



EIP-AGRI Workshop

'Opportunities for farm diversification in the circular bioeconomy'

DAY 1 – 6 FEBRUARY 2019

13:00 – 13:50

Welcome & introduction

- Ms. Sarah Watson, Lead facilitator. Warm up: who is in the room?
- Mr. Darius Liutikas, Vice-minister - Ministry of Agriculture of Lithuania. Welcome to Lithuania
- Mr. Alberto D'Avino, European Commission DG AGRI. Introduction to DG AGRI and EIP-AGRI activities
- Interviews with:
 - Mr. Paolo Mantovi, EIP-AGRI Operational Group representative
 - Ms. Efthymia Alexopoulou, Researcher
 - Mr. James Gaffey, BBI project representative
- Introducing the event programme and the Open Space opportunity, Ms. Sarah Watson

13:50 – 14:20

Presentations

- **Mr. Liutauras Guobys, European Commission DG RTD. Introduction to the EU bio-economy strategy,**
- Mr. Jose Ruiz ESPI, European Commission DG AGRI. Feedback on a workshop for policy makers on the integration of primary producers in the bio-economy,
- Ms. Laura Jalasjoki, ENRD Contact Point. State of play on the ENRD Thematic Group on the bio-economy,

14:20 – 14:40

The Bio-economy - a challenge and an opportunity for farmers

- Mr. Kevin O'Connor, Chairperson Scientific Committee BBIJU. Utilising relevant case studies to highlight practical opportunities for diversification into the bio-economy, focused on the farmer's perspective.

14:45 – 15:45

Presentations of four projects to highlight the broad variety of work being undertaken under the circular bio-economy theme

- Mr. Johan Sanders, CEO of Sannovations - Developer of small-scale bio-economy systems.
- Ms. Lucrezia Lamastra, Researcher at Università Cattolica Del Sacro Cuore - involved in two Operational Groups.
- Mr. Fernando Sebastián Nogués, Coordinator of AGROINLOG - H2020 project
- Ms. Tuula Raukola - Involved in various innovative projects in circular bio-economy in Finland

15:50 – 16:20

Coffee break

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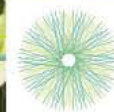


Liutauras Guobys

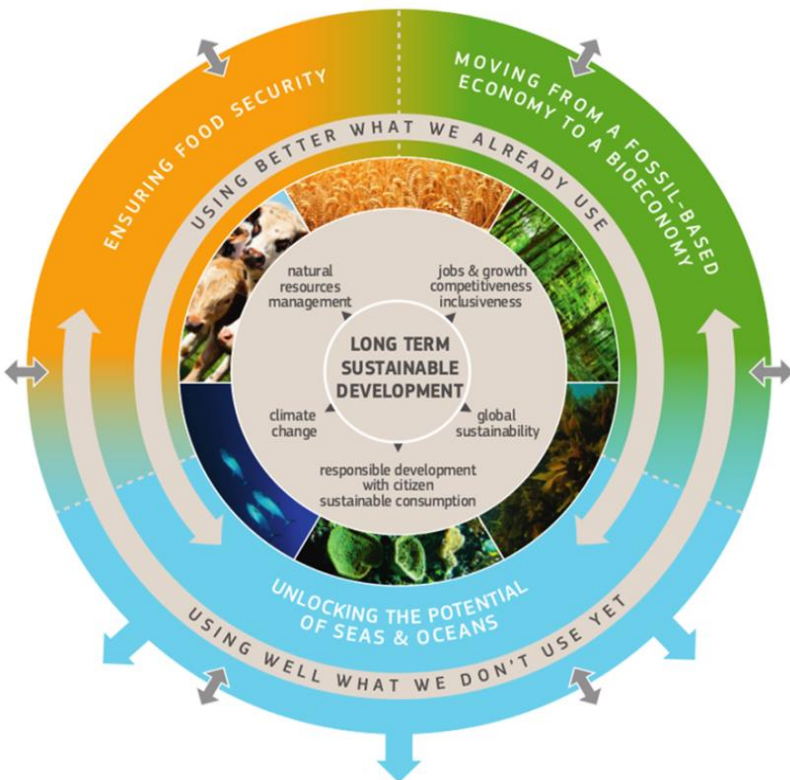
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AGRICULTURE & INNOVATION



INTRODUCTION TO THE EUROPEAN BIOECONOMY STRATEGY

Liutauras Guobys

Policy Officer

Bioeconomy Directorate, DG RTD, European Commission

EIP-AGRI Workshop:

Opportunities for farm diversification in the circular bioeconomy
Vilnius, 6-7 February 2019

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



2012 EU Bioeconomy Strategy

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

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.

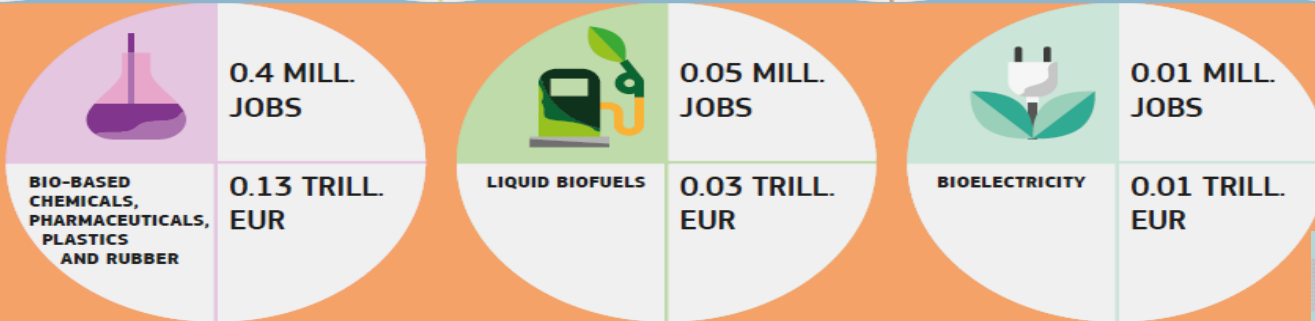
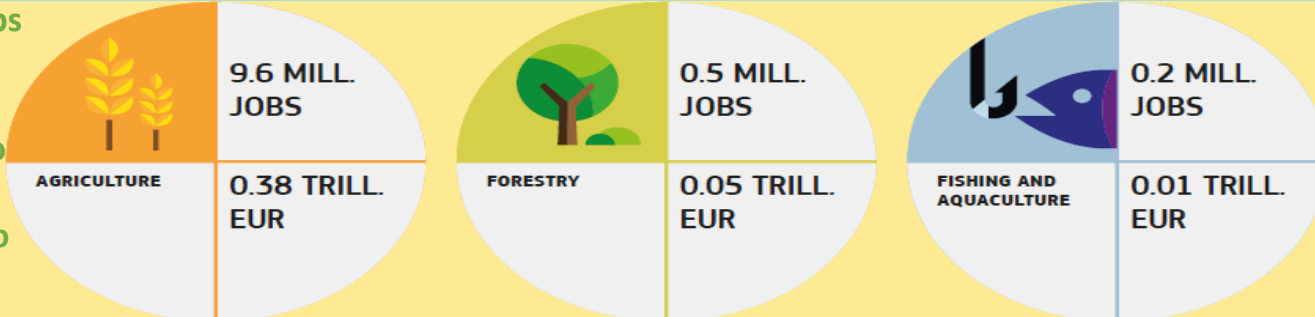
Aim:

- 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*.

The Bioeconomy in the European Union

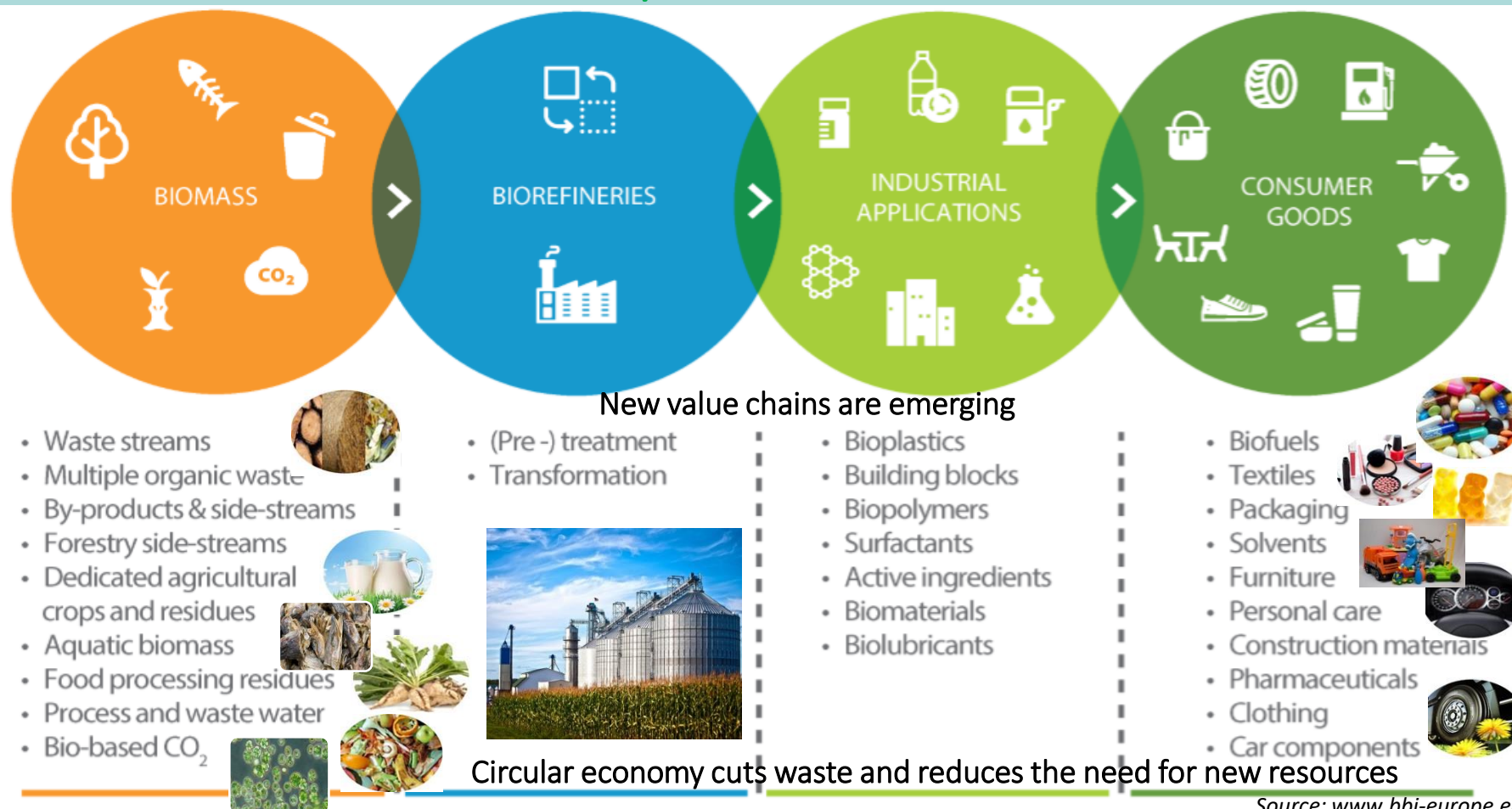
In 2015:

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



Source: Bioeconomy Report 2016, Joint Research Centre, EC

Circular Bioeconomy: bio-based industries value chains



Source: www.bbi-europe.eu

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



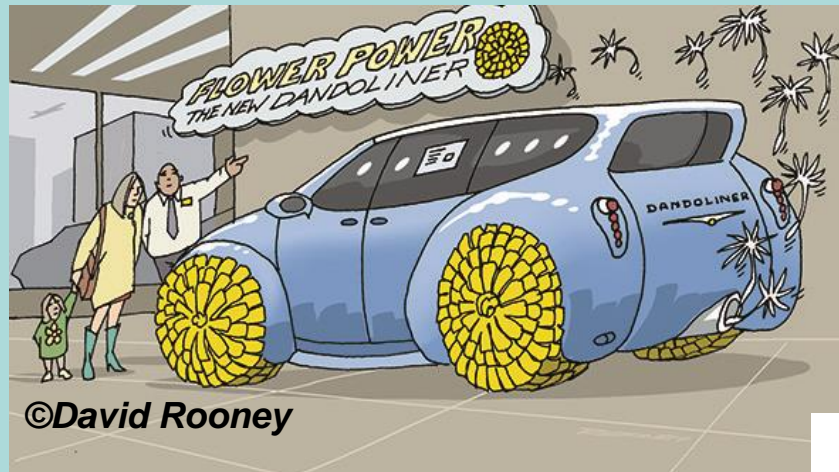
METSÄ FOREST
Wood supply and forest services

Sales:
EUR 1.6 billion
Personnel:
900



Source photo: metsaboard.com

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

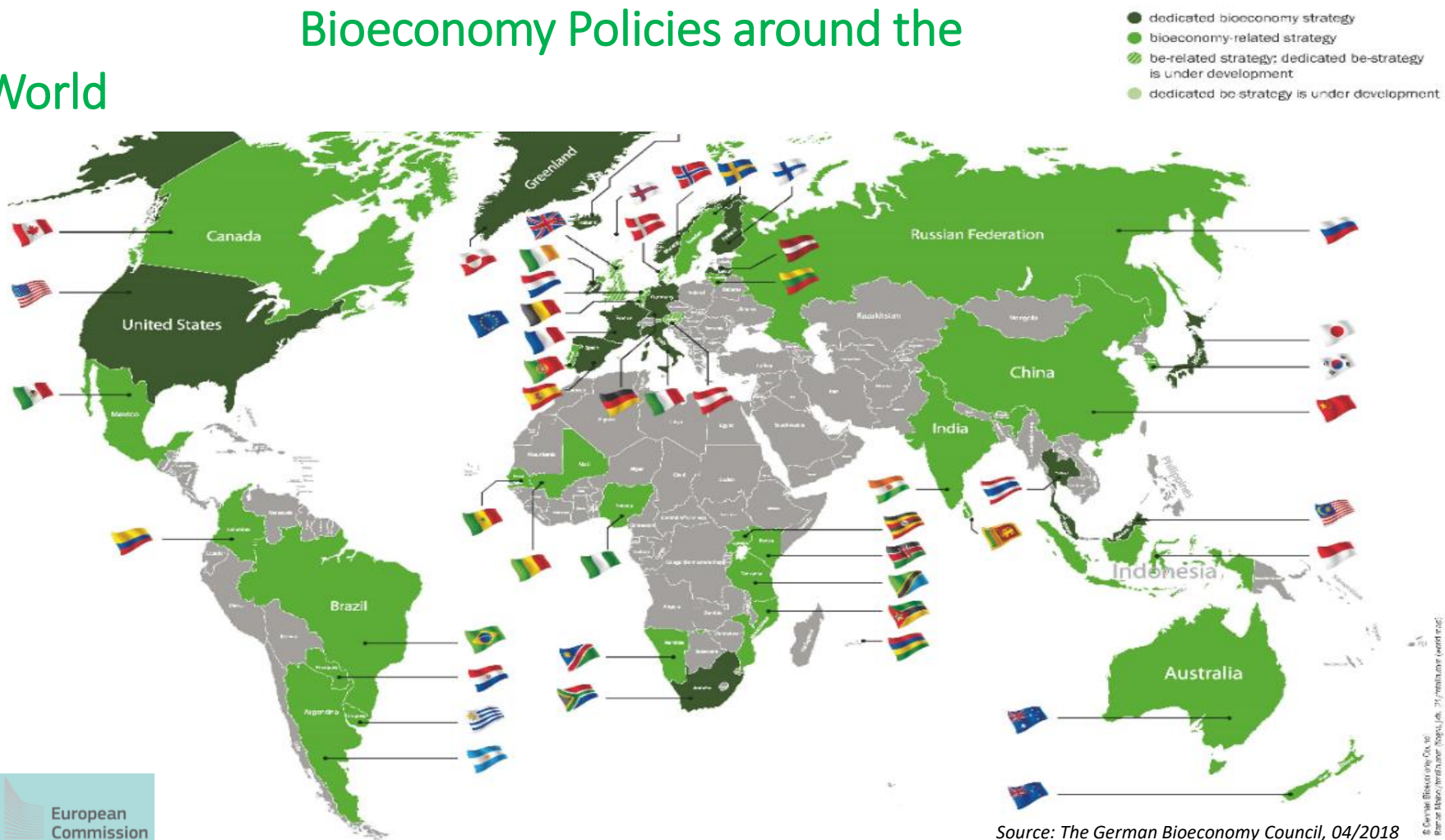
Deliver the EU Bioeconomy

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 Policies around the World



Source: The German Bioeconomy Council, 04/2018



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Europe's
bioeconomy
weaving it all together



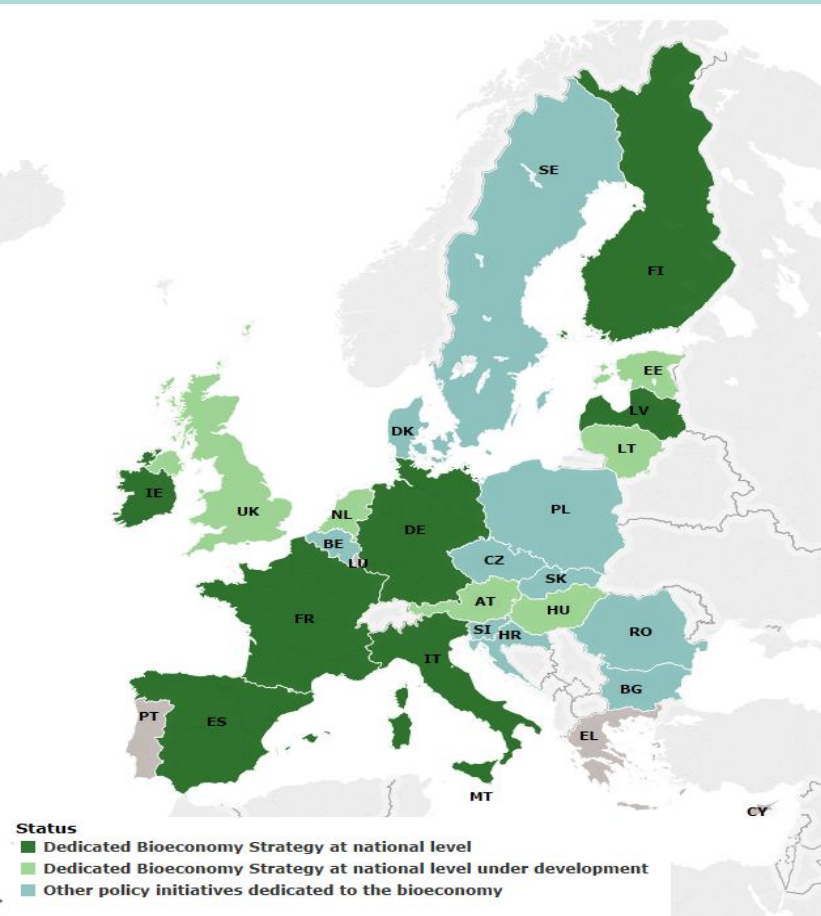
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Bioeconomy in the EU

Great diversity... - Wide variety...

- **8 MS** have a dedicated bioeconomy strategy
(Finland, Latvia, Germany, Italy, France, Spain, Ireland, UK)
- **5 MS** in the process
(Austria, Estonia, Hungary, Lithuania, the Netherlands)
- **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 10/10/2018



Adoption of the 2018 Bioeconomy Communication

Home > Priorities > State of the Union speeches > State of the Union 2018

State of the Union 2018

Annual State of the EU address by President Juncker at the European Parliament



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."

Commissioner for Research, Science and Innovation, Carlos Moedas

Commission européenne

#BioEconomy



European Commission

"There is also great potential here for new green jobs, particularly in rural and coastal areas."
Vice-President for Jobs, Growth, Investment and Competitiveness, Jyrki Katainen



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.



"We estimate that bio-based industries can generate up to one million new jobs by 2030". "The Bioeconomy (...) will boost the rural economy (...) contribute to the climate challenge (...), boost rural economic cohesion". "It is imperative that all MS develop a clear bioeconomy strategy". "Each Member State will be tasked with drawing up a CAP Strategic Plan to outline their targets and expected results according to 9 key objectives, and the bioeconomy is one of these".

Commissioner for Agriculture and Rural Development, Phil Hogan

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.

... 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

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 substitutes to fossil based materials that are **bio-based, recyclable and marine biodegradable**



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**

The Bioeconomy - building the next economy now



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

"Greater use of renewable resources is no longer just an option, it is a necessity. We must drive the transition from a fossil-based to a bio-based society with research and innovation as the motor." Máire Geoghegan-Quinn

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

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

Goran Persson, ex-Prime Minister of Sweden, 2015

Natural resource economy

Fossil economy

Source: Finnish Bioeconomy Strategy, 2014

1900

2012

2030





Thank you for your attention



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

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