Denmark's position on an EU ETS for agriculture – incentives for a sustainable, climate-friendly and competitive agricultural production in the EU

A green transition of the European Agricultural sector needs to be effective, implementable across the EU and economically feasible while ensuring food security. Experience from the recent Agreement on a Green Denmark shows that this can be done by combining a direct price signal on farm level with an enabling framework, which incentivizes and provides revenue to support the individual farm in implementing green production methods and technologies while staying competitive. Denmark believes that the Agreement can serve as an inspiration for the development of an effective ETS for agriculture in the EU. An EU ETS for agriculture should thus:

- Provide a direct price signal on farm level to deliver emission reductions with the lowest economic costs while minimizing the risk of carbon leakage to third countries.
- Facilitate the development and uptake of green technologies and sustainable production methods on farm level to ensure a sustainable level of food production including to provide food security.
- Be manageable, reliable and limit the administrative costs for farmers and government administrations.
- Ensure the environmental integrity through an efficient regulatory framework and credible monitoring, reporting, and verification scheme.

Emissions trading: An efficient and cost-effective way of reducing agricultural emissions while staying competitive

Commission President Von der Leyen has announced in her political guidelines that the Commission intends to enshrine an EU 2040 greenhouse gas emission-reduction target of 90 % compared to 1990 levels in the European Climate Law. Achieving this target will require an ambitious climate action across all sectors of the economy. It will be key to ensure that the efforts are economically feasible and cost-effective in order to be sustainable and a socially just for all.

Without new policies, the share of emissions from agriculture is expected to account for almost half of the EU´s total emissions by 2040.[1] Agriculture will thus become the largest emitting sector in the EU as the rest of the economy decarbonizes. One of the main tasks in implementing EU´s 2040 climate target will be to facilitate a strengthened mitigation effort in the agricultural sector, which at the same time secures its long-term competitiveness and food security, sustainability and resilience.

Experiences from the EU´s climate efforts show that emissions trading is an efficient and cost-effective way to incentivize emission reductions. The EU should learn from this and apply the same approach to agriculture as we have done for the energy, industry and transport sectors. With the right design underpinned by relevant EU-wide climate regulation and a greener EU common agricultural policy (CAP) the competitiveness of the agricultural sector can be safeguarded as well as the long-term food security in the EU. By promoting a more efficient and sustainable food production the European farmers can obtain a competitive advantage internationally.

Stakeholder involvement to ensure common understanding of the challenges and solutions

To find the right solutions, all stakeholders must take joint responsibility and arrive at a common understanding of the challenges. Experience from Denmark shows that it can be done. In June 2024 the Danish government together with partners from industry, agricultural, and environmental organizations, trade unions and local authorities presented the "Agreement on a Green Denmark".[2] The agreement shows that it is possible to bring relevant

[1] I.e. 45 %, by 2040. Own calculations based on data from the 2040 IA, European Commission, 2024. Baseline agricultural emissions as of section 1.7.3.1 in IA part 3, p. 111, and total EU gross emissions as of stated reduction of 88 pct. in EU COM 2040 Baseline scenario.

[2] Agreement and reactions from the partners involved (in Danish).

stakeholders on board and agree on how to effectively reduce greenhouse gas emissions in the agricultural sector in a socially fair and economical sound way while ensuring a sustainable and competitive sector. A political agreement on implementation of the ”Agreement on a Green Denmark” was reached between the government and several parties from the Danish Parliament on 18 November 2024.

At European level, the Commission has also taken the important initiative to bring together stakeholders through the “Strategic Dialogue on the future of EU Agriculture” which has recently presented its recommendations for the future of the sector including that the Commission “should work further with stakeholders and experts to assess the feasibility and relevance of an ETS for agriculture.” Denmark believes, that the Agreement on a Green Denmark can serve as inspiration and provide valuable insights on how to develop ambitious and cost-effective EU policies for reducing emissions for agriculture, notably through the design of an ETS for agriculture on farm level and a CAP that can support farmers in deploying new, climate-friendly technologies and transitioning to more sustainable production practices. Pricing emissions where they occur provides the most direct price signal on emissions as well as incentives for individual farms to reduce emissions e.g. through greenhouse gas (GHG) efficient technologies and green production methods. This requires a supporting regulatory framework and reliable data on GHG emissions at farm level across the EU.

Denmark therefore urges the Commission to conduct a thorough analysis on how to design an ETS for agriculture as swiftly as possible, as one of potentially several instruments for a green transition of the EU agricultural sector. This should include an analysis of how to ensure the necessary quality of data at farm level across the EU, and should be done in close coherence with the next CAP as well as in the context of the upcoming “Vision for Agriculture and Food”.

This work should include an assessment of the possible risk of carbon leakage to third countries in order to safeguard the competitiveness of the sector internationally as well as exploring the options for mitigating such a risk, including a possible expansion of the scope of the EU’s Carbon Border Adjustment Mechanism (CBAM) in full respect of the WTO trade rules. An ambitious, robust, open and sustainable trade policy plays an important role for the income of the EU's agri-food sector, which had a trade surplus of more than 70 billion euro in 2023.

Insights from Denmark- the case for pricing agricultural GHG emissions at EU level

“The Agreement on a Green Denmark” sets out a holistic and balanced approach on how to effectively price GHG emissions directly at on-farm production level. **Key elements of the agreement include:**

- A CO_2e tax on GHG emissions from livestock, agricultural lime and drained peatlands in agricultural use at a level, which ensures cost-effective CO_2e reductions while maintaining a continuously competitive agri-sector.

- Earmarked revenue in 2030-31, which is circulated back to farmers to provide substantial financial support to enable the farmers to invest in new green technologies and sustainable production methods, which in turn will reduce the total costs to be paid by the individual farmers.

- The revenue in 2030-31 can also be used to target support for the most vulnerable farmers in the green transition. A possible threshold to exclude farms with limited GHG emissions will also be considered to limit the administrative burden of the tax scheme.

- Establishment of a new Green Area Fund to support efforts such as afforestation, rewetting of drained peatlands in agricultural use, strategic land acquisitions and additional initiatives related to nitrogen reductions. The initiatives in the Green area fund will change 15 percent of the existing agricultural area into forest, rewetted areas etc.

- Accelerating investments in new technologies including a subsidy scheme for biochar to facilitate the green transition on farm.

- Strengthened efforts to develop and mature new climate technologies for the use in the agricultural sector, including targeted initiatives to address regulatory barriers and document GHG emission effects in line with IPCC guidelines.

Developing an ETS for agriculture on farm level

In the ongoing debate on options for pricing agricultural emissions and rewarding climate action at the EU level challenges have been expressed with respect to developing an ETS for agriculture on farm level.[3] Table 1 presents recommendations on how to approach these concerns based on insights from the Agreement on a Green Denmark as well as the analytical work behind. Some of the recommendations are elaborated in more details below in the table. A forthcoming analysis from the Commission on the design for an ETS in agriculture should look further into the recommendations.

Table 1. Insights from Denmark and recommendatitions for an EU ETS for agriculture

Challenge	Objective	Insights from the Danish expert group of a green tax reform	Recommendations for an EU ETS for agriculture
Pricing CO_2 emissions will limit agricultural production, increase the risk of carbon leakage and make the EUs agricultural sector less competitive.	The price of CO_2 should be set at a level which incentivizes change in farming methods while taking into account the sectors ability to stay competitive.	The CO_2 tax revenue can be redistributed back in 2030-31 to farmers to limit the burden of farms. The level of the CO_2 tax will be phased in to allow for the necessary time to adjust to more sustainable production methods, develop and implement new abatement technologies etc.	The ETS allowance revenue can be recycled back to farms, to limit the burden of farmers, reduce the risk of carbon leakage and uphold the competitiveness of the sector. Allowances can be phased in to allow the sector to adjust and the system to function based on experiences from ETS I and ETS II.
Limited economic incentives at the level of farmers to reduce GHG emissions.	Incentivize farmers to improve production or management methods, increase efficiency, and switch to new solutions and practices with a lower GHG impact.	Pricing GHG emissions at on-farm level ensures a direct price signal where most emissions occur, and incentivize on-farm GHG reductions.	Point of obligation on-farm level ensures a direct price signal where most emissions occur and incentivizes on-farm GHG reductions.
Limited economic incentives at consumption level to buy more climate friendly products.	Incentivize consumers to change consumption habits towards more climate friendly products.	Farmers are expected to be able to pass on some of their CO_2 tax-costs, on to consumers. A CO_2 tax at consumption level will, most likely, be unable to target emissions as precisely as a tax at production level resulting in lower cost-effectiveness and less GHG-reductions.	Farmers are able to pass on some of the ETS allowances costs on to consumers. Targeting emissions at production level ensures cheaper, and a more effective GHG-reduction effort.
Limited funding available to support farmer´s investments in the green transition.	Generate revenue that can be utilized to fund environmentally or socially beneficial behavior, processes and investments to support a sustainable transition of the sector, while preserving competitiveness.	The revenue from the CO_2 tax can be circulated back to farmers. This includes the earmarking of funds for support of farms where the transition is especially challenging and costly.	The Common Agricultural Policy must have a strong focus on supporting the green transition through investments and changed agricultural practices by incentivizing delivering eco-system services. The revenue from auctioning of allowances could be circulated back to facilitate the sustainable transition on farm level via a reformed Common Agricultural Policy. Thus, it is important that the budgetary structure in the next Common Agricultural Policy (CAP) allows for the inflow of ETS revenue.
There is a lack of green technologies and farming methods available with a documented emission reduction effect.	Provide documentation for the climate effect of new green technologies to incentivize the uptake of these technologies to reduce emissions and thereby reduce the number of allowances needed for farm production.	A national CO_2 tax is feasible based on Denmark's national emissions inventory. The process of approving new technologies and farming methods will be accelerated and clarified.	Improve the availability of reliable data on an EU level to calculate the correct climate emission factors and to document the climate effect of abatement efforts on farm level.
GHG Monitoring, Reporting and Verification (MRV) tools are not yet commonly used by farmers in the EU.	Introduce reliable and cost-effective MRV on EU level.	Much of the needed data on livestock and fertilizer is already available on a Danish level. Other data on soils needs to be developed further.	The availability of data at the EU and member state level should be assessed and improved where needed to develop a reliable and cost effective MRV.
Applications of the Polluter pays principle may face social barriers to implementation.	Design in an inclusive and fair manner so that no stakeholders or vulnerable groups feel left behind.	Transparent economic analysis increases acceptance.	Model economic impacts and involve stakeholders across the wide spectrum of the agri-sector, the environment, climate and consumers.

[3] Among others the consultancy Trinomics has set out five spcific problem drivers and objectives beyond economic efficiency (Trinomics, Pricing agricultural emissions and rewarding climate action in the agri-food chain, 2023.

Facilitating the green transition- documenting the climate impact of green technologies
European farmers play a significant role in driving forward the green transition of agriculture and food production through innovation and deployment of new, green technologies and production methods. A number of already known on-farm measures and technologies can contribute to reduce emissions. However, the climate effect of most of these solutions remains to be documented through the development of accurate emission factors.

By having accurate and updated emission factors, reduced emissions from the implementation of new green technologies will be reflected in a reduced tax payment, which in turn increases the incentive for farmers to transitioning to more sustainable production methods on farm. Work on developing emission factors at EU level needs therefore to be initiated well before the implementation of an EU ETS. The development of emission factors is an important element in the implementation of the Danish national CO_2e tax and could thus inspire the work on EU level when finalized.

Financing a sustainable agricultural transition
To ensure the availability and uptake of new innovative green techologies the revenue generated from auctioning of allowances could be circulated back to the farmers through the Common Agricultural Policy (CAP). A reformed CAP could support for instance the uptake of new productions methods, investments in afforestation, the utilization of green technologies as well supporting the development of new on farm technologies. This could include the earmarking of funds for the development and improvement of green technologies through large-scale tests, such as biochar, which have a large carbon storage potential. It should also be considered that some of the revenue would be targeted to farmers who are especially facing challenges as a result of an ETS for agriculture. This requires a reform of the CAP with an increased focus on climate, environment and biodiversity that incentivizes farmers to deliver eco-system services. Coherence between the CAP and climate regulation is therefore of great importance to ensure that the agricultural support creates the right incentives for a green transition.

Monitoring, Reporting and Verification of on farm GHG emissions (MRV)
An on-farm model needs to be manageable for the individual farmer as well as the public authorities. It will not least require that the necessary activity data can be retrieved on farm level. Findings from the analytical work on developing the Danish CO_2e tax indicate that relevant activity data to calculate the emissions from agriculture in Denmark to some extend is available. This is particularly the case for livestock, due to reporting obligations from farms to national public authorities under the CAP, the Animal Health Law and/or other EU environmental legislation. Since data on livestock seems easiest to retrieve an EU ETS as a first step include emissions from livestock. At a later stage, once robust data is available, the ETS could be extended to green-house gas emissions from agricultural soils and fertilizers also to ensure the most cost-effective solution. A joint regulation of GHG emissions and net removals in agricultural soils allows for a more coherent regulation of the agricultural sector when feasible.

Limiting the administrative burdens for both farms and authorities
The agricultural sector has in recent decades gone through a substantial industrialization, where the average size of farms has increased. At the same time, the sector is very diverse across the EU including many small farms. It is important that an ETS for agriculture is implementable and avoids imposing unnecessary high administrative burdens and costs for both farms, especially in relation to small farms, and public authorities.