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# Delivering the bioeconomy in Europe – A governance perspective

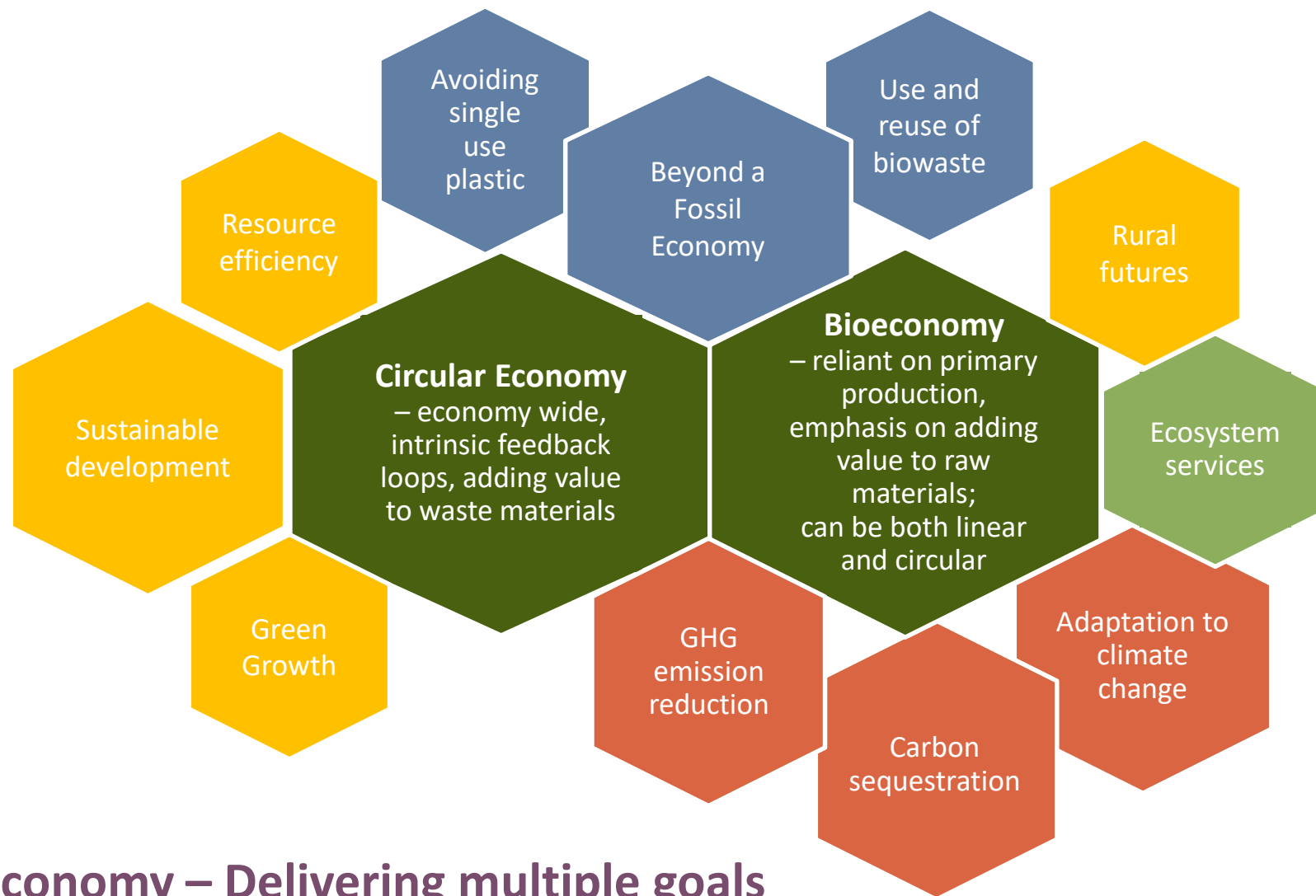
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Karlstad, 27 March 2019

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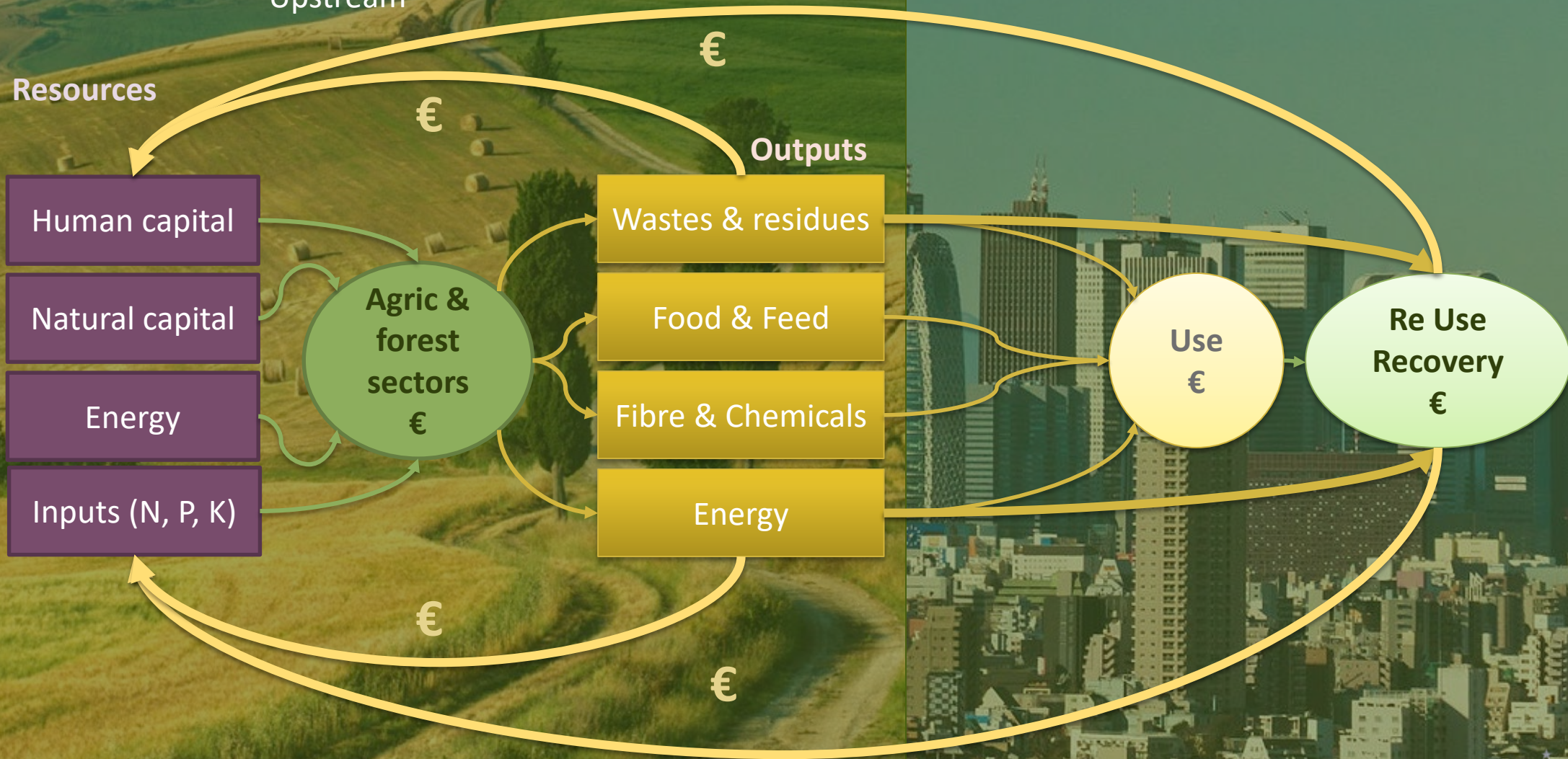
## A circular bioeconomy – Delivering multiple goals



# Agriculture and forestry in the circular economy

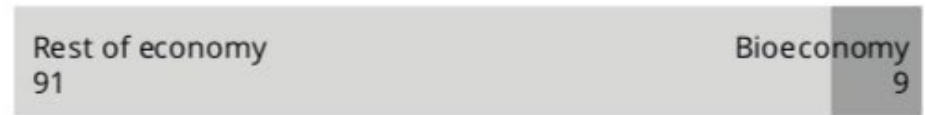
Upstream

Downstream

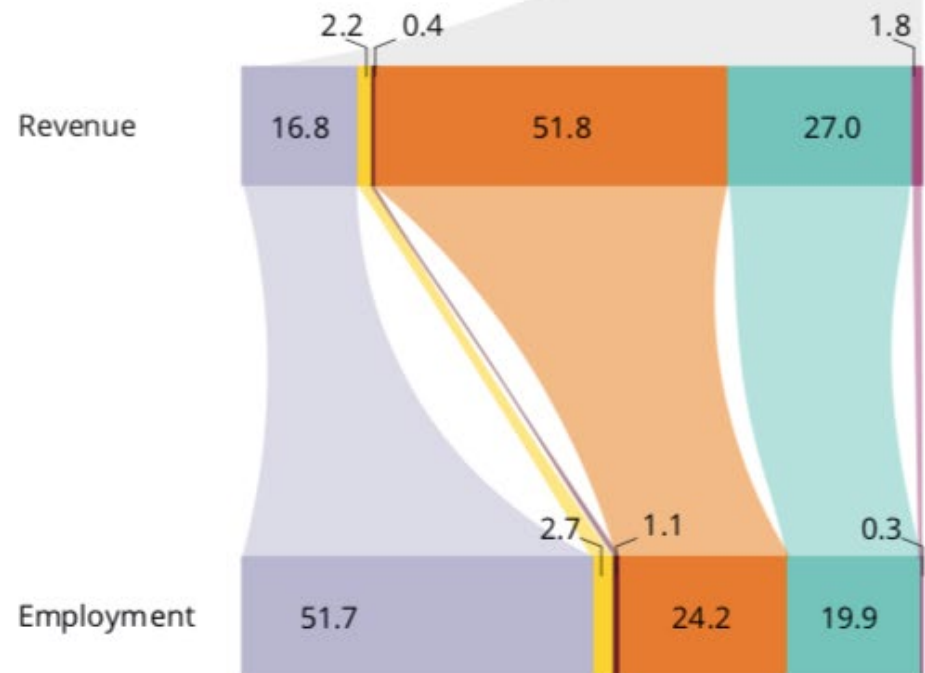


# Contribution of the bioeconomy in the EU (%)

## Revenue

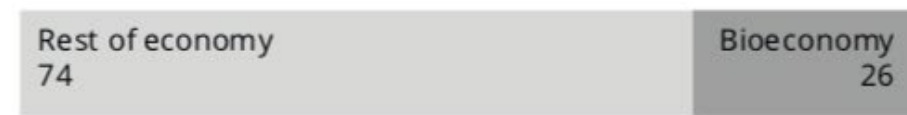


## Bioeconomy revenue and employment (%)

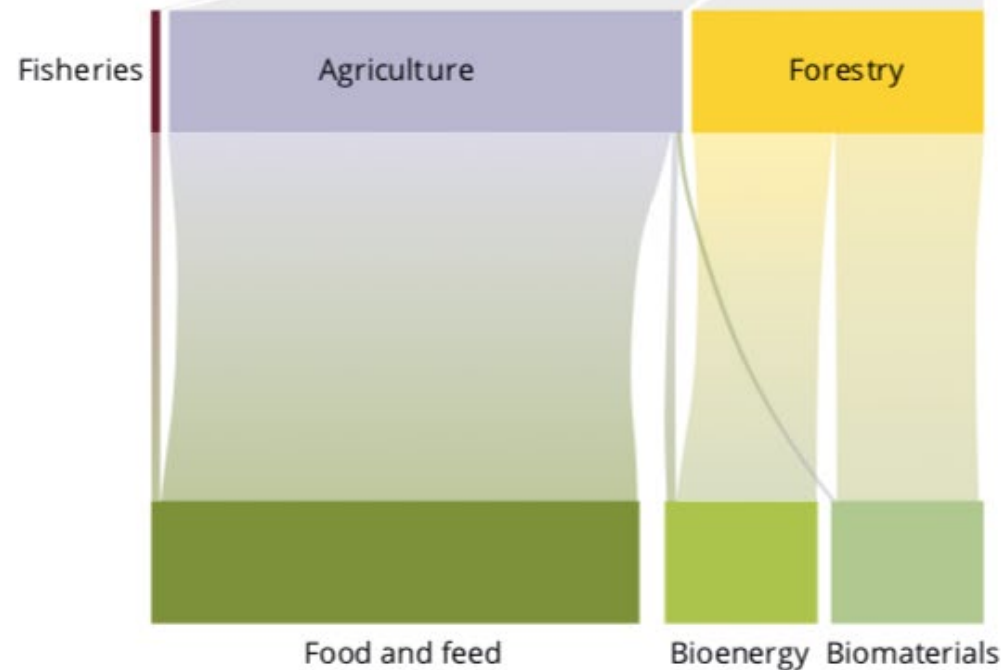


■ Agriculture
 ■ Fisheries
 ■ Material production  
■ Forestry
 ■ Food production
 ■ Energy production

## Material flow



## Biomass flows in the bioeconomy (%)



**Sources:** EEA, 2017 – The circular economy and the bioeconomy; JRC Biomass project; 2016 Bioeconomy report (Ronzon, et al., 2017); Eurostat MFA

## Biomass production

- Biomass produced = 1,466 MT / year
  - 956 MT / year agriculture
  - 510 MT / year forestry
  - (average figures)
- Harvested and used = 805 MT/year
  - 578 MT / year agriculture
  - 227 MT / year Forestry
  - (2013 figures)

**Sources:** Eurostat (env\_ac\_mfa) and (demo\_gind);  
JRC (2018) *Biomass production, supply, uses and flows in the European Union. First results from an integrated assessment.* doi:10.2760/539520

## Consumption versus production

100 %

Material consumption - 6,666 MT/yr

22%

Total produced 1,466 MT/yr

12%

Harvested and used = 805 MT/yr



## Challenges of the bio-economy

1. Increasing demand for natural resources
2. GHG emissions are uncertain and depend on production practices, life of product and end-of-life.
3. High utilisation of existing biomass – and dependence on imports
4. New products and uses counter efforts to reduce waste
5. Loss of value from rural areas

## Solutions from the circular economy

1. Circularity can help to reduce competition as can a change in the resource base.
2. Recovery at end of life - change in production practices and closing nutrient loops.
3. Greater cascading use of woody biomass, developing new side-streams from existing wastes & residues
4. Systemic change and focus on consumption
5. Develop rural bio-economy value chains, with greater feedback.



**The role of governance in delivering a more circular bio-economy**

# Actors within the European food supply chain



PRODUCING  
FOOD



PROCESSING AND  
MANUFACTURING



SUPPLY, RETAIL  
AND SERVICES



CONSUMING  
FOOD

Source: EEA (2017) *Food in a green light - A systems approach to sustainable food*. EEA Report - No 16/2017

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# Delivering the bioeconomy through integrated governance



# Joined up policy making and implementation



- Use of a coherent set of policy levers at regional, national, EU and global levels
  - **Global:** Paris Agreement and the Sustainable Development Goals (SDGs)
  - **EU:** Bioeconomy Strategy ; Circular Economy Strategy; 2030 Climate and Energy Framework; CAP Cross compliance and Rural Development Programmes;
  - **National / Regional:** National and Regional Bioeconomy Strategies as well as sectoral policies in the domains of climate, energy, resource efficiency, forest, agriculture

## Gaps:

- **Integrated, cross sectoral policy direction on the bioeconomy – connecting the dots between different policy interventions**

# Involving and gathering key players



- Actors across multiple levels working together – agriculture and environmental government departments, policy-makers, researchers and environmental and farming stakeholders, as well as land managers
- **Finnish Lapland - Arctic Smart Rural Communities cluster** is helping this remote area of Europe to recognise the potential of its local natural resources to supply bio-based energy, food and materials.
- Mission to avoid capital outflow from the area and add value;
- Create new innovative enterprises based on circular economy principles adding value to local natural resources for local communities.

## Gaps:

- **Support to bioeconomy innovation (beyond primary production) in a scale that is accessible also for small- and medium size enterprises**



# Knowledge exchange and motivating action



- Up-to-date information on the practices that work and the exchange of these practices that can be applied to other areas
- The **GreenCareLab based in Finland** is a network of nature-based service providers and activities to support their development;
- More than 100 Green Care service providers participated in the project events and activities during its first year.
- Dozens of business start-ups participated in GreenCareLab, a platform for testing and developing business ideas and services.

## Gaps:

- Incubators of innovation and knowledge exchange at local but also higher levels;
- Champions supporting those incubators.

# Supporting investments



- Up front investments for infrastructure, facilitation, machinery, knowledge as catalyst for other funding source
- **Sastamala, Finland** used rural development measure 6 & LEADER support In a feasibility study to upscale a biocomposite production line, the farm and business development measures
- 20 new jobs created.
- The support enabled funding visits to potential suppliers abroad to develop the bioeconomy value chains.

## Gaps:

- **Support for existing enterprises and scale-up**
- **Cross sectoral support combining instruments (e.g. EAFRD, other ESIF)**

# Supporting and advising



- New or novel bioeconomy value chains can require better understanding
- **The 'Academy on Tour' initiative in Belgium** used Leader to support all -day tour to a foreign country on a VIP- bus with appropriate facilities for work;
- This helped (potential) agri-food entrepreneurs to develop their business ideas into concrete plans and then implement them;
- In Scotland, the **GrowBiz initiative** implement a community-led method of support, establishing a volunteer board of up to 10 people from the community and appointing a locally based Enterprise Coordinator. This prevent the need to travel to the city to get advice.

## Gaps:

- Bioeconomy has no compulsory advice embedded;
- Ongoing business advise is limited



# How to support a stronger governance framework for the bioeconomy?

1. Integrated, cross sectoral policy direction on the bioeconomy – connecting the dots between different policy interventions within the EU;
2. Support to bioeconomy innovation (beyond primary production) in a scale that is accessible also for small- and medium size enterprises;
3. Incubators of innovation and knowledge exchange at local but also higher levels;
4. Support for existing enterprises and scale-up, including cross sectoral support combining instruments (e.g. EAFRD, other ESIF);
5. Expanding future business advise.



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# Thank you for your attention

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