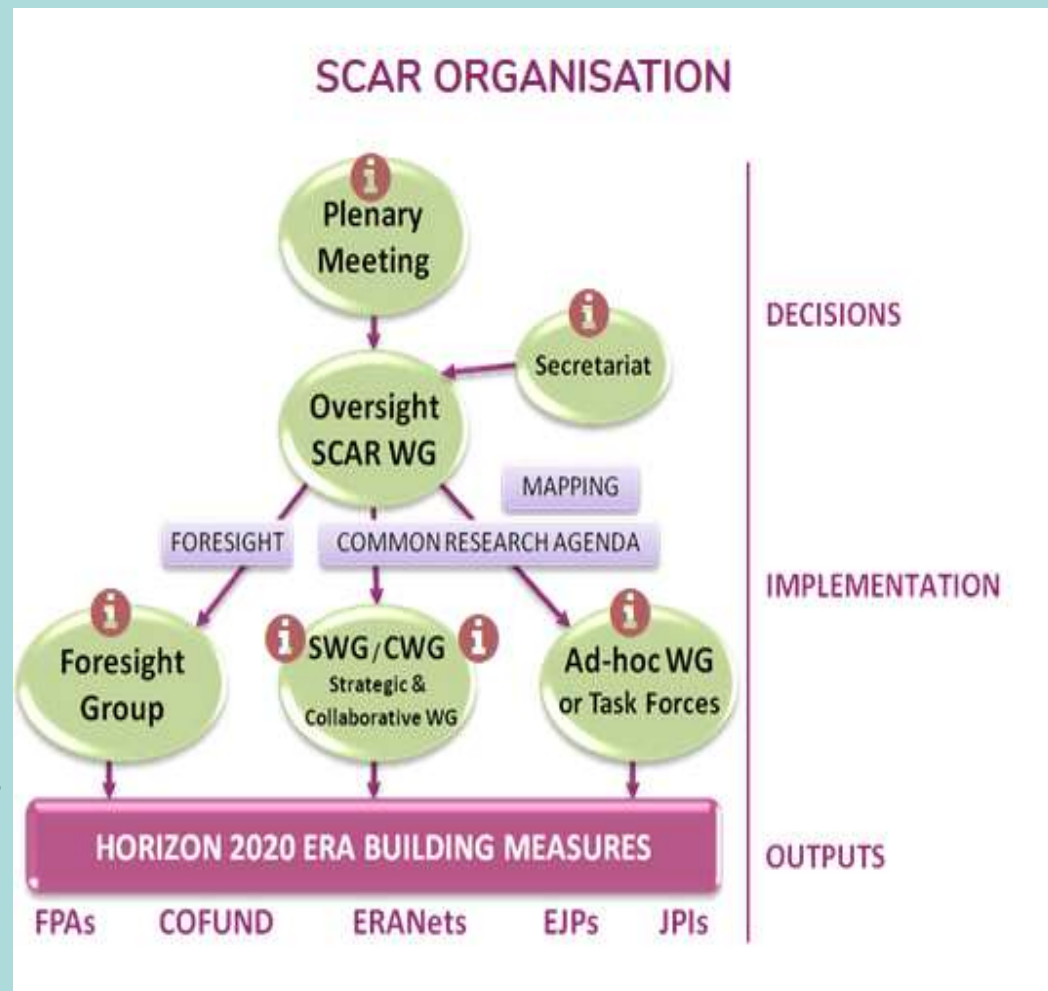
Meetings: 5-6/year

Participants:

- SCAR delegates from all countries represented in the plenary
- EC staff

Main tasks:

- Plan and prepare plenary meetings
- Coordination mechanisms in Horizon 2020
- Prioritisation of ERA-Net Co-fund activities
- Organising the establishment of new WG
- Providing support to WG



Foresight Group

Instrument for public research
planning and public policy building

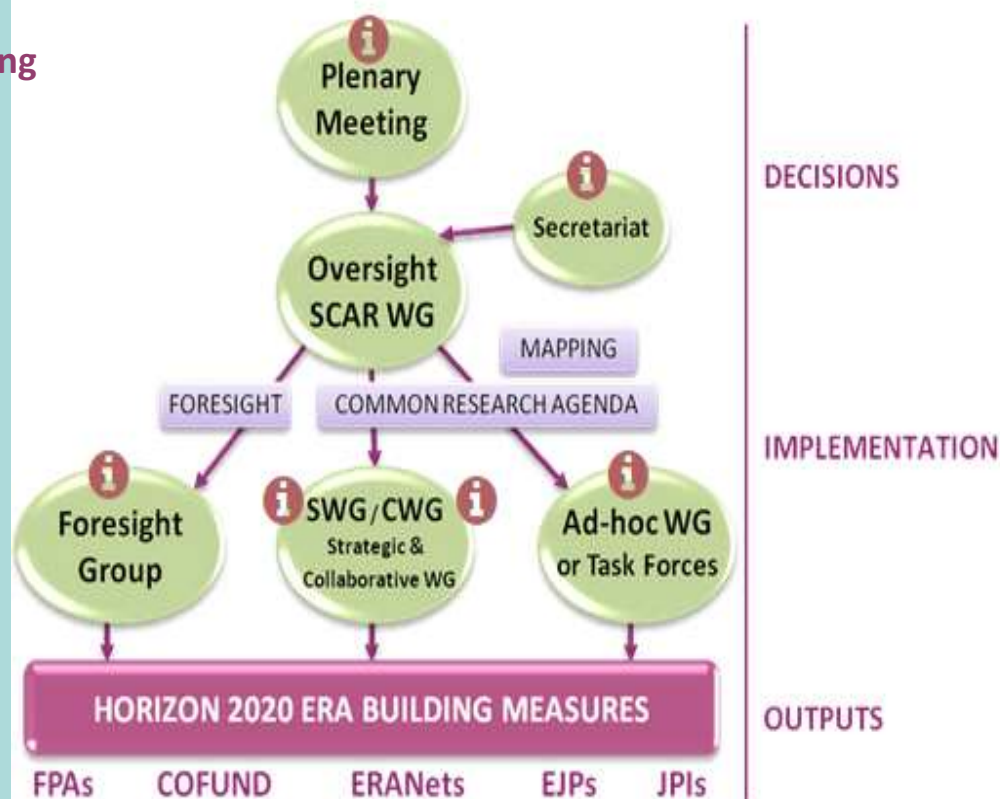
Participants:

- Long-term experts (approx. 5)
- Short-term experts (approx. 5)
- Advisors from CWGs / SWG / ERA-Nets / JPIs – Representative members are invited as required.

Main tasks:

- Foresight activity
- Execution of relevant studies & Review ongoing studies
- Research prioritisation

SCAR ORGANISATION



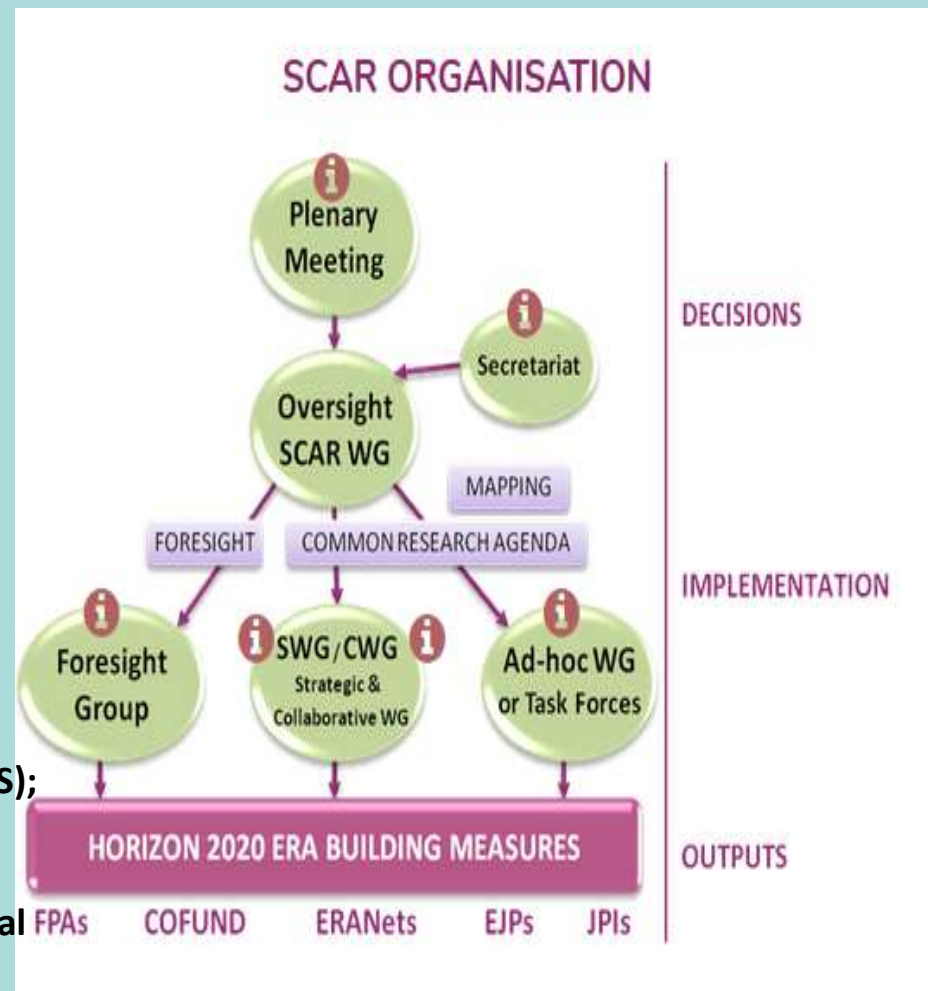
Strategic Working Groups (SWG)

Participants:

- SCAR members and EC Staff

Main tasks:

- Discuss strategic matters on broad issues.
- Contribute to medium long-term research and innovation policy.
- Formulating research policy advice on:
 - Food Systems (SCAR SWG FOOD SYSTEMS)
 - Fisheries and aquaculture research (SCAR SWG FISH);
 - Agricultural knowledge and innovation systems (SCAR SWG AKIS);
 - Sustainable bioresources production (SCAR SWG Bioeconomy);
 - Forestry research and innovation (SCAR SWG Forest);
 - European Agricultural Research towards greater impact on global challenges (SCAR SWG ARCH).



Collaborative Working Groups (CWG)

Participants:

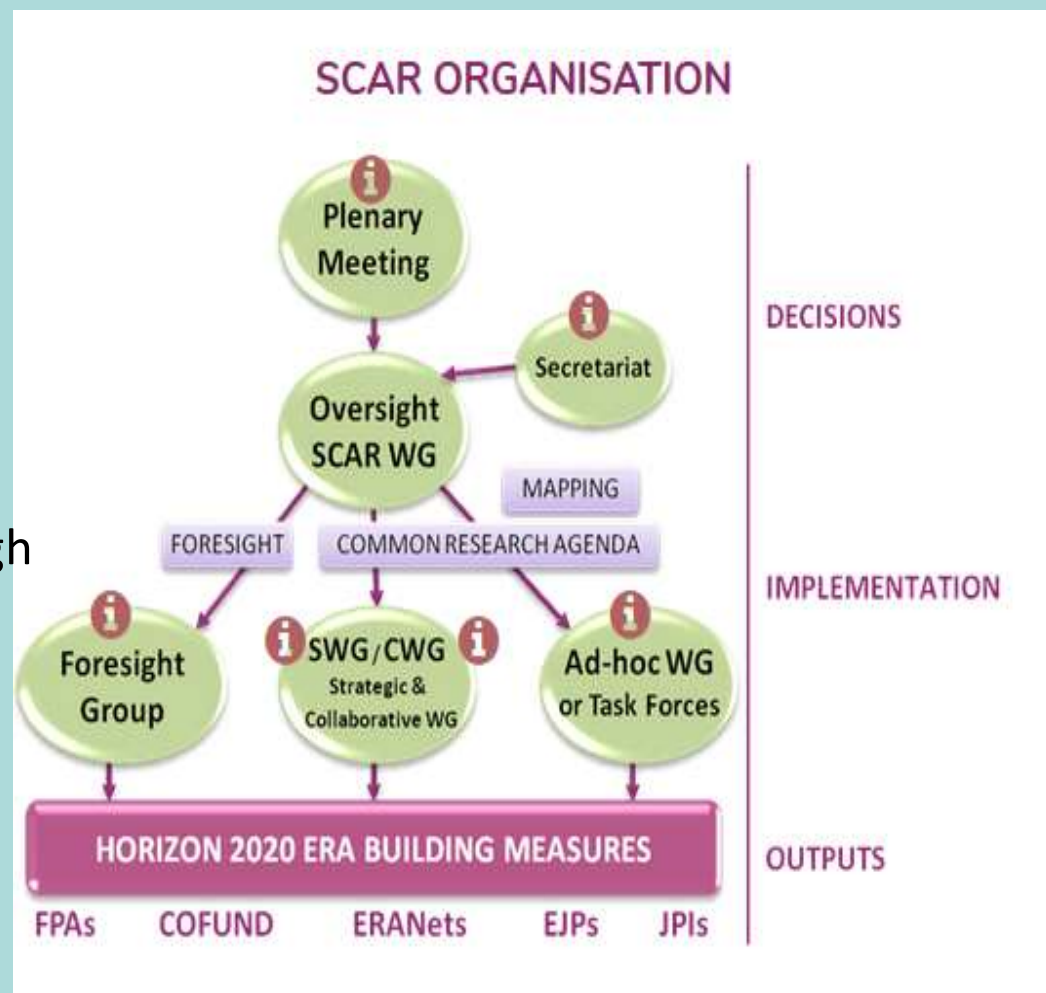
- SCAR members
- EC Staff

Main tasks:

- Develop Strategic Research Agendas, highlighting priority research topics through mapping activities and gap analyses, all of which potentially lay the groundwork for future ERA-NETs

Existing CWG:

- Sustainable animal production
- Animal health and welfare





Benefits of being a SCAR member

Extend your network:

- Meet with experts from other countries.
- Create partnerships on common research priorities.

Exchange of knowledge:

- Acquire mutual knowledge of activities, institutions and facilities in Member States and Associated Countries.
- Help align national research programmes, avoid duplication of activities and ensure efficient use of resources.

Participate to the Strategic Programming

- Provide advice and support for the development of European initiatives such as the Joint Programming Initiative, the Commission Research Framework Programmes, development and the national programme coordination mechanism ERA-Net Co-fund.
- Bring in the debate your national/regional specificity and priorities.





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The Bioeconomy, building the next economy now

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GDP and well-being

"It has become evident that we need to make a systemic change in the way we produce, consume and discard goods. By developing our bioeconomy – the renewable segment of the circular economy – we can find new and innovative ways of providing food, products and energy, without exhausting our planet's limited biological resources.

Jyrki Katainen, EC Vice-President for Jobs, Growth, Investment and Competitiveness, 2018

"The Bioeconomy: a solution for complex and interconnected challenges". 2015

"Faced with the current challenges of food security, climate change and industrial transformation, we have the responsibility to figure out how to best deal with the biological resources we have and how to put them to the best use." 2017

"The bioeconomy is a huge opportunity for rural Europe." 2018

Carlos Moedas, Commissioner for Research, Science and Innovation, European Commission

"The 21st century will be the century of biology, and the bioeconomy"

Goran Persson,
ex-Prime Minister of Sweden, 2015

Towards:

- Sustainable and circular development
- Non-fossil, post-petroleum society
- Flourishing local businesses, resources and employment

Bioeconomy

"We're at the beginning of a green rush where entirely new value chains are being created." 2017

"Bioeconomy – our next EU economy."

"Welcome to the future." 2018

John Bell, Director, Bioeconomy Directorate, European Commission

"We are seeing a bioeconomy revolution sweeping the globe"

UK Government paper on bioeconomy and waste, 2015

"The bioeconomy has emerged as an Obama Administration priority because of its tremendous potential for growth as well as the many other societal benefits it offers."

US National Bioeconomy Blueprint, 2012

"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."

Carlos Moedas, Commissioner for Research, Science and Innovation, European Commission, 2018

Natural resource economy

Fossil economy

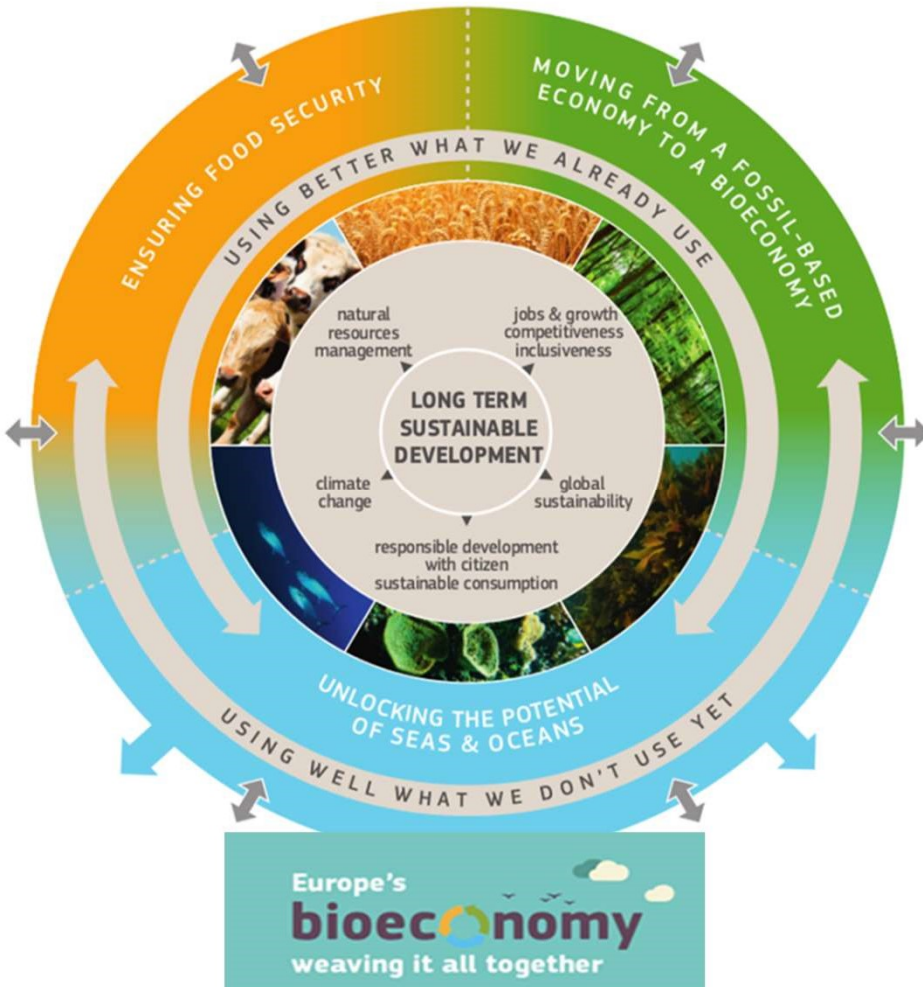
Source: Finnish Bioeconomy Strategy, 2014

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2014

2030

Thank you for your attention



For more information: www.ec.europa.eu/research/bioeconomy

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