

Basic information

2012/2295(INI)

INI - Own-initiative procedure

Innovating for sustainable growth: a bioeconomy for Europe

Subject

3.10.09.04 Organic farming

3.50.01.05 Research specific areas

3.50.04 Innovation

3.60.05 Alternative and renewable energies

3.70.01 Protection of natural resources: fauna, flora, nature, wildlife, countryside; biodiversity

3.70.12 Waste management, domestic waste, packaging, light industrial waste

3.70.20 Sustainable development

5.05 Economic growth




Procedure completed

Key players

European
Parliament


Committee responsible	Rapporteur	Appointed
ENVI Environment, Public Health and Food Safety	BARTOLOZZI Paolo (PPE)	13/11/2012
	Shadow rapporteur MERKIES Judith A. (S&D) GERBRANDY Gerben-Jan (ALDE) HASSI Satu (Verts/ALE) OUZKÝ Miroslav (ECR) ANDERSON Martina (GUE /NGL)	
Committee for opinion	Rapporteur for opinion	Appointed
DEVE Development	LÖVIN Isabella (Verts/ALE)	21/11/2012
EMPL Employment and Social Affairs	DEUTSCH Tamás (PPE)	17/12/2012
ITRE Industry, Research and Energy	CHICHESTER Giles (ECR)	05/12/2012
IMCO Internal Market and Consumer Protection	The committee decided not to give an opinion.	

	REGI Regional Development	PAKARINEN Riikka (ALDE)	27/11/2012
	AGRI Agriculture and Rural Development	The committee decided not to give an opinion.	
European Commission	Commission DG		Commissioner
	Environment		POTOČNIK Janez

Key events			
Date	Event	Reference	Summary
13/02/2012	Non-legislative basic document published	COM(2012)0060 	Summary
22/11/2012	Committee referral announced in Parliament		
29/05/2013	Vote in committee		
14/06/2013	Committee report tabled for plenary	A7-0201/2013	Summary
01/07/2013	Debate in Parliament		
02/07/2013	Decision by Parliament	T7-0302/2013	Summary
02/07/2013	Results of vote in Parliament		
02/07/2013	End of procedure in Parliament		

Technical information	
Procedure reference	2012/2295(INI)
Procedure type	INI - Own-initiative procedure
Procedure subtype	Initiative
Legal basis	Rules of Procedure EP 55
Other legal basis	Rules of Procedure EP 165
Stage reached in procedure	Procedure completed
Committee dossier	ENVI/7/09171

Documentation gateway				
European Parliament				
Document type	Committee	Reference	Date	Summary
Committee draft report		PE504.164	05/03/2013	

Amendments tabled in committee		PE508.065	27/03/2013	
Committee opinion	REGI	PE506.150	24/04/2013	
Committee opinion	ITRE	PE506.024	07/05/2013	
Committee opinion	EMPL	PE506.093	08/05/2013	
Committee opinion	DEVE	PE507.961	28/05/2013	
Committee report tabled for plenary, single reading		A7-0201/2013	14/06/2013	Summary
Text adopted by Parliament, single reading		T7-0302/2013	02/07/2013	Summary
European Commission				
Document type	Reference		Date	Summary
Commission document (COM)	COM(2012)0060 		13/02/2012	Summary
Commission response to text adopted in plenary	SP(2013)627		28/11/2013	
Commission working document (SWD)	SWD(2017)0374		13/11/2017	
National parliaments				
Document type	Parliament /Chamber	Reference	Date	Summary
Contribution	CZ_SENATE	COM(2012)0060	20/06/2012	

Innovating for sustainable growth: a bioeconomy for Europe

2012/2295(INI) - 13/02/2012 - Non-legislative basic document

PURPOSE: to present a Bioeconomy Strategy for Europe and Action Plan.

CONTENT: Europe is confronted with an unprecedented and unsustainable exploitation of its natural resources, significant and potentially irreversible changes to its climate and a continued loss in biodiversity that threaten the stability of the living systems on which it depends. This is exacerbated by a world population expected to increase by more than 30% in the next 40 years, from 7 billion in 2012 to more than 9 billion in 2050. Overcoming these **complex and inter-connected challenges** requires research and innovation in order to achieve rapid, concerted and sustained changes in lifestyle and resource use that cut across all levels of society and the economy.

The **EU's bioeconomy sectors are worth EUR 2 trillion in annual turnover and account for more than 22 million jobs and approximately 9% of the workforce**. However, in order to remain competitive and maintain jobs in the light of major societal challenges and rising markets in the developing world, the European bioeconomy sectors need to innovate and further diversify. Significant growth is expected to arise from sustainable primary production, food processing and industrial biotechnology and biorefineries, which lead to new bio-based industries, transform existing ones, and open new markets for bio-based products. New high skilled jobs and training options need to be developed to meet labour demands in these industries, as well as in agriculture, forestry, fisheries and aquaculture.

It is estimated that direct research funding associated to the Bioeconomy Strategy under [Horizon 2020](#) could generate about 130 000 jobs and EUR 45 billions in value added in bioeconomy sectors by 2025. Further growth is expected from other - direct and indirect - public and private investments in all parts of the bioeconomy. It can be expected that bioeconomy sectors will significantly contribute to achieving the Europe 2020 objectives.

The Bioeconomy Strategy and its Action Plan 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.

They will **inform research and innovation agendas in bioeconomy sectors and contribute to a more coherent policy environment**, better interrelations between national, EU and global bioeconomy policies and a more engaged public dialogue. They will seek synergies and respect complementarities with other policy areas, instruments and funding sources, which share and address the same objectives, such as the Common Agricultural and Fisheries Policies (CAP and CFP), the Integrated Maritime Policy (IMP), environmental, industrial, employment, energy and health policies.

The Strategy builds on the Seventh Framework Programme for Research and Technological Development (FP7) and the EU Framework Programme for Research and Innovation (Horizon 2020).

The Bioeconomy Action Plan: the Plan describes the Commission's main actions for the implementation of the Bioeconomy Strategy objectives. It has three principal pillars.

1. Investments in research, innovation and skills

- ensure **substantial EU and national funding as well as private investment and partnering for bioeconomy research and innovation**. Develop further JPI and ERANet activities in order to strengthen coherence and synergies between public programmes. **Support bioclusters and KICs under the EIT for partnering with the private sector**. Outline the main research and innovation concepts and priorities for food, sustainable agriculture and forestry and for marine and maritime activities under Horizon 2020;
- increase the share of multi-disciplinary and cross-sectoral research and innovation and improve the existing knowledge-base and developing new technologies;
- promote the uptake and diffusion of innovation in bioeconomy sectors and expand support to knowledge networks, advisory and business support services, notably through EIPs and bioclusters;
- build the human capacity required to support the growth and further integration of bioeconomy sectors by organising university fora for the development of new bioeconomy curricula and vocational training schemes.

2. Reinforced policy interaction and stakeholder engagement

- create a **Bioeconomy Panel** that will contribute to enhancing synergies and coherence between policies, initiatives and economic sectors related to the bioeconomy at EU level, linking with existing mechanisms (by 2012). Organise regular **Bioeconomy Stakeholder Conferences**;
- establish a **Bioeconomy Observatory** that allows the Commission to regularly assess the progress of the bioeconomy and develop forward-looking and modelling tools (by 2012);
- support the development of regional and national bioeconomy strategies by providing a mapping of existing research and innovation activities, competence centres and infrastructures in the EU (by 2015). Support strategic discussions with authorities responsible for rural and coastal development and cohesion policy to maximise the impact of existing funding mechanisms;
- develop **international cooperation on bioeconomy research and innovation** to jointly address global challenges, such as food security and climate change, as well as the issue of sustainable biomass supply (from 2012).

3. Enhancement of markets and competitiveness in bioeconomy

- provide the knowledge-base for sustainable intensification of primary production. Improve understanding of availability and demand of biomass (including agricultural and forestry residues and waste) across sectors, taking into account added value, sustainability, soil fertility and climate mitigation potential;
- promote the setting up of networks with the required logistics for integrated and diversified biorefineries, demonstration and pilot plants across Europe. Start negotiations to establish a research and innovation PPP for bio-based industries at European level (by 2013);
- support the expansion of new markets by developing standards and standardised sustainability assessment methodologies for bio-based products and food production systems and supporting scale-up activities. Facilitate green procurement for biobased products by developing labels, an initial European product information list and specific trainings for public procurers;
- develop science-based approaches to inform consumers about product properties (e.g. nutritional benefits, production methods and environment sustainability) and to promote a healthy and sustainable lifestyle.

The Commission goes on to note that the need to increase public funding for bioeconomy research and innovation has been recognised under **Horizon 2020**: almost **EUR 4.7 billion** has been proposed for the **Challenge "Food security, sustainable agriculture, marine and maritime research, and the bioeconomy"**. There will be further support under elements of the Challenges "Climate action, resource efficiency and raw materials", "Secure, clean and efficient energy" and "Health, demographic changes and wellbeing".

The **European Institute of Innovation and Technology** (EIT) with its Knowledge and Innovation Communities (KICs) in different areas will address questions related to the bioeconomy, in particular under the proposed KIC "Food4future". This will be complemented by research and innovation in enabling and industrial technologies (e.g. biotechnology, nanotechnology and ICT) and the promotion of emerging technologies.

Providing stakeholders along the entire bioeconomy value chain with the knowledge base and a toolbox that includes a range of key enabling technologies will also be critical to the implementation of a wide range of bioeconomy-related policies.

Several Member States have put in place bioeconomy research programmes and agreed to improve coordination of their research activities through public-public partnering, such as the JPI on "Healthy and Productive Seas and Oceans". Active collaboration between stakeholders is also needed to encourage more private investment and entrepreneurship in Europe.

Innovating for sustainable growth: a bioeconomy for Europe

The Committee on the Environment, Public Health and Food Safety adopted the report by Paolo BARTOLOZZI (EPP, IT) on the Commission's communication entitled "Innovating for sustainable growth: a bioeconomy for Europe".

The committee welcomes the Commission's communication and highlights the fact that, while 22 million people are already employed in the bioeconomy, accounting for 9% of total employment in the EU, it has a strong potential to employ millions more.

General comments: the committee is of the view that the bioeconomy is a prerequisite for achieving the objectives of the Europe 2020 strategy and, more specifically, of the initiatives 'The Innovation Union' and 'A resource-efficient Europe'. It underlines the **urgency of taking action now to support innovation and investment** in new techniques and business models and to create the incentives that will bring long-term benefits for the economy. It emphasises the key role of the private sector in delivering sustainable economic growth.

National and regional bioeconomy plans: Members call on the Member States to develop national and regional bioeconomy action plans, and request the Commission to present a bi-annual report to Parliament with regard to the implementation of a bioeconomy.

Transition to a bioeconomy: Members take the view that the transition to a bioeconomy will enable Europe to take some major steps forward in terms of the low-carbon economy, innovation and competitiveness and will enhance its role on the international scene.

Biofuels and bioliquids: the committee recalls that indirect land use change (ILUC) factors for biofuels and bioliquids, as well as binding sustainability criteria for the use of solid and gaseous biomass, should be included in the Renewable Energy Directive and the Fuel Quality Directive and calls on the Commission to propose a Biomass Framework Directive covering all applications of biomass (energy, fuels, materials and chemicals) and introducing a biomass hierarchy.

Investment in research, innovation and skills:

- **Research:** Members call for more detailed research to establish the social and environmental opportunities, as well as the potential costs of the bioeconomy. They support the establishment of a Bioeconomy Panel of experts to help enhance synergies and coherence between policies and initiatives, and a Bioeconomy Observatory, in order to promote mutual learning.

- **Practical measures at regional level:** Members call on the Commission to propose practical measures of regionally comprehensive scope to promote the production and consumption of bioeconomy products at regional level.

Need for new skills, knowledge and disciplines: the committee stresses that the bioeconomy requires that new skills, new knowledge and new disciplines be developed and/or integrated further in order to tackle bioeconomy-related societal changes, promote competitiveness, growth and job creation, meet the needs of industry and ensure that skills and jobs are better matched.

- **Biorefineries:** the committee emphasises that sufficient quantities of sustainable raw materials are needed for the successful operation of biorefineries in Europe and point out that this will also require **improving infrastructures for storage and transport and developing the necessary logistics**. It also points out that there are only **a limited number of demonstration facilities** in Europe and that **increased investments** are needed in order to maintain the leading role of European industries in the sector of biorefineries. It therefore calls on the Commission and the Member States to support pilot and demonstration activities for the up-scaling of products and processes.

- **Biomass:** in emphasising that bioeconomy policies must be better designed to ensure a cascading use of biomass, Members call for the **development of a legal instrument** that will pave the way for a more efficient and sustainable use of this resource. They stress that such an instrument should establish a cascading use principle in the '**pyramid of biomass**'. This approach would lead to a hierarchical, smart and efficient use of biomass, to value-adding applications and to supporting measures, such as coordination of research along the whole value chain.

- **Reinforced policy interaction and stakeholder engagement:** the committee considers it necessary to ensure an integrated, coherent, cross-sectoral and interdisciplinary approach to bioeconomy, and calls for the harmonisation of the different EU policies involved and the related guiding principles.

- **Financial instruments:** Members call on the Commission to make provisions for **financial instruments to support pre-commercial investments, turn research findings into commercial successes and enable innovative companies, especially SMEs, to find financial and other support instruments encouraging the development of the bioeconomy**. This could be, for example, through the use of Structural Funds and European Investment Bank risk-sharing facilities, through increased coherence between different EU research and innovation funds, and through the establishment of a one-stop shop for information about all bio-based economy related initiatives.

- **Less bureaucracy:** the committee calls for targeted and specific action to **reduce the complexity and duration of the bureaucratic authorisation procedures** that complicate biorefinery development processes and are likely to encourage the transfer of innovative, cutting-edge technologies outside the EU.

- **Public-private partnerships:** Members approve the use of the public-private partnership (PPP) formula, drawing adequate lessons from the problems that emerged in previous applications of the same formula to other sectors and call on the Commission to allocate adequate resources for development and growth of such partnerships.

- **Regional and local dimension:** Members agree with the need for a **multi-level approach**, and calls for increasing attention to be paid to the regional and local dimension of the bioeconomy and to **bottom-up initiatives**. They believe that bottom-up initiatives are important in creating a bio-based society and that a business- and demand-driven approach, combined with a government-driven approach, is crucial. The Commission is urged to support networks and clusters to promote exchanges of experiences within and between regions.

Enhancement of markets and competitiveness:

- **Market-creating tools:** Members take the view that there are a number of excellent tools (public procurement, standardisation, tax incentives, certification systems and specific labelling) that could **secure a sufficient supply of sustainable and high-quality bio-based products** as well as provide resource-efficient production systems. They believe that reform of the current legislation is required and call on the Commission to develop **sustainability criteria** for the use of biomass on which also market-creating tools should be based.

- **Sound political framework:** Members stress that a bio-based economy that relies on exploitation of biological resources instead of fossil energy must be guided by a sound political framework that takes into account not only economic viability but also **social and ecological sustainability factors**.

- **Long-term bioeconomy strategy:** the committee stresses the need to develop a **long-term bioeconomy strategy**, taking due account of the need to ensure food security, and takes the view that **synergy and close cooperation along the value chain**, including local producers of agricultural and forestry raw materials and biorefineries, would help strengthen the competitiveness and increase the profitability of rural regions.

- **Feedstock:** Members call on the Commission to promote **measures to increase feedstock potentials** in a sustainable manner, better mobilise such feedstocks, collect biodegradable waste - avoiding extensive transportation - and ensure that biomass use remains within ecological boundaries and does not reduce the carbon sink function. They consider it urgent, in this context, to **establish sustainability criteria for biomass energy use** to ensure the availability of biomass for more resource-efficient purposes, preventing incentives for the transformation of biomass into energy from creating market distortions and reducing its availability for producers.

- **Enabling legislation:** Members call for better and enabling legislation providing legal certainty and strong support for sustainable use of bioeconomy resources and exploitation of raw materials, and for policy to be based, in every respect, on a flexible, long-term approach that promotes investments.

- **Environmentally harmful subsidies:** Members urge the Commission to define environmentally harmful subsidies as 'a result of a government action that confers an advantage on consumers or producers, in order to supplement their income or lower their costs, but in doing so, discriminates against sound environmental practices'. They call on it and the Member States to adopt, without delay, **concrete plans**, based on this definition, for **progressively phasing out all such subsidies by 2020**, and to report on progress through the National Reform Programmes.

Lastly, the committee deems it crucial to **develop international legally binding sustainability standards** for all sectors of biomass usage, as well as binding sustainable forest management criteria. It urges the EU to pursue the adoption of multilateral agreements and provide, especially for LDCs, related institutional and technical support for ensuring the sustainable use of biomass.

Innovating for sustainable growth: a bioeconomy for Europe

2012/2295(INI) - 02/07/2013 - Text adopted by Parliament, single reading

The European Parliament adopted a resolution on the Commission's communication entitled "Innovating for sustainable growth: a bioeconomy for Europe".

It welcomes the Commission's communication and the action plan set out therein and highlights the fact that, while 22 million people are already employed in the bioeconomy, accounting for 9% of total employment in the EU, the sector has a strong potential to employ millions more.

General comments: Parliament is of the view that the bioeconomy is a prerequisite for achieving the objectives of the Europe 2020 strategy and, more specifically, of the initiatives 'The Innovation Union' and 'A resource-efficient Europe'. It underlines the urgency of taking action now to **support innovation and investment in new techniques and business models** and to create the incentives that will bring long-term benefits for the economy. It emphasises the key role of the private sector in delivering sustainable economic growth.

- **National and regional bioeconomy plans:** Parliament calls on the Member States to **develop national and regional bioeconomy action plans**, and requests the Commission to present a bi-annual report to Parliament with regard to the implementation of a bioeconomy.

- **Biofuels and bioliquids:** Parliament recalls that indirect land use change (ILUC) factors for biofuels and bioliquids, as well as binding sustainability criteria for the use of solid and gaseous biomass, should be included in the Renewable Energy Directive and the Fuel Quality Directive and calls on the Commission to propose a Biomass Framework Directive covering all applications of biomass (energy, fuels, materials and chemicals) and introducing a biomass hierarchy.

Investment in research, innovation and skills:

- **Research into costs and opportunities:** Parliament calls for more detailed research to establish the social and environmental opportunities, as well as the potential costs of the bioeconomy. It supports the establishment of a Bioeconomy Panel of experts to help enhance synergies and coherence between policies and initiatives, and a Bioeconomy Observatory, in order to promote mutual learning.

- **Obstacles to innovation:** Parliament calls for the **elimination of existing obstacles to innovation along the value chain**, notably by rapid and science-based EU approval procedures for biotechnological products and much faster market access.

- **Practical measures at regional level:** Parliament calls on the Commission to propose **practical measures of regionally comprehensive scope** to promote the production and consumption of bioeconomy products at regional level.

- **Need for new skills, knowledge and disciplines:** Parliament stresses that the bioeconomy requires that new skills, new knowledge and new disciplines be developed and/or integrated further in order to **tackle bioeconomy-related societal changes, promote competitiveness, growth and job creation, meet the needs of industry and ensure that skills and jobs are better matched**.

- **Horizon 2020:** Parliament hopes that the EUR 4.5 billion budget proposed by the Commission in Horizon 2020 will be made available to all sectors and instruments of the bioeconomy and for the purpose of **further refining innovations**, including research on the **ecosystem boundaries, reuse and recycling of biomaterials**.

- **Biorefineries:** the resolution emphasises that sufficient quantities of sustainable raw materials are needed for the successful operation of biorefineries in Europe and points out that this will also require **improving infrastructures for storage and transport and developing the necessary logistics**. Parliament also calls on the Commission and the Member States to support pilot and demonstration activities for the up-scaling of products and processes.

- **Biomass:** Parliament calls for the development of a **legal instrument** that will pave the way for a more efficient and sustainable use of this resource. It stresses that such an instrument should establish a **cascading use principle** in the 'pyramid of biomass'. This approach would lead to a hierarchical, smart and efficient use of biomass, to value-adding applications and to supporting measures, such as coordination of research along the whole value chain.

Reinforced policy interaction and stakeholder engagement:

- **Interdisciplinary approach:** Parliament considers it necessary to ensure an **integrated, coherent, cross-sectoral and interdisciplinary approach** to bioeconomy, and calls for the harmonisation of the different EU policies involved and the related guiding principles.

- **Financial instruments:** Parliament calls on the Commission to make provisions for financial instruments to **support pre-commercial investments, turn research findings into commercial successes** and enable innovative companies, especially SMEs, to find financial and other support instruments encouraging the development of the bioeconomy. This could be, for example, through the use of Structural Funds and European Investment Bank risk-sharing facilities, through increased coherence between different EU research and innovation funds, and through the establishment of a one-stop shop for information about all bio-based economy related initiatives.

- **Less bureaucracy:** the resolution calls for targeted and specific action to **reduce the complexity and duration of the bureaucratic authorisation procedures** that complicate biorefinery development processes and are likely to encourage the transfer of innovative, cutting-edge technologies outside the EU.

- **Public-private partnerships:** Parliament approves the use of the public-private partnership (PPP) formula, drawing adequate lessons from the problems that emerged in previous applications of the same formula to other sectors and calls on the Commission to **allocate adequate resources for development and growth of such partnerships**.

- **Regional and local dimension:** Parliament agrees with the need for a **multi-level approach** and calls for increasing attention to be paid to the **regional and local dimension of the bioeconomy and to bottom-up initiatives**. It believes that bottom-up initiatives are important in creating a bio-based society and that a business- and demand-driven approach, combined with a government-driven approach, is crucial. The Commission is urged to support networks and clusters to promote exchanges of experiences within and between regions.

Enhancement of markets and competitiveness:

- **Market-creating tools:** Parliament takes the view that there are a number of excellent **tools** (public procurement, standardisation, tax incentives, certification systems and specific labelling) that could secure **a sufficient supply of sustainable and high-quality bio-based products**, as well as provide resource-efficient production systems. It believes that **reform of the current legislation is required** and calls on the Commission to develop sustainability criteria for the use of biomass on which also market-creating tools should be based.

- **Sound political framework:** Parliament stresses that a bio-based economy that relies on exploitation of biological resources instead of fossil energy must be guided by a sound political framework that takes into account **not only economic viability but also social and ecological sustainability factors**.

- **Long-term bioeconomy strategy:** the resolution stresses the need to develop a long-term bioeconomy strategy, taking due account of the need to ensure food security, and takes the view that **synergy and close cooperation along the value chain**, including local producers of agricultural and forestry raw materials and biorefineries, **would help strengthen the competitiveness and increase the profitability of rural regions**.

- **Feedstock:** Parliament calls on the Commission to promote measures to **increase feedstock potentials in a sustainable manner**, better mobilise such feedstocks, collect biodegradable waste - avoiding extensive transportation - and ensure that biomass use remains within ecological boundaries and does not reduce the carbon sink function. It considers it urgent, in this context, to establish sustainability criteria for biomass energy use to ensure the availability of biomass for more resource-efficient purposes, preventing incentives for the transformation of biomass into energy from creating market distortions and reducing its availability for producers.

- **Enabling legislation:** Parliament calls for better and enabling legislation providing legal certainty and strong support for sustainable use of bioeconomy resources and exploitation of raw materials, and for policy to be based, in every respect, on a flexible, long-term approach that promotes investments.

- **Environmentally harmful subsidies:** the resolution urges the Commission to **define environmentally harmful subsidies** as 'a result of a government action that confers an advantage on consumers or producers, in order to supplement their income or lower their costs, but in doing so, discriminates against sound environmental practices'. It calls on it and the Member States to adopt, without delay, **concrete plans, based on this definition, for progressively phasing out all such subsidies by 2020**, and to report on progress through the **National Reform Programmes**.

Lastly, Parliament deems it crucial to develop **international legally binding sustainability standards for all sectors of biomass usage**, as well as binding sustainable forest management criteria. It urges the EU to pursue the adoption of **multilateral agreements** and provide, especially for LDCs, related institutional and technical support for ensuring the sustainable use of biomass.