



THE BIOECONOMY IN THE POST- 2020 CAP

SPECIAL REPORT | 12 - 29 APR. 2019
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Over 18 million people across the EU were employed in the bioeconomy in 2015 – mainly in the agriculture, food and beverage sectors, according to the European Commission's Joint Research Centre.

The aim of the bioeconomy is to have an innovative and low-emissions economy, bringing together demands for sustainable agriculture while protecting biodiversity and the environment.

In October 2018, the European Commission unveiled a new Bioeconomy Strategy, aiming to accelerate the establishment of a sustainable European bioeconomy while maximising its contribution towards the 2030 Agenda and the Sustainable Development Goals (SDGs), as well as the Paris Agreement on climate change.

According to the EU executive, the new delivery model for the post-2020 Common Agricultural Policy (CAP) provides EU member states with enough flexibility to link their CAP national strategic plans to national Bioeconomy Strategies.



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Bioeconomy in CAP – the economy of tomorrow?

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By Britta Weppner | EURACTIV.de / translated by Daniel Eck



The bioeconomy strategy could save between 1.2 and 1.5 billion tons of CO₂ every year. [Susanne Nilsson/Flickr]

In view of the threat of environmental damage caused by climate change, experts are placing a lot of hope in bioeconomy as a model for the future of agriculture. But the question is – what kind of bioeconomy do we need?

“Bioeconomy should be the basis for a new model for our agricultural sector,” said Angelique Delahaye, member of the European Parliament’s Committee on the Environment, Public Health and Food Safety.

The MEP debated bioeconomy with other experts during a EURACTIV panel on 10 April. Delahaye mentioned an example: the protein strategy could not only offer European farmers an additional income but would also help the EU address the current protein deficit and allow it to avoid dependence on genetically modified or imported foodstuffs.

It is very important to include farmers and farming regions into the bioeconomy but also to secure sustainability on a social, ecological

and economic level, said Mindaugas Maciulevicius, a rapporteur of the European Economic and Social Committee’s Agriculture, Rural Development and Environment Section.

LOCAL AND REGIONAL LEVELS ARE KEY

Maciulevicius clearly associated the terms ‘inclusivity’ and ‘sustainability’

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with bioeconomy. As it is a modern concept, he expressed the wish for “increased cooperation between regional governments, farmers and scientists as well as an increase of investments in rural regions.” To achieve this “sustainability is the key word.”

For the EU to fully exploit bioeconomy’s potential in the long term, “knowledge sharing [between member states] is key” for the debate on the Common Agricultural Policy (CAP). According to Maciulevicius, the EU is currently investing too much time, effort and money into fighting climate change at the global level.

Bioeconomy could be the solution, to earn money that way and meet the EU’s priorities and strategies at the same time. “We should imitate the success of the EU, instead of looking for new solutions,” Maciulevicius said.

Especially on a local and regional level, an innovative bioeconomy could be the source of new environmentally friendly jobs and substantial investments.

COMBINING THE USE OF RESOURCES

Waldemar Kütt, head of unit for the bioeconomy strategy of the European Commission, seemed convinced that the actual question is to analyse how bioeconomy should be defined. According to him, bioeconomy is “not synonym for bio-based economy.

The bioeconomy strategy is not a new CAP or alternative climate strategy.” Instead, it reinforces the CAP in many agricultural sectors and aims to combine the use of resources.

The driving force to reach a functioning economy in the future should consist of a renewed bioeconomic strategy, which supports a sustainable and circular bioeconomy, explained Kütt.

Three main elements that need

to be considered in the debate about the role of bioeconomy in the CAP are, according to Kütt: biodegradable waste that would transform waste into products and offer farmers new assets; the inclusion of rural regions through the use of bioeconomy at a regional level; and a bioeconomy framed by planetary boundaries and opportunities.

“We need to work on what is possible and keep an eye on consumption (such as our daily food intake) as well as our production,” added Kütt. As the entire system is very complex and the bioeconomy has an overarching character, Kütt also pointed out that different policy areas needed to be connected.

SOLUTIONS FOR THE FUTURE

Joanna Dupont-Inglis, director of EuropaBio, Europe’s largest and most influential biotech industry group, stressed the importance of the bioeconomy in light of climate change. The bioeconomy strategy could save between 1.2 and 1.5 billion tons of CO₂ every year, said Dupont-Inglis.

According to her, “Europe could be the leader in this very transformative sector, [...] but ultimately we will be buying [foodstuffs and technologies] from China instead of allowing biotechnology to make progress in the EU.”

The problem is that the European biotech community loses talent to countries that allow for greater innovation. “We live in a bioeconomy and could not survive without it,” according to Dupont-Inglis.

WILL WE MISS THE BOAT?

Pekka Pesonen, secretary-general of Copa-Cogeca, the strongest interest group for European farmers, offered a perspective from farmers themselves:

“Farmers and associations never want to lose part of their production

if they can exploit it in any way. The development of bioeconomy has great potential to support farmers in better valuing their production and help the environment.”

While this is an opportunity for the younger generation to continue the food policy that currently enables over 10 million European farmers, Pesonen also pointed out that “the unstable legal framework for biotechnologies confuses everyone in the EU”.

Pesonen pointed out that this situation has geopolitical implications when European companies are bought by Chinese companies and non-EU countries can use the technology that has been banned in the EU. The main question is therefore whether there is enough space for innovation in the bioeconomy plan. “New plant breeding techniques are an example of how we will probably miss the train,” according to Pesonen.

Pesonen is calling for a reform package and additional EU investments into research and support for farmers who suffer economically from cuts in public spending. On the European level, forestry and agriculture are of strategic importance, and research policies could also promote sustainability.

GLOBAL OVERCONSUMPTION

Harriet Bradley, EU agriculture and bioenergy policy officer at Birdlife International, cautioned that “we need to be very careful with the use of biomass. Bioeconomy needs to be sustainable.”

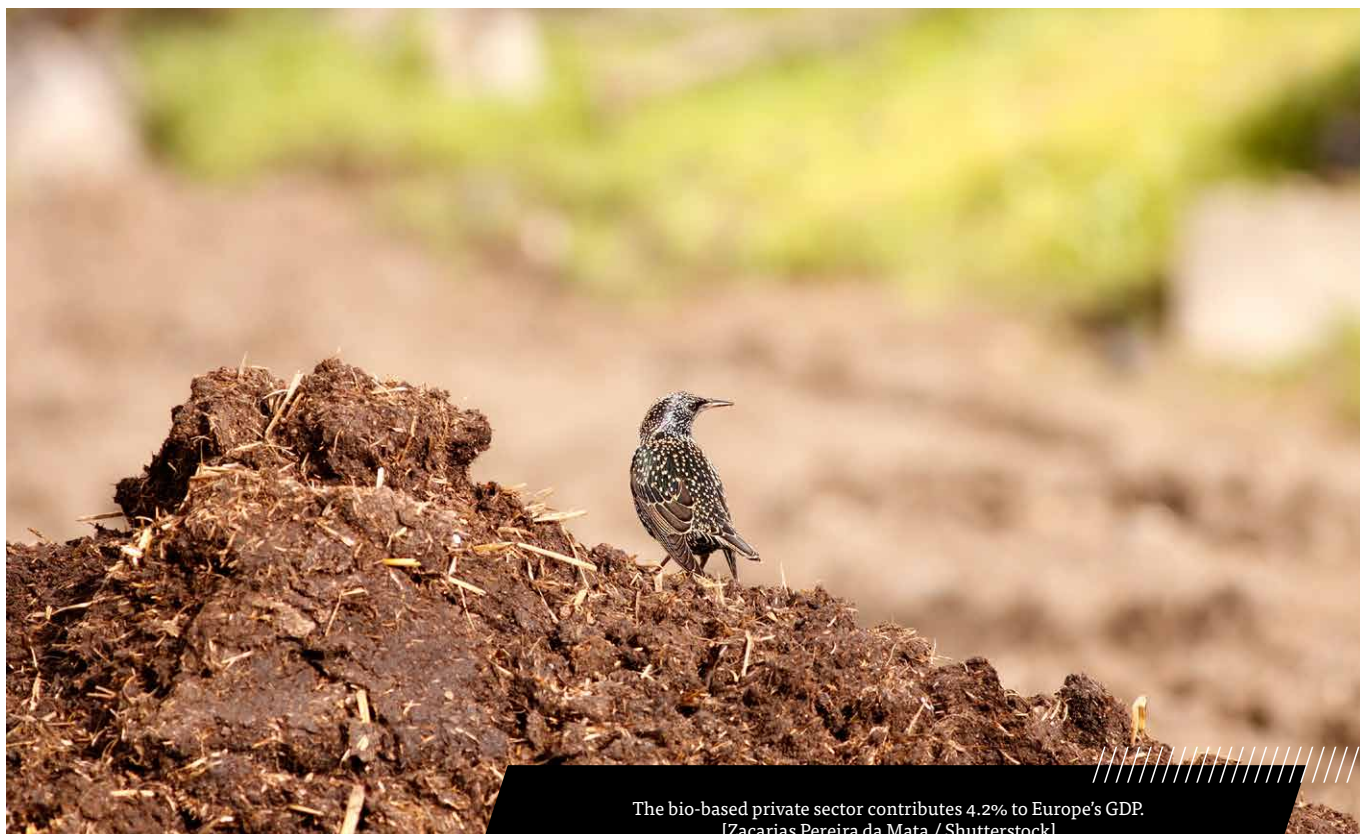
Bradley explained that our current bioeconomy is “largely unsustainable” and added that “we currently massively over-exploit resources, which is something we need to take into account when discussing the future of bioeconomy.”

All in all, “production needs to be more intelligent” than it currently is, highlighted Bradley.

Private sector is part of the solution in bioeconomy, experts say

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By Gerardo Fortuna | EURACTIV.com



The bio-based private sector contributes 4.2% to Europe's GDP.
[Zacarias Pereira da Mata / Shutterstock]

The private sector has a key role to play in promoting bioeconomy in the agrifood sector, high-level experts have told EURACTIV.com. However, they said the risk of depriving the food production system of organic resources must be weighed up.

The bio-based private sector contributes 4.2% to Europe's GDP. It generates €621 billion added value and around €2 trillion in annual turnover. It also employed 18 million people

in 2015, of which more than two-thirds were in agriculture and food manufacturing sectors.

However, the labour productivity gains of agriculture, forestry and fishing remained at €20,000 per person employed in the 2008-2015 period, below the industry average in other sectors of €34,000 per person employed.

Launched in 2013, the EU Commission's bioeconomy strategy was initially conceived as a way to encourage the foundation of post-

petroleum energy independent Europe. But it soon moved towards solving more cycle problems, including in agriculture and food security.

When it comes to sustainability, people, but governments as well, mainly look at energy, cars, buildings, according to Gerda Verburg, United Nations Secretary-General assistant and coordinator of the UN Scaling up Nutrition (SUN) movement.

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“They should pay more attention to agriculture, forestry and fisheries because, in the end, these sectors should keep our planet in healthy conditions to feed the world population,” she said.

For Verburg, although it is still work in progress, the bioeconomy concept is an opportunity to “close the circle”, especially in the breeding sector where it is possible to fix the problem of greenhouse emissions that animals produce.

PRIVATE SECTOR INVOLVEMENT

Verburg also said big tech companies and the private sector should be involved in all the possible solutions to assist farmers.

Bioeconomy provides a source of additional income from farmers, foresters and fishermen, but it could also be a profitable business for private companies that bring to market services and products.

“I don’t care if companies are making profits out of the transfer from a non-sustainable production toward sustainable production,” she said, adding that she is much more concerned about companies that continue to push farmers to buy their products.

According to her, it is the fact that some companies are maximising their profits at the cost of people and environment that should raise concerns, rather than the fact that they make use of an innovative approach to support farmers and at the same time develop biodiversity.

“Good for them if they make money out of this, as long as they are part of the solution. And let’s be frank, a company who doesn’t make profits, also won’t make a leap into future,” she said.

The private sector is the main actor in all the new agricultural trends,

according to Davit Kirvalidze, Georgia’s candidate for FAO Directory general and former agriculture minister of his country. Asked by EURACTIV particularly about bioeconomy, he replied, “Empower the private sector, and the private sector will know how to do it”.

He added that the private sector had always led the progress while the role of governments is to provide companies with the right regulatory and institutional environment.

RISKS

Per Pinstrup-Andersen, a Danish economist and Professor Emeritus at Cornell University, stressed that we “do need to understand much better how to approach all the biological resources used in the bioeconomy framework”.

According to him, many risks could come from the use of natural resources for purposes other than food, as has happened with biofuels, which he considers as the wrong way to cope with the energy security problem.

He added that some co-products like animal manure should be kept in the food circle to produce organic fertilisers, rather than be used for energy production.

Animal manure could be treated, indeed, through a process of anaerobic digestion to produce biogas, a renewable fuel which contains methane and that can have an impact in reducing greenhouse gas emissions.

“We have to be very careful that we know what we’re doing so that we don’t simply subtract natural resources from food production with some very negative consequences,” Pinstrup-Andersen concluded.

The European Commission put the use of biofertilisers as one of the areas to develop in the context of the new bioeconomy strategy, unveiled last October.

“I would really like to see manure

used as a feedstock for fertilisers. It is part of the circular economy philosophy,” Commission Vice-President Jyrki Katainen said during the presentation of the strategy.

Netherlands launches 2030 vision to protect biodiversity in agriculture

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By Mario Liberto | Sicilia Agricoltura



The Dutch government said in order for agriculture to be less dependent on pesticides, enhancing natural characteristics and processes should be at the core of the vision. [T.W. van Urk / Shutterstock]

The Dutch government has launched a new vision for the country's agriculture, which prioritises the protection of natural resources and the reduction of the sector's environmental impact.

The new 2030 Plant Protection Vision is based on two principles: innovative plant breeding and precision or smart farming, which are both hot topics for the future of EU

farming.

"Pesticides are important to ensure good, high-quality production. However, the current dependence on pesticides is such that we need a radical turnaround – also to reduce the environmental impact," agriculture minister Carola Schouten said last week.

Schouten said the vision represented a "paradigm shift". With the availability of more resilient plants

and growing methods, the need to use pesticides will be less, she explained.

"And where pesticides remain necessary, their use should be 'smart' so as to minimise environmental emissions and assure the production of crops with barely any residues," she added.

Under the Dutch plan, plants will be better protected from pests and

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diseases, with a minimum use of pesticides. "It aims to conserve nature and biodiversity, healthy species, and a clear economic perspective for farmers," the Dutch ministry said in a statement.

BREEDING 'NATURAL ENEMIES'

In order to reduce dependence on pesticides, enhancing the natural defenses of plants should be at the core of the vision, the Dutch government said. Through plant breeding, plants will become more resilient to diseases and pests, it argues.

"A good, healthy soil that provides enough nutrients to the plant, also contributes to resilience. Wherever possible, growers should use natural enemies, by using them actively – as happens for growing vegetables in greenhouses – or by using and strengthening the natural resources available in the immediate surroundings (functional agrobiodiversity)," the ministry said.

The term new plant breeding techniques (NPBTs) describes scientific methods for the genetic engineering of plants to enhance natural traits like drought tolerance and pest resistance.

The discussion over NPBTs has taken center stage in Brussels since a European court ruled in July 2018 that organisms obtained by mutagenesis are genetically modified organisms and should, in principle, fall under the GMO directive.

The agri-food industry disputes the GMO classification, saying the plants obtained through these techniques might have occurred naturally or through conventional cross-breeding techniques that mimic natural processes.

To opponents, NPBTs are just another attempt at selling GMOs through the back door to European farmers who will simultaneously lose their right to use their own seeds. Their argument is that all these techniques should fall under the EU's strict GMO approval process.

In a recent interview with EURACTIV.com, EU Health Commissioner Vytenis Andriukaitis said these new methods call for a new regulation, as they have nothing to do with GMOs considering that no foreign DNA is added to the plant.

PRECISION FARMING

Another element of the Dutch plan is the introduction of precision farming practices as a way to mitigate climate change through the decreased use of pesticides.

The Dutch ministry said precision farming helps better monitor the crops and soil, and provides early warning in case of risks.

"Pesticides may then be used in a targeted way. Where pesticides are needed, low-risk varieties are preferred, and (new) techniques are necessary to minimise the emission to the environment," the ministry said.

The new delivery model of the post-2020 CAP grants EU member

states flexibility to come up with their own CAP strategic plans fully adjusted to their various local needs.

In an interview with EURACTIV Romania in September 2018, EU agriculture commissioner Phil Hogan made it clear that from now on it would be up to the member states to speed up the introduction of innovation in agriculture.

"The budget for precision agriculture depends on the needs and the precise budget allocations within the overall CAP envelope that member states will receive," Hogan said.

"The experience of the current CAP applied across 28 member states of varying climates, methods of production and traditions, shows that Brussels can no longer determine what has to be done in each and every member state," the Irish politician said.

Commission calls for bioeconomy strategies to be expanded and implemented

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By Amanda Lee | EURACTIV.com



Under the future Common Agricultural Policy (CAP), the European Commission will not approve the national strategic plan of a member state that does not include the promotion of the bioeconomy in agriculture, the EU's farming Commissioner Phil Hogan said on Thursday (25 April).

"The bioeconomy is a very important subject that requires EU-wide action and it is now stating

explicitly as part of the 9 EU objectives" of the reformed CAP, Hogan said.

The EU Commissioner for agriculture and rural development was answering a question from EURACTIV.com at the conference Our Forest, Our Future in Brussels last Friday (26 April).

Through national strategic plans laid down in the proposed CAP, all member states will outline how they want to meet these 9 EU-wide objectives, including the promotion of

the bioeconomy, using the CAP tools.

Hogan pointed out that EU countries are required to submit proposals on how to expand the bioeconomy's role in agriculture and in all bio-based industries.

According to the EU's agriculture boss, EU member states will have more freedom under the Commission's proposal for the future CAP. This freedom will allow them to focus on

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their bioeconomies and help them meet the higher ambitions of the future policy on the environment and climate change.

“A sustainable bioeconomy is also hugely important for reducing emissions in the EU,” said Hogan, mentioning bioenergy’s contribution to help meeting renewable energy targets for 2020 and 2030, but also to substitute fossil-based materials in sectors like construction, plastics or textiles.

EU AND NATIONAL STRATEGIES

The Commission’s bioeconomy strategy was initially conceived seven years ago as a way to encourage Europe to be less dependent on petroleum. The updated strategy presented last October expanded its action plan to develop a sustainable and circular bioeconomy from mainly biofuels to any kind of bio-based industry.

Now the strategy looks more at the circular economy as well as sustainability. The three goals of the strategy, as stated by the Commission, are to strengthen and scale up the bio-based sectors, unlock investments and markets, deploy local bioeconomies rapidly across the whole of Europe and understand the ecological boundaries of the bioeconomy.

The Commission’s action plan also promotes the uptake of national bioeconomy strategies, setting up tools such as the European bioeconomy policy support facility, as well as a European Bioeconomy forum, in order to help EU countries develop their own strategy.

“We need a bioeconomy strategy that can be implemented in every member state,” Hogan said.

Currently, only Germany, France, Spain, Ireland, Italy, Latvia, Finland and Malta have dedicated national bioeconomy strategies at the

national level. Six EU countries have strategies under development while the remaining 13 have other policy initiatives or related strategies at a national level.

ADDITIONAL INCOME FOR FARMERS

“For the past 4 years at the EU level, I have put the bioeconomy centrally in the agricultural policy discussions of the future,” said Hogan.

According to Hogan, the European Parliament agrees that the bioeconomy can be a win-win for farmers and cooperatives when it comes to creating jobs in rural areas and providing a new source of income for farmers.

However, the three reports that together form the entire CAP structure were approved only by the agriculture committee of the European Parliament, without reaching the plenary stage.

It means that it will be up to the Conference of Presidents of the next Parliament, after the EU elections in May, to decide whether to forward the draft report directly to the plenary or ask the next agriculture committee to start from scratch instead.

“We have tried our best to get member states and farmers focused on this for the future,” Hogan said. “And now, for the first time, I think we are succeeding.”

Hogan hopes member states will make their own initiatives and that the discussions with the Romanian presidency will be successful and help farmers and producers see the potential of the bioeconomy.

Northern French region banks on bioeconomy

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By Marion Candau | EURACTIV.fr / translate by Bogdan Neagu | EURACTIV Romania



In September 2018, the Hauts-de-France region in northern France adopted a bioeconomy roadmap. The former sugar region wants to become a leader in this new sector.

The Hauts-de-France region is adopting strategies that are heavily focused on developing a strong bioeconomy. Energy transition challenges, economic development and limiting global warming are among the main arguments that are motivating the region.

It would strengthen economic development because the bioeconomy

affects all sectors of activity that process biomass: agriculture, forestry, agri-food, plant chemistry.

In the field of energy, biomass is an organic energy source that comes from plants (including microalgae), animals, bacteria or fungi.

Ynsect, for example, a company that raises insects for animal feed, has chosen the northern French city of Amiens to set up its industrial unit and is set to create close to 100 jobs. Root Lines Technology, a start-up from Amiens, manufactures human therapeutic proteins based on turnip root.

Other more established companies in the region also continue to innovate. This is the case of Extractis, a French leader in the field of green chemistry which aims to become a European leader, with the region's support

Extractis, partly EU-funded with the European Regional Development Fund (ERDF), is a technical centre specialised in fractioning biomass. The company develops, among other things, new extracts, active ingredients and ingredients from biomass.

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EXPERTS IN GREEN CHEMISTRY

All the necessary equipment and technologies can be found on the company's site near Amiens. Everything is there to produce extracts that are used by the company's clients in many sectors: agri-food, cosmetics, etc.

"Let's take the example of a company that is interested in creating a cream that contains an antioxidant capable of rejuvenating the skin. They know that a particular flower compound can be interesting," explained Julianne Allemon, business developer at Extractis.

But due to lack of time or expertise, they mandate us to do this extraction. So they will deliver X kilos of this flower to us, and we will innovate to find out how to extract the molecule," she said.

The company therefore specialises in research and development and direct production. Because the company already knows how to extract molecules, it will immediately enter the production phase, process several tons of raw material and give the customer a few kilos of dry product.

"I am giving you the example of the cosmetics sector, but it is the same for the food industry," she added, saying that Extractis works for both French and European customers.

THE EUROPEAN PROJECT

Since 2016, the company has also been working on a project alongside 19 European partners under the European Horizon 2020 programme. Saltgae, coordinated by Spaniards, aims to recover saline effluents from the agri-food industry.

"We received funding for the demineralisation of effluents because of microalgae being able to survive in very saline conditions, which are then

harvested and fractionated to recover proteins for example," explained Camille Viot, a project manager at Extractis with a PhD in chemistry.

The company works very closely with partners from Ireland, Portugal, Italy or Spain. They meet every three months and regularly communicate by phone to share their experiences and obstacles.

At European level, the European Commission is also making bioeconomy its flagship project. Last October, it announced that it would launch 14 measures in 2019 so that EU member states would mobilise around the idea of promoting a strong bioeconomy.

"In a world where biological resources and ecosystems are limited, innovative efforts are needed to feed people and provide them with clean water and energy," the Commission said in an October statement.

"Bioeconomy can produce fuel from algae, recycle plastics, transform waste into new furniture or clothing, and develop organic fertilisers from industrial by-products. It has the potential to create one million new green jobs by 2030," it said.



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