Agricultural biomass should play an increasingly central role by 2050. Indeed, to achieve 2050 climate and energy objective, the energy contribution of agricultural biomass will need to increase significantly.

Based on a recent literature review conducted by Faaij (University of Groningen) which estimates the minimum and maximum biomass potential, with the right conditions, a middle range potential of 406 Mtoe could be achieved by 2050. This is striking considering that it is equivalent to 3 times the use of biomass in 2017.

Biomass is derived from organic material such as wood (including residues from forest-based industries), agricultural residues and crops, and organic waste. It can be used for heating, electricity generation, and transport fuels. Increasing the use of biomass, diversifies Europe’s energy supply, creates growth and jobs, and lowers greenhouse gas emissions.

The main feedstock is currently coming from the forest sector that is estimated to cover 70% of the overall biomass supply for energy. Agricultural biomass and biomass from waste represent a smaller portion and supply together 30% of the supply.

While bioenergy has grown in the last 2 decades, the percentage of wood removal harvested for energy purposes remains stable. This demonstrates that bioenergy is not driving forest harvesting and that the sector increasingly uses residues from forest-based industries.
Bioenergy and forests health

Forests play an active role in the fight against climate change by storing carbon and by substituting fossil energy and materials respectively with bioenergy and wood-based products. At the same time, forests are endangered by climate change as the increase in wild fires and insects (bark beetle) have shown in recent times. Bioenergy is an important asset to climate change adaptation. In fact, forest management is key in reducing the risk of forest fires and diseases. Bioenergy contributes to developing markets for low value forestry residues which makes climate adaptation measures more attractive for forest owners.

EU forests coverage steadily increasing

In the last two decades, both forest area and the forest stock (carbon stock per ha) are increasing. Harvesting are less than the growth: more than 30% of the annual forest increment remains in the forest, creating additional wood availability for the future.

The area of European forests is increasing by the size of a football field every minute, bringing an additional carbon sink potential for the coming decades.

Support climate adaption measures: In the Common Agriculture Policy post-2020, rural development budget should be at least maintained in real terms: measures addressing climate change mitigation and adaptation through sustainable forest management are key to meet EU climate and energy policy targets. They should aim at increasing forest stand viability and productivity.

Support synergies between bioenergy and agriculture: Valorisation of agricultural residues through energy and cultivation of perennial energy crops provide income diversification for farmers, promotes socio-economic development at a local scale and contribute to provide a clean source for farm’s own energy requirements.

Support synergies between bioenergy and sustainable land management: Bioenergy brings a market value for forest and agricultural residues and will thus make sustainable management in agriculture and forests economically attractive for farmers and forest owners. Additional environmental benefits from energy crops should be acknowledged.

Support a bio-based economy: Feedstock supply will encourage a necessary transition from fossil based economy to a bio-based economy.