BIOECONOMY

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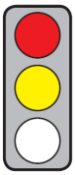
Centrum für Europäische Politik

KEY ISSUES

Objective of the Communication: The Commission wishes to foster innovation, resource efficiency and competitiveness in EU companies by means of a "bioeconomy strategy".

Parties affected: Industrial companies (in particular food, chemistry and energy), agriculture and forestry, research institutions.



Pro: Product standards increase efficiency on the supply side and, at the same time, make it easier to compare price-performance on the demand side.

Contra: (1) Since solutions to the problems identified by the Commission can also be found in other sectors, the promotion of biotechnology innovation distorts the competition between the different sectors and their corresponding companies.

(2) Supporting the setting up of a network of biorefineries, especially in each Member State, cannot be justified.

CONTENT

Title

Communication COM (2012) 60 of 13 February 2012: **Innovating for Sustainable Growth: A Bioeconomy for Europe**

Brief Summary

- **Term**
  - "Bioeconomy" (p. 3 f.)
    - is the sustainable production of renewable biological resources (plants, animals, micro-organisms) and their use as a basis for e.g. food, feed, industrial products and bioenergy;
    - relies on agronomy, ecology, food science and social sciences, biotechnology, nanotechnology, information and communication technologies (ICT), and engineering;
    - includes the sectors of agriculture, forestry, fisheries, food and pulp and paper production, as well as parts of the chemical, biotechnological and energy industries.
  - The EU's bioeconomy sectors are worth € 2 trillion in annual turnover and account for 22 million jobs and approximately 9% of the workforce.

- **Bioeconomy strategy and bioeconomy action plan**
  - In view of the challenges of an increasing global population, the depletion of resources, increasing environmental pressures and climate change, the Commission is calling for a "bioeconomy strategy" to "radically" change the production, consumption, processing, storage, recycling and disposal of biological resources (p. 2).
  - The bioeconomy strategy is aimed at:
    - the sustainable use of natural resources,
    - reduced dependence on fossil resources,
    - environmental and climate protection,
    - guaranteed food security, and
    - the creation of economic growth and the preservation of EU competitiveness.
  - The objectives of the bioeconomy strategy are to be achieved through a "Bioeconomy Action Plan" [p. 9 et sqq., see overview SWD(2012) 11, p. 33-39]. It comprises proposals for measures in the EU and/or Member States for:
    - investments in research, innovation and qualification;
    - closer political cooperation at a national, EU and global level; and
    - strengthening the markets and competitiveness of the bioeconomy sector.

- **Investments in research, innovation and qualification**
  - The financing of bioeconomy research and innovation through public and private funds at EU, national and regional level is to be extended.
  - National, EU and global research and innovation activities should be better coordinated.

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– The share of multidisciplinary and cross-sectoral bioeconomy research and innovation is to be increased.
– For the development of bioeconomy studies and vocational training programmes, university fora are to be organised.
– The uptake and dissemination of innovations in bioeconomy sectors are to be promoted.
– Innovations for products of high-quality biomass "at competitive prices" are to be promoted (p. 4).
– Policy makers should obtain scientific advice as to the benefits and trade-offs of bioeconomy solutions.
– Small and medium-sized enterprises (SME) in bioeconomy sectors should be supported
  - through EU research and innovation programmes and
  - access to demonstration and test plants.
– Patent law is to be facilitated and "improved".

► **Closer political cooperation at national, EU and global level**
– Still to be set up in 2012 is a "bioeconomy panel" at EU level, whose purpose it will be to enhance "synergies and coherence between policies, initiatives and economic sectors related to the bioeconomy at EU level" (p. 8). Such panels are also to be created at national and regional level.
– Researchers, end users, politicians and citizens should be better integrated into the entire research and innovation process (e.g. in bioeconomy stakeholder conferences).
– The availability and quality of data on the effects of bioeconomy processes and products on the society, economy and environment should be improved.
– A "Bioeconomy Observatory" is still to be established in 2012, along with the relevant databases, to enable the Commission to regularly monitor the development of the bioeconomy markets and evaluate the corresponding policy measures. The databases should be linked to global monitoring systems.
– By 2015, a mapping of existing research and innovation activities is to be carried out.
– International cooperation is to be developed further and the exchange of scientific findings facilitated.

► **Strengthening the bioeconomy markets and competitiveness**
– For "bio-based products" derived from biological materials, labels and an EU product information list is to be developed.
– For bio-based products and for food production systems, standards and standardised sustainability assessment methodologies are to be developed.
– Science-based approaches are to be developed to inform consumers as to product properties (e.g. nutritional benefits).
– The availability of and demand for biomass is to be better investigated.
– An "agreed methodology" for calculating the environmental impact and resource efficiency of products and services ("ecological footprint") is to be developed.
– In each Member State, the setting up of a network of "biorefineries" which convert waste and/or biomass to chemicals or fuels, should be promoted.

Policy Context

The strategy "Europe 2020" is to transform the EU into a "smart, sustainable and inclusive economy" [COM(2010) 2020, p. 5; see CEP Policy Brief]. The accompanying flagship initiative "innovation union" [COM(2010) 546; s. CEP Policy Brief], which is intended to improve the framework conditions for research and innovation, already calls for the creation of a bioeconomy. Moreover, the bioeconomy strategy is to contribute to the implementation of further flagship initiatives (see CEP Overview), such as "A Resource Efficient Europe" [COM(2011) 571; s. CEP Policy Brief], "An integrated Industrial Policy for the Globalisation Era" [COM(2010) 614; s. CEP Policy Brief] and "An Agenda for new skills and jobs" [COM(2010) 682; s. CEP Policy Brief]. The bioeconomy strategy is based in particular on the 7th Framework Programme for research and development (RP7), which for the period 2007–2013 has a budget of approximately 50 billion Euros, and on the following EU Framework Programme for research and innovation ("Horizon 2020"), which provides 87 billion Euros for research for the period 2014–2020.

Options for Influencing the Political Process

Leading Directorate General:	DG Research
Committees of the European Parliament:	Environment (leading), Labour and Social Affairs, Industry and Research, Internal Market and Consumer Protection

ASSESSMENT

Economic Impact Assessment

Ordoliberal Assessment

Since market processes cannot ensure the sustainable use of natural resources or environmental and climate protection, the application of corrective tools in economic policy is generally appropriate and is already being practiced. Food safety in the EU is currently not under threat. The politically endorsed increased energetic use of biomass, however, conflicts with the cultivation of food, since cropland (e.g. for corn) is very often required for its production.

The Commission's approach to focus on promoting only bioeconomy sectors as part of the bioeconomy strategy **is problematic, since solutions to the problems** identified by the Commission **can be found in other sectors, too**. For instance, the use of resources could also be reduced in the manufacturing industry, or the automotive industry could reduce their energy consumption through by employing extra light metals. **The promotion of biotechnology innovation therefore distorts the competition between different sectors and their associated companies**. Instead, the Commission should be interested in encouraging an open-ended innovation culture.

Promoting research with public funds is in principle appropriate, as long as it is for basic research. Companies often lack investment incentives for basic research because such efforts do not necessarily lead to profitable innovation.

Supporting the **setting up of a network for biorefineries cannot be justified**. Investment decisions to set up biorefineries should be left to the companies, since politicians do not know the ideal amount of such investments. Only the market players, who are also supposed to carry the investment risk, have this knowledge. **The call to set up biorefinery networks in *every* single Member State contradicts the idea of the division of labour in the European internal market.**

Impact on Efficiency and Individual Freedom of Choice

The promotion of innovation for the production of high-quality biomass at "competitive prices" is to be rejected. It is the task of companies to develop quality improvements and cost-reducing processes in order to gain competitive advantage.

Scientific expert advice for policy-makers improves their level of information.

On the one hand, the (central) coordination of research and the uptake of "bioeconomy panels" at EU level can help prevent research from being duplicated within the EU, whilst exploiting economies of scale and scope. On the other hand, however, at the same time they are reducing the solution potential. For especially in the case of complex problems, the most appropriate solution is often found through a decentralised multitude of approaches.

The development of labels and improved availability of data on the impacts of bioeconomy products improves the information status for purchase decisions.

Standards for bio-based products provide several advantages: firstly, they expedite the dissemination of innovation, as also for innovative products compatibility with complementary products is maintained; secondly, they **increase efficiency** of production **on the supply side**, since companies do not need to re-develop single components due to the standardisation of the end product; **and** thirdly, they **make it easier to compare price-performance on the demand side**, due to a greater similarity of end products, and reduce uncertainty with regard to applicability. At the same time, standardisation reduces customer dependence on certain providers due to improved compatibility.

The development of an "ecological footprint" faces the general difficulty that the resource consumption and environmental impact of multiproduct companies, in particular with combined production, can only be assigned to a certain product by applying purely hypothetical assumptions.

Impact on Growth and Employment

Increased innovation activities can have a positive impact on growth and employment.

The setting up of university fora leads to better qualified workers, who are essential for an innovative environment and thus for growth and employment, they should, however, not focus exclusively on bioeconomy courses of study, since politicians cannot know which sectors will require which qualifications in future.

Impact on Europe as a Business Location

An innovative environment and improving the financing conditions for research activities in bioeconomy sectors increases the attractiveness of Europe as a business location for research-intensive and innovative companies in these sectors. At the same time, however, this must be financed by less research-intensive and innovative companies, as well as companies from other sectors, by means of an increased tax and contribution ratio.

Legal Assessment

Competency

Unproblematic. The EU may – in addition to the Member States' measures – promote research and technological development (Art. 179-190 TFEU). Moreover, measures can be based on the competencies for agriculture and fishery (Art. 38-44 TFEU), for the safety and competitiveness of industry (Art. 173 (1) TFEU) and for environmental protection (Art. 191-193 TFEU).

Subsidiarity

Unproblematic.

Proportionality

Unproblematic.

Compatibility with EU Law

Unproblematic.

Compatibility with German Law

Unproblematic.

Conclusion

The Commission's approach to focus specifically on promoting only bioeconomy sectors is problematic, since solutions for the challenges identified by the Commission can be found in other economic sectors, too. Therefore, the promotion of biotechnology innovation distorts competition between the different sectors and their corresponding companies. Supporting the setting up of a network of biorefineries, particularly in each Member State, cannot be justified. Standards for bio-based products increase efficiency on the supply side and facilitate price-performance comparison on the demand side.