



**IFOAM EU position paper on the
Effort Sharing Regulation and Land
Use, Land Use Change and Forestry
(LULUCF) regulation**

February 2017

COM/2016/482 - Proposal for a Regulation on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 for a resilient Energy Union and to meet commitments under the Paris Agreement and amending Regulation No 525/2013 of the European Parliament and the Council on a mechanism for monitoring and reporting greenhouse gas emissions and other information relevant to climate change

COM/2016/479 - Proposal on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry into the 2030 climate and energy framework and amending Regulation No 525/2013 of the European Parliament and the Council on a mechanism for monitoring and reporting greenhouse gas emissions and other information relevant to climate change

Introduction

Climate change has a direct impact on agriculture. Farmers around the world are affected by changing weather patterns, more frequent extreme weather events, droughts and floods, with direct effects on yields and the resilience of farm systems. Therefore, it is important that the agriculture sector plays an active role in mitigating greenhouse gas (GHG) emissions, to ensure that the long-term goal of the Paris Agreement will be met and that food production will not be jeopardised. Adaptation and climate change resilience are also key issues for the agricultural sector and its development. But with the proposals of the Commission, little action to reduce emissions is expected from the agricultural sector beyond existing policies. The organic agriculture movement believes that Member States should develop long-term roadmaps for the reduction of all environmental impacts from agriculture, including GHG emissions and that the level of flexibility should be lower in order to provide a higher ambition and stronger incentives for the agriculture sector.

Policy framework for 2021-2030

In the EU, GHG emissions reductions are framed by the “Climate and Energy package”, adopted in 2008 and which sets an overall target of 20% GHG reduction for 2020. EU Heads of States agreed in 2014 to a 40% reduction target (compared to 1990) for GHG emissions for 2030. On this basis, the European Commission developed proposals for a new EU climate and energy framework. This framework consists of 3 pillars:

- The EU Emissions Trading System (ETS) that covers emissions for the energy sector, with a target of -43% in 2030 compared to 2005.
- The Effort Sharing Regulation (ESR), which covers national emissions for transport, building, waste and non-CO₂ emissions from agriculture (methane and nitrous oxide) with an overall target of -30% compared to 2005.
- The Land Use, Land Use Change and Forestry (LULUCF), which includes CO₂ emissions and removals from forest management, afforestation, reforestation, deforestation, cropland and grazing land, with a “no debit” rule which implies a commitment to have zero net emissions¹.

The proposals for the ESR and the LULUCF pillars were presented on 20 July 2016 and are going through the standard co-decision process. A vote in the Environment Committee is expected around May 2017.

¹ COM(2016) 479 final, Article 4:” [...] each Member State shall ensure that emissions do not exceed removals, calculated as the sum of the total emissions and removals on their territory in the land accounting categories [...]”

In contrast to the current period, for the 2021-2030 framework, LULUCF emissions will be accounted for at European level (and not only reported).

The agricultural sector GHG emissions are accounted for in two of these pillars:

- Non-CO2 emissions under the ESR: methane (CH4) emissions from livestock and nitrous oxide (N2O) from fertiliser use
- CO2 emissions under LULUCF: cropland and grassland

Member States will have different targets under the ESR, varying from -40% to 0%, mainly based on the GDP per capita of each country².

Emissions levels are for the period 2021-2030 and they are calculated based on a linear trajectory based on the average emissions for 2016-2018 GHG emission data. The Commission would conduct annual evaluations in the member states to identify any potential need for corrective actions in the ESR pillar and they would also conduct a compliance check every 5 years for each of the previous years of the period. The two compliance checks would take place in 2027 and 2032. In the LULUCF pillar, there would be regular compliance checks by the Commission and the European Environmental Agency.

The Common Agricultural Policy (CAP) is an important tool to achieve climate mitigating action in the agricultural sector. It can be used to incentivise action at farm level and to support practices that can increase both the mitigation and adaptation potential of farming systems.

General demands on the ESR and LULUCF

The 40% target was agreed by Member States in 2014, before COP21. But the ratification of the Paris agreement, and the 1.5°C goal it includes, render necessary a higher level of ambition, also in line with the EU commitment to reduce GHG emissions by 80% by 2050 (EU Roadmap 2050).

IFOAM EU believes that the EU must increase its ambition to reduce emissions by 2030 to be consistent with the EU's long-term objectives, and that it needs to take additional action to preserve its carbon sinks.

Flexibilities under the ESR

The ESR includes two flexibility mechanisms to help the Member States reach their target. The LULUCF flexibility and the ETS flexibility.

The ETS flexibility entitles Member States to use ETS allowances up to the equivalent of 2% or 4% of their 2005 non-ETS emissions. Up to 100 million ETS allowances can be used in this 10-year period to offset emissions in any sector of the ESR. Member States need to inform the Commission by 2020 if they want to use this flexibility or not.

The LULUCF flexibility allows Member States to use LULUCF credits to offset emissions in the ESR sector. This could happen only if countries produce these credits in the LULUCF sector, by absorbing more carbon than they emit. In total, up to 280Mt credits could be used in the whole period and these

² Norway and Iceland are also interested to participate in this effort and their involvement will be decided in accompanying legislation. Norway has stated its interest to be fully involved in the ESR, with a target to reduce emissions by 40%.

credits could be generated from either afforestation, deforestation and cropland and grassland management (forest management could not be used to generate credits, because of uncertainties related to the current accounting rules).

If Member States use the maximum of these two flexibilities, it would lower the level of ambition of the ESR proposal, and the overall target of 30% would be reduced significantly, even down to 23%³. Furthermore, offsetting genuine emission reductions under the ESR with non-permanent sequestration under LULUCF is problematic and does not reduce emissions in the long term.

Starting point

The Commission has set the starting point based on average emissions between 2016-2018. This choice would reward the countries that will not reach the target by 2020. For five countries⁴, emissions during these years are expected to be higher than their 2020 targets.

IFOAM EU believes that the starting point should be based on the actual 2020 emissions levels or the 2020 targets, whichever is lower.

Compliance

According to the ESR proposal, compliance checks would take place every 5 years and if Member States are not in the right trajectory, they would need to take corrective action. The two compliance checks are foreseen to take place in 2027 and 2032.

IFOAM EU believes that the compliance checks should be annual, in order for Member States to have time to adjust their action plan to the requirements of the Commission so as to achieve their target. The Commission should also include 5-year reviews and ratchet mechanisms in order for the Member States targets to be revised in case it is needed.

Accounting rules in the LULUCF proposal

The accounting rules are different for the different categories (forest management, cropland and grassland management, etc.).

IFOAM EU supports robust and transparent accounting rules for all LULUCF sectors, which are also comparable.

Relevant aspects for the agricultural sector

The agricultural sector represents 10% of EU total GHG emissions and 18% of ESR emissions. But emissions linked to food production are in reality much higher when indirect emissions are taken into account, as high as 33% of global GHG emissions according to some estimates. Indirect emissions include e.g. emissions from imported feed and deforestation in third countries due to feed production, fuel usage and emissions from the production of fertilisers and pesticides.

Agricultural non-CO₂ emissions in 2005 amounted to 446 MtCO₂ equivalent for the EU-28 and, according to the Commission's impact assessment, under a business as usual scenario (no further

³ Carbon Market Watch, The 2030 Effort Sharing Regulation: How can the EU's largest climate tool spur Europe's low-carbon transition? http://carbonmarketwatch.org/wp-content/uploads/2016/09/CMW_THE-2030-EFFORT-SHARING-REGULATION_final2016_WEB.pdf

⁴ Belgium, Denmark, Ireland, Luxembourg and the Netherlands

policy action), only modest reductions are projected for the agricultural sector, by just 2.1% by 2020, and to around 2.4% by 2030 compared to 2005, far below the overall 10% (for 2020) and 30% (for 2030) reduction targets that are required for all sectors under the ESR.

Cropland is currently a net source of CO₂ in EU28. Over time, emissions are projected to decrease from 61 Mt CO₂eq in 2005, to 50 Mt CO₂eq in 2030 (18% decrease in comparison to 2005) and 43 Mt CO₂eq in 2050 (30% decrease).

Grassland is a net carbon sink in the EU28. Over time, this sink increases from -9 Mt CO₂eq in 2005 to -19 Mt CO₂eq in 2030 and stabilizes thereafter. This result is mainly driven by land conversion to grassland as this land use change tends to sequester carbon after conversion.

The impact assessment accompanying the LULUCF proposal indicates that a 20% reduction of agricultural emissions would amount to a cumulative reduction of 425Mt CO₂ equivalent. Two models are mentioned, which indicate that agriculture non-CO₂ emissions would have to be reduced by 78MtCO₂eq or 84 MtCO₂eq in 2030, assuming a 20% reduction, in 2030 compared to 2005. The modelling studies used by the Commission conclude that a 20% reduction in the agriculture sector would be costly and would have a significant impact on production.

Impact of LULUCF flexibility on expected emissions reduction in the agriculture sector

For this reason, the Commission decided to introduce a flexibility mechanism to make it easier for some Member States to reach their ESR targets by using LULUCF credits, and at the same time to avoid any impact on agricultural production. The idea that agricultural production should not be affected by climate mitigation targets was introduced already in the October 2014 Council conclusions⁵, in which Member States demanded that *“the multiple objectives of the agriculture and land use sector, with their lower mitigation potential, should be acknowledged, as well as the need to ensure coherence between the EU’s food security and climate change objectives”*.

Article 7 of the ESR proposal⁶ therefore introduces a flexibility mechanism that would allow Member States to generate and use a certain amount of LULUCF credits. This mechanism was created to make it easier for the Member States with a high share of emissions in the agriculture sector to reach their target under ESR.

Member States could collectively use up to 280Mt over ten years (2021-2030) of CO₂ credits coming from afforestation, deforestation and cropland and grassland management. Forest management is not included because of a high level of uncertainty and the range of variability of the projections. In order for Member States to use this flexibility, they need to generate the credits and to go beyond achieving zero net emissions in these categories. With this “medium flexibility” option chosen by the Commission, *“up to two thirds of the [20%] assumed emissions reductions could be undertaken in the LULUCF sector, i.e. 280 Mt between 2021-2030”*.

According to the Commission’s impact assessment, under this option, *“the pressure to reduce agricultural emissions would be sharply decreased”, and “given the limited reduction needed by agriculture non-CO₂ emissions (31 MtCO₂eq) price increases for agricultural commodities would be much more limited, and consequently production and consumption changes would be very modest and generally below 1% (and as low as 0.1% for dairy products and meat).”*

⁵ EUCO 169/14 http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145397.pdf

⁶ COM(2016) 482 final

This means that in practice, at EU level, the agriculture sector would only have to reduce its emissions by around 6-7%, if the full flexibility is used. And very little action beyond what is expected to be achieved under current policies is actually foreseen in the agricultural sector.

Member States would have a specific amount of LULUCF credits they could use, on the basis of their share of agricultural emissions in the ESR: “Member States are allocated to one of three groups representing their need related to the relative importance of agricultural emissions in their national emission profile. The upper and lower groups contain approximately one-quarter of agriculture non-CO₂ emissions of the ESD, while the middle group contains half. The attribution to each group is based upon historical ESD share of agriculture non-CO₂ in 2008-2012. Member States with a 25% ESD share of agricultural emissions or more are allowed to use LULUCF credits of up to 15% of their agricultural non-CO₂ emissions, i.e. they would get a 15% flexibility; those with over 14% to 24.9% would get flexibility of up to 7.5% of their agricultural emissions; less than 14% are given a 3.75% flexibility. This flexibility key is then multiplied by the average annual 2008-2012 agriculture non-CO₂ emissions to generate a national cap. This approach also guarantees that every Member State may potentially generate LULUCF credits.”

This mechanism was also introduced based on the fact that the forests are carbon sinks in Europe. However, there is evidence that forest sinks are declining up to 2050, which is the period where the EU must act to reduce emissions. The carbon sink in managed forests declines from minus 354 Mt CO₂eq in 2005 to minus 242 Mt CO₂eq in 2030 and minus 151 Mt CO₂eq in 2050 as forest harvest removals increase steadily over time.

IFOAM EU considers that it is legitimate to allow the agricultural sector a certain level of flexibility in some Member States with a high share of emissions in agriculture, but the sector should not be left off the hook altogether. IFOAM EU believes that the flexibility granted by the Commission proposal (280 Mt) is too high and will not sufficiently incentivise mitigation action in the agricultural sector. The EU agricultural sector should have a higher level of ambition for emissions reductions, which could drive investments and the development of a long-term roadmap for mitigation and adaptation, and the transition towards sustainable farming.

Therefore, IFOAM EU suggests that a lower amount of flexibility should be granted, corresponding to option 1 examined in the LULUCF Impact Assessment, i.e. 190Mt CO₂.

Soil carbon sequestration

Soil management and soil quality play an important role in organic farming. Organic farmers focus on nutrient recycling to keep the soil healthy and fertile. This, in practice, means that the soil can sequester more carbon. Practices which are standard in organic farming can contribute significantly to soil carbon sequestration, and improved practices can reduce emissions from soil carbon losses. Hence, IFOAM EU believes that these practices can contribute to improving farming systems and to compensating for emissions elsewhere.

Organic farming sequesters more carbon than conventional farming, and has the potential to sequester even more. A 2012 global meta-analysis found that organic farms sequester the equivalent of 1.65 tons CO₂ more per hectare per year in soils than non-organic farms (and 1 ton CO₂e/ha/year more in zero input systems)⁷. A 2013 meta-analysis of 24 organic/non-organic comparison trials in

⁷ A. Gattinger, A. Mueller, M. Haeni, C. Skinner, A. Fliessbach, N. Buchmann, P. Mäder, M. Stolze, P. Smith, N. El-Hage Scialabba, and U. Niggli (2012) [Enhanced top soil carbon stocks under organic farming\(link is external\)](#). Proceedings of the National Academy of Sciences.

Mediterranean climates found that the organic systems sequestered 3559.9 kg of CO₂/ha/yr. The data came from comparison trials from Mediterranean climates in Europe, the USA and Australia and if extrapolated globally would sequester 17.4 gigatonnes (Gt) of CO₂⁸.

There is however a limit to the amount of carbon that can be stored in the soil. Even if it is true that soil carbon sequestration can offset part of human emissions now, there will be a point when carbon sequestration stops but emissions continue if we stay with business as usual. The greatest soil carbon gains can be achieved in the first 20 or so years of changing how soils are managed, and it is the next 20 years that we need to cut emissions the most. The potential for soil carbon sequestration should be carefully assessed, not overstated.

Moreover, soil carbon sequestration is not permanent. It takes a long time to sequester carbon in soil, but it can very quickly be lost again if farm management changes. This means one needs to ensure that farmers remain committed to keep the carbon in the soil when the full potential is reached. Farmers are under a huge amount of financial pressure to make short-term decisions which harm soils in the long-term but increase their profits in the short-term. But unhealthy soils cost the public in terms of lost carbon sequestration potential, increased local flood risks and in the long-term – decreased food security. It is time to recognise that soils are a public good and that they do need the same environmental protection as water and air. This means not only is public support needed for farmers to change how they manage soils in the long-term – we need regulatory action at the EU level to ensure that soils are adequately protected.

IFOAM EU believes that emissions from the agricultural sector should be addressed together and therefore welcomes the inclusion in the accounting of carbon sequestration in cropland and grassland. Allowing Member States to generate credits with soil carbon sequestration can drive necessary action to improve the status of European soils, which will also deliver positive side-effects for adaptation and productivity. Priority should be given to the renaturation of peatlands and to the protection and expansion of permanent grassland.

However, Member States should develop more robust measurement tools for soil carbon sequestration, which also address reversibility and saturation.

Afforestation

The Commission's proposal would also allow Member States to generate credits through afforestation. However, afforestation can have detrimental effects on biodiversity and the environment. It is often the case that afforestation is a monoculture of alien species, which creates significant problems to the fauna and flora of the area.

IFOAM EU believes that afforestation should only be included in the LULUCF flexibility under strict conditions. If afforestation remains included, the Commission should introduce nature safeguards to ensure that the activities undertaken in the various LULUCF sectors will have a positive impact on the environment and biodiversity. Forest management should absolutely remain excluded from the flexibility mechanism.

Need for a broader perspective on climate change and agriculture

Livestock production – direct & indirect emissions

⁸ Aguilera E, Lassaletta L, Gattinger A and Gimeno S (2013) Managing soil carbon for climate change mitigation and adaptation in Mediterranean cropping systems: a meta-analysis, *Agriculture, Ecosystems and Environment* 168 (2013) 25–36

The majority of non-CO2 emissions come from livestock production (methane). Livestock is an integral part of farming, and only ruminants can make use of grasslands for protein production. It can boost soil fertility and can contribute to sequestering carbon in the soil when it is practiced in an appropriate manner, on well-managed grasslands.

However, industrial livestock production keeps growing across the globe, as the demand for dairy and meat products rises. However, the land cannot sustain an increasingly growing livestock population and certainly not where livestock are fed on cereal-based diets. It is evident that changes are needed in this sector. Reduction of industrial livestock production is necessary in order to make agriculture more sustainable and to reduce agricultural emissions. There is also a need to change the dominant food patterns into more sustainable diets that will focus more on the quality rather than the quantity of animal products.

In addition, feed production which is used for the livestock production in Europe is contributing to indirect agricultural emissions, due to the fact that extensive deforestation in other parts of the world is needed to grow the amounts of feed needed⁹. There should be a balance between livestock production and land capacity, and livestock production should not rely on imported feed¹⁰.

IFOAM EU believes that reducing total livestock production, moving to more forage based production systems and raising awareness on the need to reduce meat consumption will contribute to mitigating direct and indirect GHG emissions in the agricultural sector. Greenhouse gas emissions linked to imported feed should be taken into account. On the other hand, sustainable grazing on well-managed grasslands, with livestock that does not depend on imported feed, can contribute to soil fertility and carbon sequestration. The EU should encourage quality meat production rather than exports of cheap meat for the global market, through the following measures:

- strengthen legislation on farm animal welfare and its implementation to ensure that livestock is only kept in relation to land and in proportionate numbers;
- environmental impact assessments if enlargement of livestock herds or stables are planned in areas with already high livestock densities;
- introduction of a compulsory farm gate balance for all farms with livestock above 2 livestock units per hectare (under the nitrates directive);
- support should only go to investments in stables that are suited for high animal welfare conditions comparable to organic standard (and only for land related livestock systems with less than 2 livestock units/hectare);
- information campaigns for healthy food choices with less but high quality meat preferably from organic farming.

Emissions from fertilized soils

The second large part non-CO2 emissions comes from nitrous oxide emissions from fertilized soils. Those emissions directly relate to nitrogen inputs. A general reduction in nitrogen inputs would reduce those emissions, but also eutrophication, and have beneficial effects on biodiversity. The nitrate directive has already been quite effective in this direction, but EU climate action should specifically

⁹ "Greenhouse gas emissions from the EU livestock sector: A life cycle assessment carried out with the CAPRI model"; Franz Weiss, Adrian Leip; *Agriculture, Ecosystems & Environment*; Elsevier; 1 March 2012

¹⁰ Recital 15 of the Organic Regulation 834/2007 states that "in order to avoid environmental pollution, in particular of natural resources such as the soil and water, organic production of livestock should in principle provide for a close relationship between such production and the land, suitable multiannual rotation systems and the feeding of livestock with organic-farming crop products produced on the holding itself or on neighbouring organic holdings."

support further action towards the reduction of nitrogen inputs on agricultural land. Organic agriculture is a production system that has a significant potential in this regards, as nitrogen levels per hectare tend to be lower than in non-organic systems.

IFOAM EU believes that further action to reduce nitrogen input levels per hectare would provide an effective means to reduce non-CO2 GHG emissions from agriculture.

Moreover, 1/3 of the global food production is lost as food waste. Actions to reduce food waste would lower GHG emissions linked to food production, processing and consumption.

Transition to more sustainable farming systems and building synergies

Furthermore, climate change is only one aspect of the global environmental crisis. Biodiversity is disappearing at an unprecedented rate. Industrial agriculture is recognised as one of the main causes for biodiversity loss, but also for water shortages and soil erosion, which can in turn entail loss of fertility and declining yields. The use of synthetic pesticides has negative impacts on flora and fauna, but also on human health, and excessive use of nitrogen disrupts the nitrogen cycle with dire consequences such as less robust crops, the eutrophication of water bodies, increased GHG emissions or biodiversity losses.

Food security and climate-change adaptation and mitigation cannot be addressed separately, and action on these fronts should obviously avoid further disruption of ecosystems services and loss of biodiversity. It is important to build resilient farming systems that can mitigate GHG emissions but also have higher adaptation potential, in order to safeguard future food security and agricultural production.

Conversion to more sustainable farming systems is necessary to lower the contribution of agriculture to climate change, but also to help farmers to become more resilient in the face of changing weather conditions and more frequent extreme weather events. The benefits of organic farming for climate change adaption are recognised, and organic farming can also contribute to reducing GHG emissions and to increasing soil carbon sequestration. Organic farming is a system optimised to deliver positive impacts on a range of different aspects, such as biodiversity, water, soils, animal welfare and farmers' profitability. The need to reduce GHG emissions from agriculture should not be addressed in isolation from other impacts, and should incentivise measures that deliver co-benefits on a range of different environmental aspects.

A renewed CAP

The Common Agriculture Policy (CAP) is the main tool to influence the development of agriculture in the EU. It already provides some tools and budget to encourage farmers to adapt practices that can mitigate agriculture emissions. But mainstreaming of climate friendly practices requires a fundamentally new approach to the CAP that is capable of supporting sustainable development of our farming systems. Instead of allocating money for the number of hectares or individual actions, payments for farms must be changed to incentivise whole farm best practice. The focus should be on supporting farmers whose approaches inherently work towards the socio-economic and environmental sustainability of their own farms, their regions and the citizens. Prioritising public money for farm system approaches enables farmers to make sound decisions on all aspects of sustainability for their entire farm enterprise and at the same time meet societal expectations. In the end, this is a win for taxpayers and citizens too.

A new CAP, aligned to the UN's 2030 Agenda for Sustainable Development¹¹ that is focused on the tangible, environmental and societal outputs of farming would help to keep farmers in business, provide high-quality food, and contribute to the EU goals regarding rural viability, climate change and the environment. To this end, successive reforms should move the CAP to a new model of farm payments based on agroecological outcomes. Mainstreaming public money for public goods requires policymakers to make fundamental changes that re-orientate the CAP towards a single pillar approach that shifts support away from income support for land, to payment for public goods to farmers, with 100% EU financed money. This approach would be based on a flagship payment model that incentivises and rewards environmental and socio-economic services delivered at farm level including efforts by farmers to mitigate and adapt to climate change, complemented by supporting measures such as farm advice and extension services, supply chain development, infrastructural investment, promotional activity and innovation.

¹¹ Falkenberg (2016): Sustainability Now! A European Vision for Sustainability. EPSC Strategic Notes. Issue 18. Available at: https://ec.europa.eu/epsc/sites/epsc/files/strategic_note_issue_18.pdf