

Requirements for an optimised regulatory and political framework from 2020 to 2030

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- From 2020 to 2030
- Key priorities- Energy Union Strategy & Biobased Initiative
- How effective is the policy mix that currently influences biomass value chains?
- What are the key policy gaps?
- What are the key policy inter-linkages and are they positive or negative?
- What are some of the key policy success stories?
- What improvements are necessary to improve their overall effectiveness?
- S2Biom contribution

From 2020 to 2030: Transition from a sectoral to a thematic policy formation



2020

- **Sectorial focus** in setting biomass related targets for energy & transport
- Implications from:
 - the nature of biomass supply (displacement effects)
 - multiple end use sectors
 - restricted integrated capacity to cope with complex value chain impact assessments

2030

- Shift to **thematic focus** with GHG/ climate change/ circular economy
- Advantage: analysis can address impacts across sectors
- Disadvantage: Uncertain (sector specific) targets stagnate investment in innovative technologies, changing policies



Key priorities

Energy Union Strategy - COM(2015) 80 final



- Being the world leader in developing the next generation of renewable energy technologies, including **environment-friendly production and use of biomass and biofuels**, together with energy storage;
- Facilitating the participation of consumers in the energy transition through smart grids, smart home appliances, smart cities, and home automation systems;
- Efficient energy systems, and harnessing technology to **make the building stock energy neutral**, and
- More **sustainable transport systems** that develop and deploy at large scale innovative technologies and services to **increase energy efficiency and reduce greenhouse gas emissions**.



Key priorities

Biobased Initiative (BBI JU)



To contribute to a more resource efficient and sustainable low-carbon economy and to increasing economic growth and employment, in particular in rural areas, by **developing sustainable and competitive bio-based industries in Europe, based on advanced biorefineries** that source their biomass sustainably and in particular to:

- Demonstrate technologies that enable **new chemical building blocks, new materials, and new consumer products from European biomass**, which replace the need for fossil-based inputs
- Develop business models that **integrate economic actors along the value chain** from supply of biomass to biorefinery plants to consumers of bio-based materials, chemicals and fuels
- **Set-up flagship biorefinery plants that deploy the technologies** and business models for bio-based materials, chemicals and fuels and demonstrate cost and performance improvements to levels that are competitive with fossil-based alternatives.



New biomass value chains: policy or innovation driven?

Top down Policy driven

Energy

- RED provided strong steer to the development of RES/ incl. bioenergy
- NREAPs a good start for getting bottom up data/ figures to inform modelling & analysis

Fuels

- Since Biofuels Directive (2003) a dynamic sectorial development
- In 2010 development of new plants slowed down- concerns on low term policy consistency and displacement effects

Bottom up innovation driven

Biobased materials

- There are no (financial) policy incentives for biobased products (cfr biofuels)
- The development of the market is industry & innovation driven (hence importance of feedstock supply & price and efficient conversion processes)

Sustainability, Standardisation, Green Procurement



What are the key policy gaps?



- Is a policy type under- represented (economic, regulatory, expenditure, institutional policy instruments)?**
- Are policies not focusing on key Drivers, Pressures, the State or the Impacts?**
- Are relevant policies missing?**

Sources: EuropaBio, Nova Institut, DG ENER, EnC



1. Feedstock supply

- **Cost**
- **Infrastructure & transport**
- **Seasons (variation in supply)**
- **Quality**

2. Production processes

- **Yield**, productivity and robustness
- Properties of some biobased products
- **Scale-up**
- Predictive models

3. Market

- **Long-term regulatory & policy strategy**
- Market penetration
- Consumer awareness

4. Innovation systems

- **Access to finance**
- Demo & flagship support
- Collaboration between industry and academia



What are the key policy inter-linkages and are they positive or negative?



- There are strong local initiatives/ clusters that shape the biobased economy in Europe while a coordinated EU support/ policy is not yet present with concrete cross sector targets, etc...
- A strong push in one sector (e.g. bioenergy) can increase the price and availability of feedstock, having an impact on another sector .
- Bioethanol is still promoted as “biofuel”, not as possible feedstock for chemical industry.
- The integration of the “cascading use principle” in policies can have a positive/negative impact on certain sector(s)
- Advances (innovation) in “advanced” biofuels will have an impact on the development of lignocellulosic production systems for biochemicals



What are some of the key policy success stories?



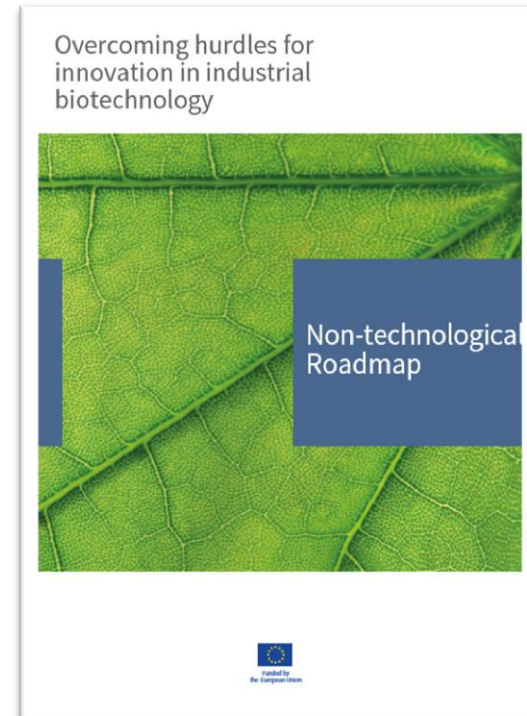
- **European and national/regional strategies for biobased economy**
- **RED/Biofuels stimulating policy**
- **Existence of regional clusters**
- **ETPs on biofuels, sustainable chemistry, forestry, ...**
- **Funding instruments, e.g.**
 - **NER 300**
 - **BBI JU (4 billion EUR between 2014-2024)**
- **...**

Sources: EuropaBio, Nova Institut, DG ENER, EnC



What improvements are necessary to improve their overall effectiveness*?

- **Need for continuous feedstock supply at competitive price**
 - Investigate routes for using multi-feedstock processing capability
 - Develop infrastructure for biomass collection, storage and transportation
 - Development of decentralised pre-treatment facilities
 - produced in Europe are too high and too variable
 - Facilitate the appropriate use of wastes and residues
- **Improve access to finance**
 - Focus Union research funding (EU Horizon 2020) on key resource efficiency objectives, supporting innovative solutions for sustainable energy & transport, resource efficient agriculture and the wider bio-economy
 - Promote funding support for trials at dedicated pilot plant facilities
 - Development of demonstration projects as proof of concept
 - Create a European BioEconomy Strategic Investment Fund (EESIF)
- **Lack of a “green public procurement” policy promoting biobased product**



* *Bio-Tic project*

Energy Union Strategy/ BBI

- Innovation-driven transition to a low carbon economy, resulting in new business sectors and new business models, creating additional jobs and new job profiles
- Develop an (bio)economy that:
 - sources domestic renewable raw materials
 - produces food, feed, chemicals, materials and fuels locally
 - creates jobs in a broad range of sectors in Europe, triggering rural growth across regions
 - places sustainability, smart and efficient use of resources at the heart of industrial, business and social activities.

S2Biom contribution

- **Policy makers:** analysing opportunities for the region/MS (feedstock availability), analysing impact of policies, support to develop regional strategies, action plans...
- **Industry:** analysing best region for new investments based on feedstock availability, cost, logistics ...
- Identifying “best practices” via case studies, facilitate research (linking conversion technologies – feedstock type), ...

Thank you for your attention !

