SUMMARY REPORT

Towards a new EU policy for sustainable bioenergy

The role of forest biomass for climate change mitigation and adaption

10 October 2017
European Parliament, Brussels

Policy-makers, scientists, and stakeholders gathered in the European Parliament to discuss the role of forest biomass in combating climate change and the impact of the Commission proposal for forest biomass sustainability criteria as part of the recast of the Renewable Energy Directive (RED II).

Marijana Petir MEP and rapporteur on the opinion for the dossier on behalf of the Committee on "*Agriculture and Rural Development"* welcomed participants and highlighted the multifunctional role that forests play. The opinion, voted last week in the Committee supported a risk-based approach as a tool to ensure the sustainability of forest biomass so as separate treatment of forest biomass from biofuels, bioliquids and biomass from agriculture. It was said that such an approach respects the competencies of Member States over forestry and forest management. It was underlined that The Committee on "*Environment, Public Health, and Food Safety*", which has a lead in his file, is currently considering a proposal with an approach based on exclusive use for bioenergy of waste and residues from forest and wood industry. It was concluded by stressing that forestry brings important income and jobs to rural areas providing other products than just bioenergy.

Giulio Volpi, Bioenergy policy coordinator, Renewables and CCS policy Unit, DG ENER, European Commission highlighted in his presentation that biomass has many uses such as energy, materials, bioeconomy, and biochemistry all supporting the aim to decarbonise the economy. It was stated that bioenergy is the main renewable energy source and represents 10% of EU final energy consumption. It was said that bioenergy will continue to play a key role in the future not yet reaching its peak. Further, due to energy efficiency gains, EU bioenergy used is expected to decline after 2025, freeing up biomass for other bioeconomy uses. Another issue of debate raised is the increasing reliance on imports, however figures show that most of the solid biomass will continue to be produced in Europe. Analysis shows that typically forest bioenergy delivers greenhouse gas benefits compared to fossil fuels, but carbon impacts can vary depending on forest management regimes, supply chains, end use efficiency, and the time horizon and assumptions made in studies. These elements need to be addressed in the EU sustainability framework for the post-2020 period, in order to ensure that biomass is sustainably used. Therefore as part of the recast of the EU renewable energy directive, the Commission has proposed to reinforce the EU bioenergy sustainability framework with four main objectives: (i) cover all bioenergy uses, (ii) minimize risks of negative environmental impacts, (iii) deliver optimal greenhouse gas savings compared to fossil fuels, (iv) promote resource efficiency and avoid market distortions. It was stressed that this must be achieved through proportionality and cost effectiveness avoiding double

regulation or excessive administrative burden for economic operators. Accordingly the Commission has proposed to apply the existing land criteria only to agricultural biomass. With regard to forest biomass, a new set of criteria were established following a risk-based approach to avoid unsustainable forest harvesting and ensuring LULUCF accounting. The benefits of this approach include proportional focus on the risky biomass meaning that it is not subject to environmental safeguards, but builds on national sustainable forest management policy. It was explained that if there is no national legislation to meet the minimum requirements laid down in the Directive, the economic operators are required to provide additional evidence at the forest holding level. As such this approach builds on existing national sustainable forest management legislation. In addition, to avoid disproportionate administrative burden the criteria apply only to large scale plants. It was said that the Parliament is currently discussing an alternative approach focusing only on waste and residues. It was mentioned that this is neither environmentally desirable or technically efficient. Sustainability is not about specific forest feestocks but rather how they are produced. In addition, it would require checking different types of biomass in forests. It was concluded by stating that the Commission proposal is based on a long discussion with supported findings to ensure environmental sustainability in a cost effective and proportionate way.

Professor Tomas Lundmark, **Department of Forest Ecology and Management, Swedish University of Agricultural Sciences (SLU)** highlighted in his presentation that forest growth is decided by natural condition and to a large extent it is stimulated by forest management. It was stated that increased forest growth equals increased climate benefit. It was also said that there is a relationship between utilising resources as forest growth provides more opportunities for increased sustainable yields. It was explained that silviculture practice manipulates the forest ecosystems with the aim to increase photosynthesis and avoid mortality and dead wood formation and respiration. It was stated that if there is a high rate of photosynthesis and a low rate of decomposition this results in a large net surplus of CO2 removals. The pivotal role of forest managers was raised in ensuring the balance of this system. It was pointed out that the natural forest also has a rate of photosynthesis, however a large share is used for decomposition of dead wood. Therefore the net carbon balance of an unmanaged forest is close to zero in the long term. It was explained that the managed system tries to get a large net surplus of carbon put into the system, which can be used for storing or harvest. It was underlined that the most important tool to manage sustained forest growth is to cut trees. It was said that it is similar to the performance of humans as the annual forest growth of trees is age related. The presentation also highlighted the ongoing discussion of using fossil fuels or biomass and which option causes the highest net emissions of carbon dioxide. In the scientific community this relates to forest management versus ecologist and conservation biologist. The issue of payback time was raised underlining that there is a lack of discussion on the payback time using fossils. If it assumed that biomass must regrow after harvest, biomass is considered worse than coal in the short term. However, in the long term trees will regrow therefore highlighting that bioenergy is better than coal. In applied ecology payback time is not considered but the system is rather seen as prepaid. The growth and harvest occur simultaneously meaning that carbon goes

into to the forest at the same time or at a higher rate than it goes out meaning that bioenergy is better than fossils. The annual carbon benefit from Norway, Sweden and Finland was showcased underlining the carbon benefit expressed in avoidance or reduced emissions of CO2. The concept climate change mitigation efficiency was raised, which calculates the average value of avoided emissions. It was said that substitution and carbon stock change are both important stressing that in Sweden and Finland the substitution effect is 2/3 of the climate benefit. It was reiterated that the carbon benefit is the sum of the carbon sink and substitution representing the forest growth. In Nordic countries the climate benefit has doubled in the last 50 years with 5000 million tons less of CO2 in the atmosphere. It was concluded that each Member State must keep their forests growing at the same level or higher than today and that this is the only suitable reference level as well as the only way to provide additional climate benefit.

Bernhard Budil, **Secretary General, Land & Forst Betriebe Austria, member of CEPF (Confederation of European Forest Owners)** highlighted in the presentation that forests and forestry are a solution for global challenges such as climate change and sustainable development. The need to rid of fossil materials and replace with sustainable products and materials was outlined also underlining that this is not supported by some of the approaches in the Commission proposal. The cascading use principle was raised underlining that it is not fit for legislation as markets should decide where forest owners sell their wood. It was said that the Commission is currently preparing voluntary guidelines on best practices of the cascading use of wood. It was also said that there is increased pressure from the Parliament to include the cascading use principle to many legislative proposals such as LULUCF and RED II, which is not supported by forest owners. It was further stated that there are national well-functioning legislations on forestry in place stressing that the Commission has addressed that there are no sustainability problems in the EU. It was pointed out that forest area and forest stocks have increased over the past 25 years. Further, it was informed that the EU is under the Renewable Energy Directive without any sustainability criteria for bioenergy and are accounting emissions and removals from forests under Kyoto rules. This is something that should be addressed also taking into account if new legislation is needed adding further administrative burden. The presentation highlighted that even though cautious to adding new legislation, the Commission proposal could work as it includes the verification of sustainable forestry via risk-based approach on national level. It was advocated that the criteria should be simplified and that there are no good justifications for criteria four or five. Further, it was said that any implementation on the forest holding level must be avoided as to not impact small-scale forest owners. It was reiterated that the cascading use principle would lead to distortion of competition, a decreasing supply of forest biomass, and failing to support several political goals such as renewable energy, bioeconomy, and climate change. With regards to the risk-based approach it was also mentioned that additional benefits include decrease dependence on imports while ensuring mobilisation of EU grown biomass. In addition, it was said that it is pivotal that DG ENV and DG AGRI are in line when deciding about sustainability articles. It was concluded by stressing: (i) there is no reason for the implementation of sustainability criteria for solid biomass, (ii) if there is a need then smart solutions based on a risk-based approach are

necessary also to be verified on national level, (iii) the cascading use principle should not be added to the legislation.

Ilga Anita Bērzkalne, Head of Development, LVM (Latvia State Forests), member of EUSTAFOR (European State Forest Association) introduced in her presentation the country's legislative framework in relation to forestry which includes stringent environmental provisions to ensure that harvesting is part of Sustainable Forest Management and does not inhibit the long-term production capacity of forests. The history of Latvian forests was discussed, highlighting that forest coverage has doubled in acreage in the last 90 years, while standing volumes have quadrupled. When this volume is compared to growth rates, it was demonstrated that the annual growth rate exceeds the felling volumes, with the overall biomass in the standing forests increasing. It was emphasised that much of this has been achieved through the work of LVM, which oversees half of the Latvian forests, roughly one quarter of the country's territory. The primary assignment of LVM is to provide economic benefit, ensure environmental integrity and respond to social needs through forest products, including biomass for a wide array of down-stream industries. LVM provides multifunctional forest management, which is based on forest management plans on three levels and includes rigorous sylvicultural standards. Within its territory, LVM identifies areas with a high conservation value and clusters them to create "eco-forests," protecting habitats and making sure that logging and commercial activities take place with consideration for biological values. On the stand level, LVM defines various objectives for each stand - ranging from complete nature protection to promoting commercial activity - and utilises distinct management tools based on different classifications of these objectives. Finally, on the ground level, LVM looks at protecting individual forest elements. LVM's future objectives were stated, including the identification of additional sources of bioenergy, beyond the stem of the tree, and the utilisation of potential biomass for young stands. Through R&D activities, LVM continues to develop ways to reduce the cost of production and extraction of biomass from the forest for the purposes of bioenergy. Also, LVM finds opportunity in sustainable forest management; the increase in the growth of biomass for bioenergy through more active management of young stands, has the potential to accelerate carbon dioxide absorption in growing forests. It was concluded that the existing legislative framework ensures sustainable forest management to produce biomass for construction, pulp and paper, and bioenergy. Therefore, the sustainability of biomass sourcing should be verified looking at the provisions already in place.

Linde Zuidema, Bioenergy campaigner, FERN identified in her presentation that the mission of FERN is to make the EU work for people and forests. It was said that the EU has great commitments when it comes to climate change, halting biodiversity loss, and using resources more efficiently, but the EU's promotion of wood as a renewable has proven counter-productive in the light of these objectives. It was stated that forest biomass is a limited resource. It was said that bioenergy incentives have led to increasing harvests and the intensification of forest management has certain tradeoffs; it can lead to increasing emissions, biodiversity loss, and it can put further pressure on forest ecosystems. It was stressed that something 'bio' is not necessarily sustainable or low carbon, and in this regard

we need to have a closer look at the payback time of burning wood. The emissions of burning wood were further highlighted with the points that burning wood for energy releases more CO2 into the atmosphere than burning coal, that forests store less carbon when they are harvested while their regrowth is uncertain, and that because biomass is a limited resource, its renewability is relative and its substitution potential is limited. It was noted it is of crucial importance to balance the role of forests as a carbon sink and the role of biomass for substitution of high carbon materials and fossil fuels. Incentivising the burning of raw material is a dangerous road because of the important role of forests and biomass as carbon pools. However, it was stressed that this is a careful balance - if you increase the amount of wood used for substitution that has a negative impact on the forest carbon sink. Forests are mitigating climate change by sequestering carbon, but these carbon sinks are projected to decline, with EU forest carbon sinks facing a 92% decrease by the year 2050. In this regard it was concluded that it is important to consider the potential for forests to store carbon, and this is especially relevant when looking at the burning of trees. In terms of recommendations, it was emphasised that wood is a limited resource and sustainability criteria should focus on *how wood is being used* as a limited resource to ensure bioenergy reduces climate change and is resource efficient. Useful criteria would be to restrict incentives to the use of waste and residues only and in efficient installations that have co-generation technology without the use of fossil fuels.

The discussion with the audience highlighted that disagreement on the issue still exists underlining the importance of such exchanges among stakeholders in order to find synergies moving forward. It was reiterated that EU policies must be compatible with reaching EU objectives on climate change and biodiversity while at the same ensuring jobs and growth in rural communities. With regards to sink versus substitution it was underlined that this must be seen in a comprehensive way that lead to climate benefits. The need to be cautious towards incentives for bioenergy was raised as well as the way forward on waste and residue and handling of thinnings. The importance of national competence was reiterated as well as the importance of harvesting timber wood to replace fossil materials, which has a great long term potential that should be better utilised. In addition, it was highlighted that imports are also subject to criteria.

Hannu Takkula MEP and shadow rapporteur on the opinion produced by the Committee on "*Agriculture and Rural Development"* concluded the meeting by reiterating the need for sustainable forest management to promote forest growth and increase the climate benefits. The opinion highlights the support for a risk-based approach to forest biomass sustainability, which is in accordance with the Commission proposal. The opinion improves the proposal by further clarifying the criteria for example on peat land and wetlands changing the forest holding approach to supply based approach. The importance of the national risk-based approach was stressed as a basis for evaluating sustainable sourcing as well as respects the existing forest and nature legislations in the EU. It was said that the Committee on "*Environment, Public Health, and Food Safety*" should take the opinion into account in its final report underlining not to only include waste and residues of forestry as this would not further ensure that EU legislation encourages sustainable forest management.