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Policies for biorefinery

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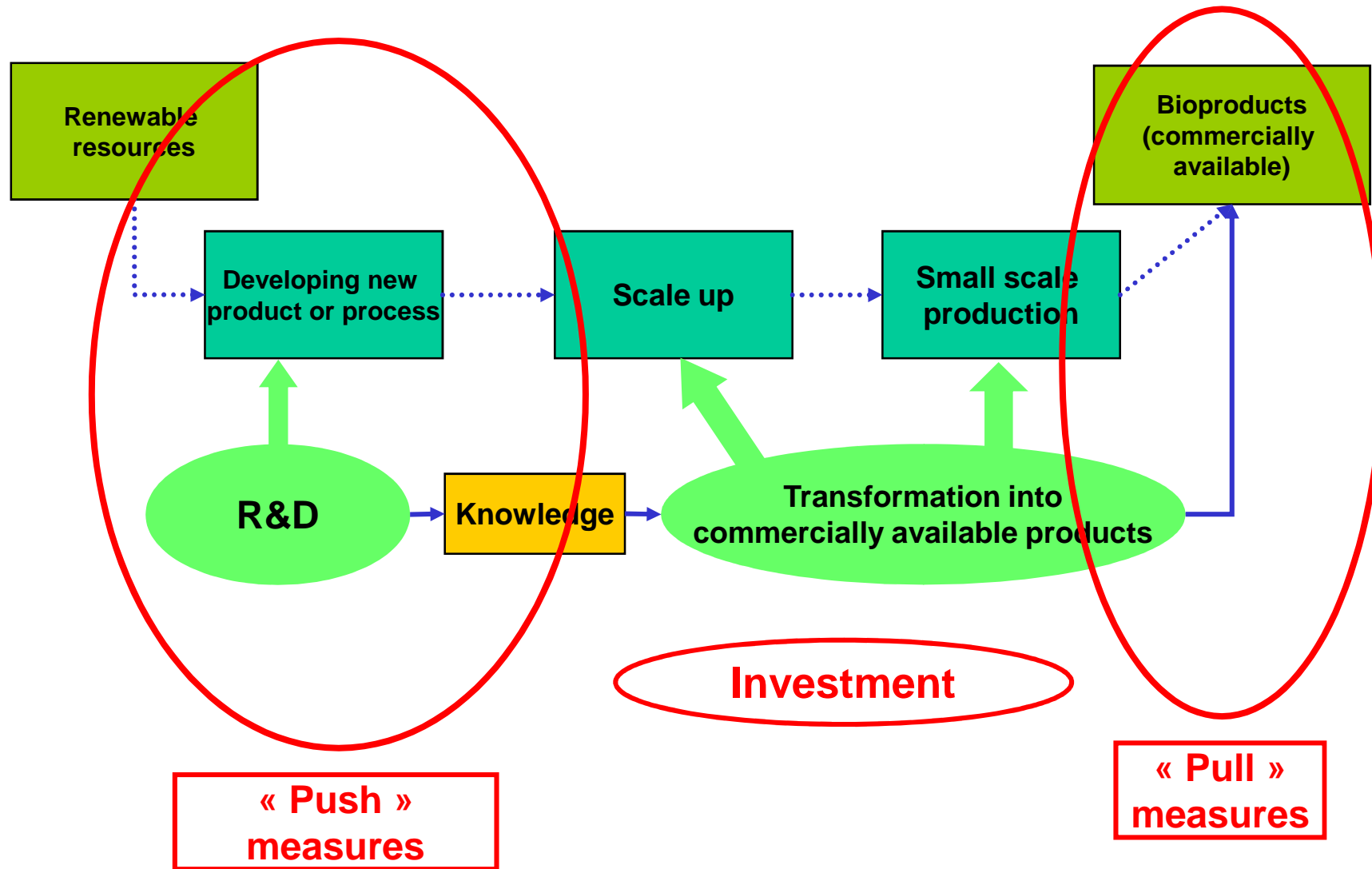


biorefinery.nl/biopol

biorefinery-euroview.eu



Supporting the bio-economy



▷ **Recommendation 1:**
Bring European research closer to industrialisation

- R&D programmes: FP7, ERA-net, national
 - continuity of R&D funding – long-term research orientation
 - strategic planning of topics supporting biorefinery development from frontier/basic research to applied research
 - Facilitate cooperation with industry in public research programmes
 - Extend R&D funding towards pilots

➤ **Recommendation 2: Development of Public Private Partnership for biorefinery demonstrators**

- Coordinate action at EU level to address gaps in pilot facilities
- Facilitating integration
 - New financing models for development of innovative bio-based products by small high-tech companies
 - Financing models/tax incentives for development of biorefineries (pilot & demonstration) – use of EIB loans and/or structural funds.
 - Development of PPP (JTIs)

Overview of policies and legislations

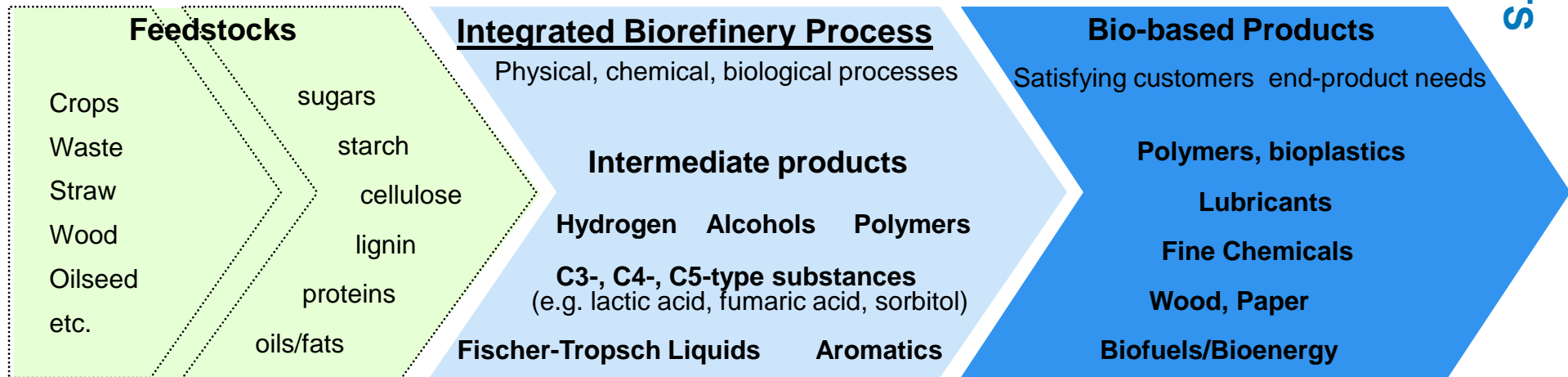
Standardisation (COM(2004)674), 'More RTD & Innovation' (COM(2005)488),
 Environmental Technology Action Plan, Greening Industrial Policy,
 Thematic Strategies for Sustainable Use of Resources & on Waste (COM(2003)572 & COM(2005)666)

Agricultural/ forestry:
 Sugar and starch refund

Environment/Health
 Integrated Pollution Prevention
 Control Directive (96/61/EC)

Environment:
 Packaging & packaging waste
 Landfill Directive
 Green public procurements
 ECO-Label

BIOPRODUCTS



Agricultural/ forestry:
 CAP aid schemes - Aid for non-food Crops, Energy-crops set-aside
 Biomass & Forestry action Plans

Technology:
 Strategic Energy
 Technology Plan
 Carbon trading

Biofuels/Energy:
 Biofuels Directive, Renewable energy Directive
 Lead Market Initiative – renewable energy

BIOFUELS

▷ Policy coordination and coherence

- **Lead Market Initiative**
 - => provide an umbrella to address policy coherence public intervention (pull and push measures) in a coordinated way
- **Long-term policy framework**
 - Sustainable Use of Resources & on Waste,
 - Greening Industrial Policy
 - Biofuels strategy
 - CAP, waste management, emission reduction, etc
- **Action Plans: Environmental technology, Biomass, Forestry, etc**

▶ Recommendation 3: Take biobased carbon as CO2 savings in climate legislation

- carbon within biobased products should be taken into account as CO2 storage/ savings, as the origin is not fossil carbon, but CO2 from the atmosphere fixed by plants.
- Most LCA systems at the moment consider fossil and renewable carbon as the same whereas the timeline of their life cycle is inherently different with millions of years for fossil and tens of years for renewable
- The LCA calculation should take this into (such as PAS 2050) and been used in Climate related legislation

▶ Recommendation 4: tax reduction for certain sustainable product categories

- How to take environmental benefits of biobased products into account in the market in the value or in the price?
- reduced taxes: VAT or market introduction measures
- “transitional” (only valid during a certain period)
- Should depend on sustainability/environmental benefits
- How to implement this
 - by changing VAT rules
 - by changing the State Aid rules



Recommendation 5: Use of targets for certain biobased product categories

- Indicative or compulsory targets for specific biobased products, such as for biofuels, need to be considered with care as they tend to create market distortion
- However they can be interesting tools to introduce strategic decisions (economic or environmental) which are not compatible with market laws (e.g. security of supply in fuel market).
- Examples could be the use of soil biodegradable mulching films in agriculture or of biodegradable biolubricants in forest or water environment.

▷ **Recommendation 6: Facilitating the reconversion of existing conventional production facilities**

- One of the limiting factor of biorefinery is the high investment costs, and the capture of industries finds in existing infrastructure
- The real costs for a transition to sustainable processes need to be reduced and the long-term cost/benefit ratio of a move to biotechnological processing has to be more transparent to motivate companies in different industrial sectors
- A task force need to look at how financial incentives for reconversion could be established as part of State Aid rules

➤ Recommendation 7: Accelerate approval process and shorten time to market

- A faster approval and registration system at European level for products produced by bioprocesses or from biomass could stimulate a faster market introduction of biobased products
- Such “fast track” regulatory procedure could be developed for REACH in negotiation with ECHA (European Chemicals Agency).
- These does not mean lower safety or new alternative regulation but prioritisation through the existing regulatory path

▷ Recommendation 8: Environmental policies

- With appropriate demonstration of best available technology and environmental assessment through LCA the IPPC directive could be used to encourage the use of alternative and more benign process such as biological processes.
- Practical guidance to the use of LCA methodology need to be put in place to obtain comparable results.
- European standards being developed should take into account the ISO 1440 standard for environmental declaration as well as the ASTM 7075 standards, used for declaration for the US Bio-preferred program

▶ Recommendation 9: Support & optimise infrastructure & logistics

- Investments in ***developing and optimising infrastructures and logistics capacities*** are crucial to ensure that all the biomass that can be mobilised in a sustainable way (both from an environment and economic point of view)
- Support and implementation at national and regional level.
- Strong European goals and guidelines need to be set in order to encourage the implementation at national and regional level (e.g. renewable energy directive and national biomass action plan).
- For new Member States, structural funds are an important possible tool to improve infrastructure (road and storage).



Recommendation 10: Implementation of the renewable energy directive

- Approval of the RES in December 2008 with 20% of renewable energy by 2020
- As part of its implementation, Member States have to draw plans to biomass and renewable energy.
- This represents an opportunity to increase the production and secure feedstock for non-food applications, but they need to consider not only biomass for food/feed and energy but also fibers, biochemicals and biomaterials.



Recommendation 11: Replace the “production refund” by an alternative incentive

- Over the last 20 years, the “production refund” was the main CAP instrument designed to bridge the gap between the high EU raw material prices and the lower world market prices for cereals and potatoes starch
- measure abolish in 2008 without alternatives
- This may drive starch industry away from Europe and jeopardize future biorefinery development based on biomass refining and transforming knowledge
- Possible alternative (short-term) measures:
 - the setting of a **flexible import duty system** allowing imports of cereals above a certain threshold price
 - the opening of a TRQ (Tariff-Rate Quotas) for the specific use of cereals for bio-based production (as is done for industrial sugar)
- Long-term alternatives:
 - Include the use of **renewable raw materials for industrial use should be added to that list** to the MS prioritisation for their rural development plans (along to climate change, renewable energies, water management or biodiversity). This would diminish the current level of inequality of aid between energetic and industrial renewable raw material use.

▶ Recommendation 12: Improve land productivity in- and outside EU

- In order to develop and secure a supply for the biobased economy, **it is important considering measures to increase European agricultural production.** Sustainability (i.e. without major agricultural land extension) of biomass supply lies in **increased productivity by developing:**
 - **the crops themselves**, for traditional crops but also ‘energy’ or ligno-cellulosic crops (use of best cultivars, good agricultural management techniques, etc.)
 - **the cropping system** (mobilise existing biomass) and efficient land use, and infrastructure development
 - **biorefining technologies** to ‘make more out of the biomass’ and development of **biorefinery infrastructure**
- The growth of perennial crops should be further encouraged and developed in the CAP. Support models for switch grass are studied in the US as part of the US Conservation Reserve Program (CRP).