

## Amendment of the Land Use, Land Use Change and Forestry (LULUCF) Regulation (EU) 2018/841 – European Biogas Association

The European Biogas Association (EBA) is glad to share its vision on the role of renewable gases to help the European Commission in the amendment of the LULUCF Regulation.

EBA is a network of national associations, private companies, universities and research centres. EBA operates in Brussels for more than 10 years and it allows politicians, public authorities, investors and other stakeholders to exchange information, ideas and statistics with the European main players of the renewable gas sector.

Our partners are experienced managers, engineers, researchers, lawyers, agriculture practitioners, plant operators and gas distribution system operators. Renewable gas is a multi-disciplinary and cross-sectoral activity that involves many different actors across the whole society. Nevertheless, the value chain of renewable gas is usually national or regional. Renewable gas is a powerful enabler of circular economy and local sustainable development. All the actors operating in renewable gas are moved by an inner desire of sustainability and we believe that renewable gas should be a cornerstone of the European Green Deal vision. We expect that production and consumption renewable gas will continue to grow in Europe in 2030 and 2050<sup>1</sup> because it is a clean source of renewable energy that is crucial in many economic sectors. Heavy duty transportation, maritime and aviation rely to a very large extent on renewable gas to decarbonise and depollute their operations and products. At the same time, renewable gas offers great opportunities for heating and cooling, energy intensive industries and the power sector. Renewable gas also offers a cost-effective heat and electricity decarbonisation solution for domestic and industrial consumers that are located off-the-gas grid, for instance in rural areas. A significant share of rural dwellings in the EU currently rely on heating oil and coal for heating purposes. Switching away from more polluting solid and liquid fuels like heating oil and coal to renewable gas offers CO<sub>2</sub> savings and improves local air quality.

EBA strongly support the goal of the European Commission to sequester more greenhouse gases from the atmosphere. We also confirm that the current EU policy framework need to be revised in order to achieve a better harmonization of national trading and incentive schemes for land-based carbon emissions and removals. In this regard, we would like the European Commission could acknowledge EBA's suggested strategy for integrating renewable gas with sustainable land use. Our strategy aims to build better soil, healthier, more fertile and capable of sequestering more carbon. EBA strategy to enhance soil carbon sequestration is based on two simple but crucial elements:



**Incentivising farmers to adopt cover crops for healthy soil.** Cover crops<sup>2</sup> are part of a farming system where an additional (second) culture is grown before or after the harvest of the main crop on the same agricultural land with the aim of enhancing soil quality and fertility by preventing soil erosion (see Figure 1) and compaction due to climate factors - e.g. floods or draughts, frost or burnt - and by promoting soil biological, chemical and physical activity. Cover crops are not normal winter crops or grassland but are sown specifically to protect bare soil in winter - and early spring - after

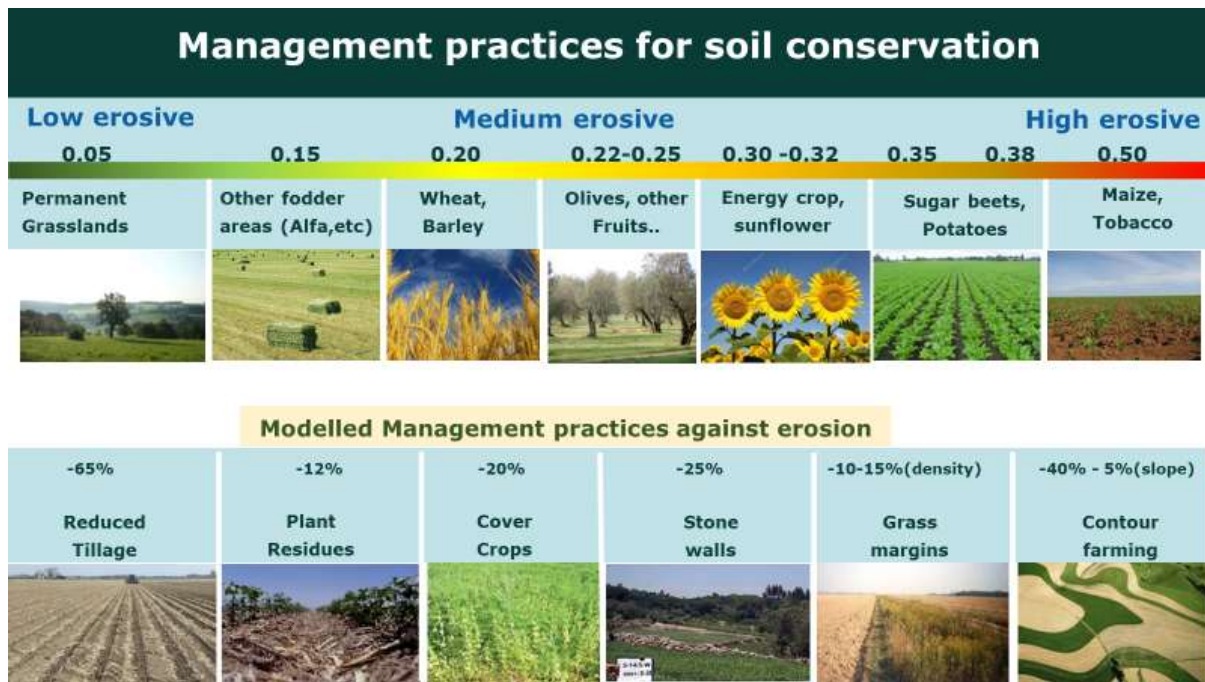
<sup>1</sup> European Commission (2020), *Impact assessment accompanying the document "Stepping up Europe's 2030 climate ambition"*, SWD(2020) 176 final

<sup>2</sup> Panagos et al. have assessed the beneficial effect of cover crops to prevent soil erosion. They concluded that by extending cover crops to 35% of European arable lands would allow to reduce risk of soil erosion by 40%.

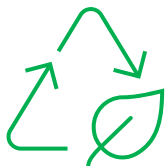
Panagos et al. (2015), *Estimating the soil erosion cover-management factor at the European scale*  
<https://www.sciencedirect.com/science/article/pii/S0264837715001611>

the harvesting of summer crops. The economic interest of the cover crops is low – its main goal is to protect soil and nutrients. However, their value increases if renewable energy policies allow their use for renewable energy production<sup>3</sup> and if incentive schemes recognise their land-based carbon removals.

**Figure 1. Management practices for soil conservation**



Source: Panagos et al (2020), Soil-related indicators to support agri-environmental policies



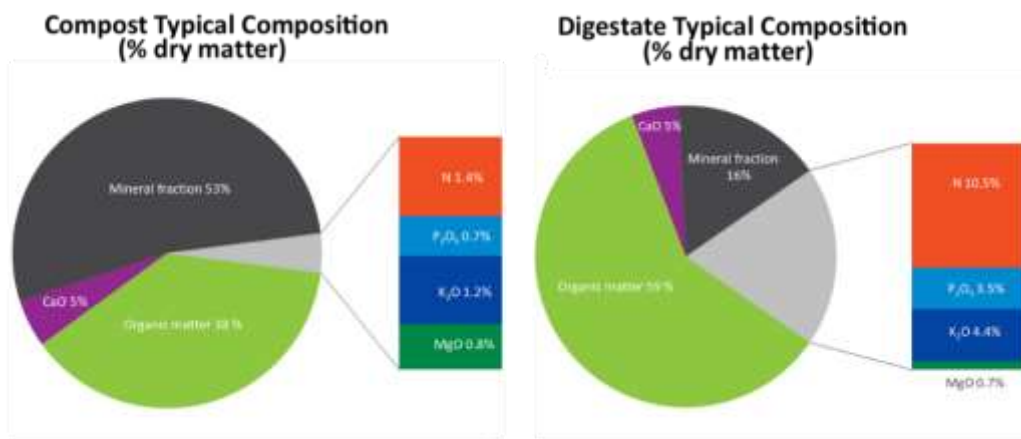
**Returning recycled organic matter with fertilizing properties – i.e. compost and digestate – to the land to recarbonise soil.** It is evident that to achieve the climate target for 2030 and the climate-neutrality objective by 2050, reducing the emissions will not be enough and it will be necessary to enable the natural capital to stock the excess concentrations as well as to substitute fossil-based materials with bio-based materials. In these regards, we invite the European Commission to prioritize the use of recycled bio-based materials, such as digestate and compost (see Figure 2), whose use will generate even bigger benefits.

<sup>3</sup> A study by Navigant from 2019 outlines the renewable energy potential in Europe from cover crops. They call them sequential crops. Navigant estimates that with sequential crops it can be possible to produce 41 bcm of natural gas equivalent of renewable gas – i.e. biomethane.

Navigant (2019), *Gas for climate. The Optimal Role of Gas in a Net Zero Emissions Energy System.*

<https://www.europeanbiogas.eu/wp-content/uploads/2019/11/GfC-study-The-optimal-role-for-gas-in-a-net-zero-emissions-energy-system.pdf>

Figure 2. Typical composition of recycled compost and digestate from bio-waste



Source: European Compost Network (2019), ECN Status Report 2019. European Bio-Waste Management. Overview of Bio-Waste Collection, Treatment & Markets Across Europe

The main benefits of compost and digestate application to land are seen in the medium-to-long term. Compost and digestate replenish the fertile layer of humus in the soils. When soil is rich in humus, it can store more carbon and additional benefits materialise, such as enhanced water holding capacity; improved soil structure which reduces the risk of erosion; fostered nutrient exchange capacity which reduces the risk of nutrient loss; and increased microbial activity in soil which reduces the risk of disease<sup>4</sup>. Other benefits that materialise in the short-term are providing nutrients, replacing mineral fertilisers (NPK)) from primary resources and providing an alternative to peat<sup>5</sup> for growing media products.

Quality compost and digestate should always be available and their use should be incentivised with regulatory and monetary enablers that recognise their positive externalities<sup>6</sup> and enable a fairer competition between recycled bio-based and fossil-based materials. In addition, it is also important to ensure that composting and any associated anaerobic digestion processes are quality assured, with the end products being tested regularly to monitor quality. Since 2010, the European Compost Network (ECN) has established a harmonised quality assurance scheme for compost and digestate (ECN-QAS) according to which several national quality assurance schemes for compost and digestate are conformity assessed like in Austria, Belgium, Germany and Italy (see Figure 3).

Figure 3. National quality assurance schemes for compost and digestate



<sup>4</sup> Gilbert, J., Ricci-Jürgensen, M. and Ramola, A. (2020) *Benefits of Compost and Anaerobic Digestate When Applied to Soil*, ISWA, Rotterdam.

<sup>5</sup> The EU Biodiversity Strategy recognises peatland as a carbon rich ecosystem that should be strictly protected.

<sup>6</sup> According to a study carried by ENEA Consulting and quoted in the report by the French Energy Regulator (CRE) to assess the decarbonisation of the gas sector, the value of positive externalities generated by biomethane is between 40 and 70 euros per MWh.

ENEA Consulting (2017), *État des lieux du biométhane en France et pistes de réflexion pour le développement de la filière* <https://www.enea-consulting.com/wp-content/uploads/2017/11/ENEA-biomethane-france-2017-synthese-publique.pdf>  
Commission de régulation de l'énergie (CRE) (2019), *Le verdissement du gaz* <https://www.inrae.fr/sites/default/files/pdf/rapport-sur-le-verdissement-du-gaz-prospective-cre-1.pdf>

**Source: European Compost Network (2019), ECN Status Report 2019. European Bio-Waste Management. Overview of Bio-Waste Collection, Treatment & Markets Across Europe**

EBA agrees with the European Commission's estimation that EU removals will need to nearly double from their current level to up to 500 Mt CO<sub>2</sub>eq./yr by 2050 to be in line with aspirations for a climate-neutral EU. EBA also confirms that there are two kind of barriers to carbon sequestration: the positive externalities are not sufficiently rewarded and the negative externalities are not sufficiently penalized. Rewarding climate action and applying the "polluter-pays" principle should indeed trigger the needed price signals.

Nevertheless, monetary benefits are not the only leverage available from the European Union. A good and fair regulatory framework that does not generate distortions of competition and that enables a level playing field is also needed to prevent and minimize market failures and negative externalities. In this regard, EBA highlights that certain provisions of renewable energy directive – RED II – should be revised and rectified. Current obligations and definitions of RED II undermine the uptake of cover crops by farmers and are against the Green Deal goal of making agriculture more sustainable. EBA highlights that RED II should make renewable energy production from cover crops more straightforward and certain and less prone to the uncertainty of national bureaucratic implementation and interpretation of complicated provisions. There is the risk that uncertainty to implement the RED II will not only discriminate cover crops but will also jeopardize national incentive schemes.

Likewise, the Juncker Commission has left an important legacy to the Von Der Leyen executive team: sustainable finance. However, there is the risk that the new rules will undermine cover crops and build new obstacles to agroecology. EBA considers the criteria for cover crops proposed by the Technical Expert Group on Sustainable Finance unacceptable because they do not recognise the soil management benefits of cover crops and they link their use to fixed rotation systems, while the Joint Research Center has collected extensive evidence of their benefits<sup>7</sup>.

EBA has also identified other obstacles and barriers, including uncertainty and a lack of a level playing field, for the safe use of recycled compost and digestate. The uptake of recycled bio-based materials in the economy is crucial to replace fossil-based materials but also for Member States to comply with the more ambitious recycling targets adopted in 2018<sup>8</sup>. EBA highlights again that the criteria for the safe use of compost and digestate proposed by the Technical Expert Group on Sustainable Finance are too restrictive and they are not justified against the precaution and prevention principles upon which the EU environmental policy rests.

All these policy areas and related legislation – waste, agriculture, sustainable finance, renewable energy, energy efficiency, land-use, climate – create a very complex, and sometimes contradictory, framework for bioenergy and recycled bio-based materials. EBA highlights that they should be better coordinated. The fit for 55 package announced by the European Commission in its work programme for 2021 is a great opportunity to rectify certain problems and create a more consistent and stable framework that will allow EBA proposed strategy to be accomplished.

---

<sup>7</sup> The European Soil Data Center of the JRC is publicly available online <https://esdac.jrc.ec.europa.eu/resource-type/documents>

<sup>8</sup> By 2025, the preparing for re-use and the recycling of municipal waste shall be increased to a minimum of 55 % by weight; by 2030, the preparing for re-use and the recycling of municipal waste shall be increased to a minimum of 60 % by weight; by 2035, the preparing for re-use and the recycling of municipal waste shall be increased to a minimum of 65 % by weight.