



The Role of Bioeconomy in Climate Change Mitigation

Key decision-makers and stakeholders were on September 29 brought together by **MEP Miapetra Kumpula-Natri** and the European Parliament Intergroup on “*Climate Change, Biodiversity and Sustainable Development*” to discuss the pivotal role that the bioeconomy and bio-based products can play ahead of COP21 in Paris.

Miapetra Kumpula-Natri MEP and Chair of the “Bioeconomy” working group of the EP Intergroup on “Climate Change, Biodiversity and Sustainable Development” welcomed the participants by highlighting the need for more MEPs to understand the value and role that the bioeconomy can play in Europe. It was also stressed that the bioeconomy must fit into other aims being discussed in the EU. It was urged that more MEPs should get involved in the discussion and actions needed in order to lead the way forward.

Pavel Poc MEP and Chair of the EP Intergroup on “Climate Change, Biodiversity and Sustainable Development” opened the meeting by reiterating the need for the EU to understand the need to harvest a bioeconomy. It was underlined that research in this area must be accelerated and a legal framework should be set up. It was also highlighted that bio-based solutions need to be found in public procurement. The importance of learning from past mistakes was underscored. It was stated that the EU must be sure that the bioeconomy focuses on technological innovation in order to ensure resource availability and ease the anthropogenic pressure on ecosystems instead of creating new ecological costs and damages.

Peter Wehrheim, Head of Unit “Climate Finance and Deforestation”, DG Climate Action, European Commission, highlighted that the negotiations leading up to Paris have thus far been slow, but a joint mandate for the Member States was recently adopted by the Council. It was stressed that the EU aims to half greenhouse gas emissions by 2050 and aim to be fossil free by the end of the century. It was stated that it is possible to decarbonise the economy while still sustaining growth and jobs. The bioeconomy involves finite natural resources and a strong bioeconomy will help us live within our limits while staying competitive. With regards to research and innovation it was highlighted that for every Euro invested now will produce 10 Euros of added value in 2025. The link between agriculture and forestry was underscored as well as the need to find a balance between them. The importance of forests providing carbon sinks and mitigating climate change was reiterated and the central question is how to preserve the forest sink while reaping the opportunities of a bioeconomy. It was informed that the Commission has recently conducted a stakeholder consultation, which has provided insights to the need for preserving the sink while increasing harvest, providing better management, better resource mobilisation, shorter rotations and better nutrients. It was stressed that such measures need support as well as policies that align various objectives in order to steer towards a bioeconomy. Waste was also mentioned as an important element. It was stressed that the challenge to reconcile the bioeconomy with mitigation actions is a global challenge and the international community must acknowledge the link between agriculture, forestry and climate change.



It was stated that the EU will present provisions on the role of agriculture and forestry in mitigation policies after Paris and assess how to include these sectors in the 2030 Climate and Energy Framework.

Ernst Worrell, Professor “Energy, Material and the Environment”, Utrecht University, pointed out that the bioeconomy is already here as humans have historically lived in a bio-based society and slowly moved away from it. Bio-based materials are an important part of the economy and the need to look at new markets for producing as well as recycling bio-based materials was stated as essential in order to enhance the bioeconomy. However, it was urged to not just look at new applications but also examine what already exists and utilise it to produce more with less. It was underscored that the bioeconomy must switch to feedstocks that provide the biggest gain. Sourcing was pointed out as key. Waste and the high quality recycling of bio-based products were pointed out as more preferred over use as energy source. It was stressed that the source and use of energy determines the climate impact and that all bio-based developments are not necessarily climate-friendly. It was underlined that an integrated system or perspective is needed in order to assess where it make sense to identify biomass sources, which will provide the greatest benefits.

Linde Zuidema, Bioenergy and export credit agencies campaigner, FERN, outlined some important challenges posed by the bioeconomy that need to be taken into account. Firstly, the limited availability of land and the crops needed to feed the bioeconomy. It was stressed that the biomass needed for bioenergy along with a growing population puts pressure on land use. It was stated that wood is the main source for renewable energy in the EU today and as the energy demands are estimated to increase this will put an additional strain on land use. Further, the limited availability of resources will pose challenges for other sectors that also rely on wood. It was underlined that raising demands puts pressure on forest management and poses the risk of leading to off-sets that forests provide. It was underlined that a better understanding is needed for resource limits and trade-offs between different uses. It was underscored that it must be made clear as to why certain uses of biomass are promoted over others. It was also called upon the EU to ensure a coherent framework that strikes a balance between climate and energy, biodiversity, deforestation and resource efficiency. The limited availability of land and natural resources and resource efficiency should be the guiding principles when moving towards a bioeconomy.

Matthew Reddy, World Business Council for Sustainable Development, presented what the private sector is doing in relation to forests and the bioeconomy leading up to the summit in Paris. The WBCSD launched an initiative at COP20 in Lima called the Low Carbon Technology Partnerships Initiative (LCTPi) along with the Sustainable Development Solutions Network and the International Energy Agency. The LCTPi aims to present a series of concrete action plans at COP21 for the large-scale development and deployment of low-carbon technologies. There are a number of focus areas and there is a strong link between the two that contribute to the bioeconomy, “*Forests as Carbon Sinks and Forest Products*”, and “*Climate Smart Agriculture*”. The LCTPi process is currently working to identify a number of actions and quantify the total mitigation potential from each sector, which will



be presented at COP21. It was highlighted that scaling up sustainable forest management and replacing more energy intensive products with wood based products is the most efficient way to mitigate climate change. It was underlined that carbon neutral biomass is a key requirement for the sector to thrive, and public and private sector procurement is vital. The need for value chain partnerships and cross sectoral collaboration as well as establishing a common language among sectors was also highlighted. Further, public-private partnership will also play a role in scaling up the bioeconomy.

Julie Girling MEP highlighted that there is always a bit of confusion when it comes to biomass and the value of biomass. It was pointed out that MEPs receive a lot of information on the matter but it is difficult to quantify. It was underlined that it is difficult to work in a world where things aren't quantified and where the paybacks aren't seen immediately. It was reiterated that the EU must think in a holistic way in order to ensure that we do not make mistakes and avoid unintended consequences.

The discussion with the audience raised the issue of trying to find a common definition of bioeconomy and the notion that it is based on natural resources, which should be a guiding principle. It was pointed out that biomass is not a finite resource by itself but relies on limited factors such as land, water, and nutrients, and if not managed sustainably biomass will be limited. The importance of biodiversity was also raised by participants as it provides a huge opportunity to increase the establishment of hectares. By integrating corridors, conservation zones and buffers it is possible to increase forest cover as well as improve biodiversity. The role of foresters was also pointed out as essential. It was highlighted that foresters face a multitude of challenges with regards to the market as fossil fuel subsidies create an uneven playing field. Education was stated as another important element in order to build on the capacity of foresters, calling for more investments on this side. The difficulties of small scale suppliers of biomass were also raised as it was stressed that there is a lack of infrastructure and that this market needs to be further examined.

It was underlined that EU forests provide a net sink, which is projected to decline in the coming years as the biomass harvest is expected to increase. It was pointed out that the European forests have natural boundaries, which must be taken into account when using them to supply bioenergy and the bioeconomy. The concern for deforestation or degradation due to new demands was however not shared among all participants. It was highlighted that there are sufficient mechanisms in place to secure healthy forests in the EU and the bioeconomy can be a good driver to further sustainable development. It was reiterated that EU foresters have pushed a lot of sustainable principles and the management as well as attitudes have changed. It was stressed that more still needs to be done as there will be an increasing demand in all areas of food, feed and fibre. The discussion also called for more assessment on trends and impacts on bio-based demands. The issue of substitution was raised and how the EU can move forward developing a substitution strategy to boost more bio-based products. It was underlined that the greenhouse gas emissions are not originating from the forestry sector but from energy intensive industries. The sink effect of forests is because of proper management and it was underscored that market opportunities are needed in order to reduce the carbon footprint.



Another important factor related to substitution is consumer awareness and the need to show that there are alternatives on the market. The discussion also called for the need to include the banking sector and public procurement. It was pointed out that a range of financial instruments exists in the EU and these need to be accessible to motivate investors to shift to green investments. The need for consistent long-term policies was also stressed. It was stated that the bioeconomy must be seen in a holistic way that offers more than just carbon benefits, but also provides long-term returns to make products more competitive and provides significant savings over time.

Joanna Dupont, European Bioeconomy Alliance, stated that the bioeconomy faces a multitude of challenges with regards to finance, new markets, accessing feedstocks, and drawing attention to the benefits of a bioeconomy. It was stressed that the full climate change mitigation potential of biotechnology processes and bio-based products ranges from between 1 billion and 2.5 billion tons CO₂ equivalent per year by 2030. There is a huge potential for sectors but it is challenging operating in the current fossil based framework. Fundamentally, it was stated that if the EU is to move towards a renewable and resource-efficient economy investments must be made in the bioeconomy. It was pointed out that many people do not realise that everything around them from paint, carpet, to chairs originates from fossil carbon. It was underlined that if more people were aware of this then bio-based products would be more appreciated. The need to stop extracting fossil carbon was stressed in order to move towards a circular bioeconomy.

Miapetra Kumpula-Natri MEP provided a Resolution¹ brought forward on behalf of the “*Bioeconomy*” working group to the 21st UNFCCC Conference of the Parties highlighting the important benefits of the bioeconomy and bio-based products. The Resolution also calls on the EU and its Member States to acknowledge the potential benefits and contributions of the bioeconomy towards climate change mitigation and the development of a circular economy.

¹ <http://ebcd.org/wp-content/uploads/2015/07/Bioeconomy-WG-Resolution.pdf>