TAPPC
TRUE ANIMAL PROTEIN PRICE COALITION

True prices
for meat and dairy

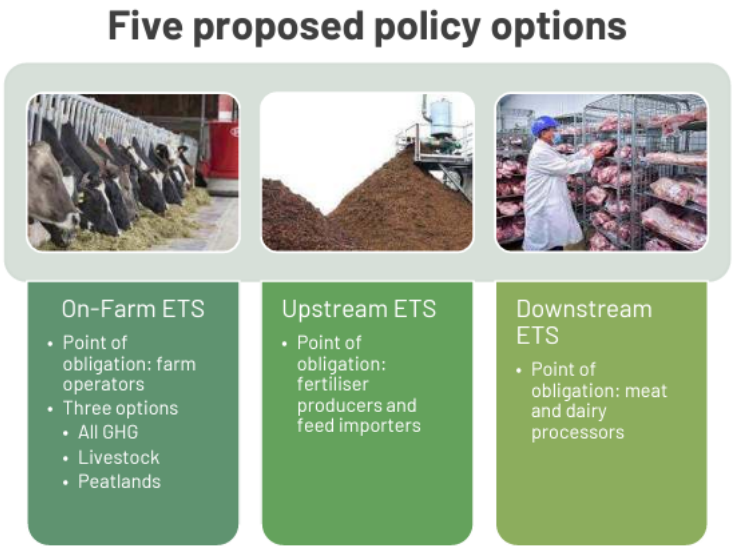
Pricing agricultural emissions in the EU

Discussion paper TAPP Coalition

31st July 2023

Trinomics and Ecologic Institute developed a draft report for DG clima on pricing agriculture greenhouse gas emissions in the EU and pay farmers for carbon removals. The plan is it is published in Q3 in 2023. They presented their draft findings 14th June during a technical workshop with 100 stakeholders, where TAPP Coalition also gave some feedback. Here you can see more information including the recording of the event and the powerpoint presentation about the policy options, discussions and recommendation: https://www.tappcoalition.eu/nieuws/20522/eu-commission-dg-clima-present-draft-study-ets-options-for-ghg-emissions-in-food-systems

3 main policy options were presented for the pricing proposals:



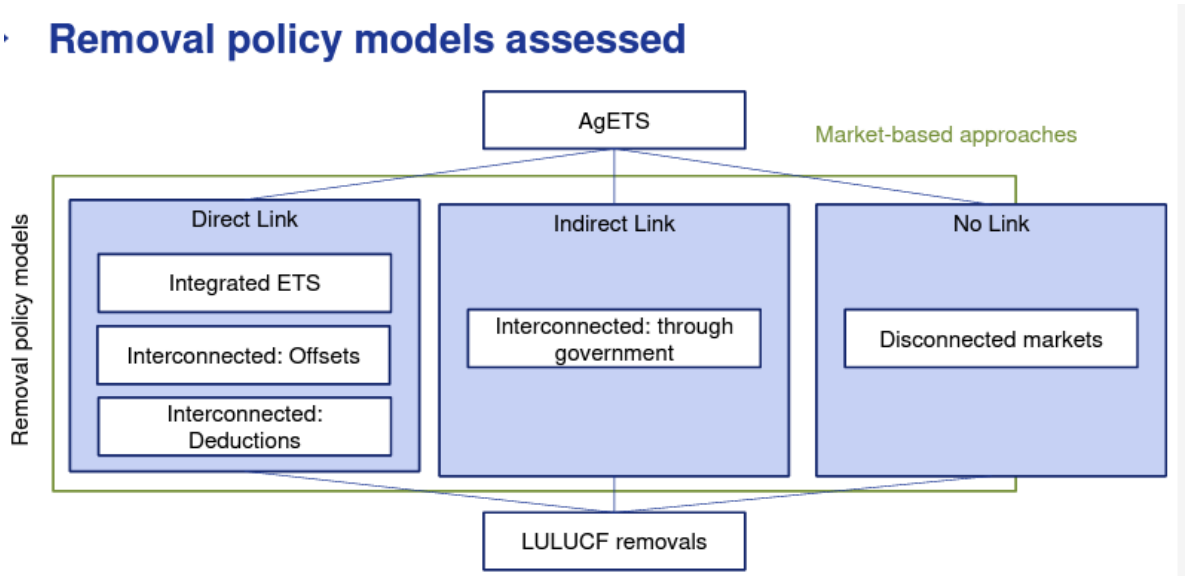
On-Farm ETS: Scope

Source of emissions	GHG Type			Net emissions per annum ($MtCO_2e$)	Included in on-farm ETS scope?		
	CH4	N20	CO2		All GHG	Livestock	Peatlands
Enteric fermentation	✓			169 $MtCO_2e$	✓	✓	
N2O Emissions from managed agricultural soils		✓		146 $MtCO_2e$	✓		
Manure management	✓	✓		61 $MtCO_2e$	✓	✓	
Soil carbon emissions from organic soils	✓	✓	✓	31.8 $MtCO_2e$	✓		✓
Grasslands			✓	13.1 $MtCO_2e$	✓		
Soil carbon emissions from mineral soils			✓	10.2 $MtCO_2e$	✓		
Liming			✓	5.4 $MtCO_2e$	✓		
Urea application			✓	3.6 $MtCO_2e$	✓		
Rice farming	✓		✓	1.97 $MtCO_2e$	✓		
Burning crop residues	✓	✓		0.54 $MtCO_2e$	✓		
On-farm energy use	✓	✓	✓	?			

Off-Farm ETS: Scope

Source of emissions	GHG Type			Net emissions per annum ($MtCO_2e$)	Included in ETS scope?	
	CH4	N20	CO2		Upstream	Downstream
Enteric fermentation	✓			169 $MtCO_2e$	✓	✓
N2O Emissions from managed agricultural soils		✓		146 $MtCO_2e$	✓	
Manure management	✓	✓		61 $MtCO_2e$		✓
Soil carbon emissions from organic soils	✓	✓	✓	31.8 $MtCO_2e$		
Grasslands			✓	13.1 $MtCO_2e$		
Soil carbon emissions from mineral soils			✓	10.2 $MtCO_2e$		
Liming			✓	5.4 $MtCO_2e$		
Urea application			✓	3.6 $MtCO_2e$	✓	
Rice farming	✓		✓	1.97 $MtCO_2e$		
Burning crop residues	✓	✓		0.54 $MtCO_2e$		
On-farm energy use	✓	✓	✓	?		

DG CLIMA then asked them to look into how such an Ag ETS could be linked with carbon removals



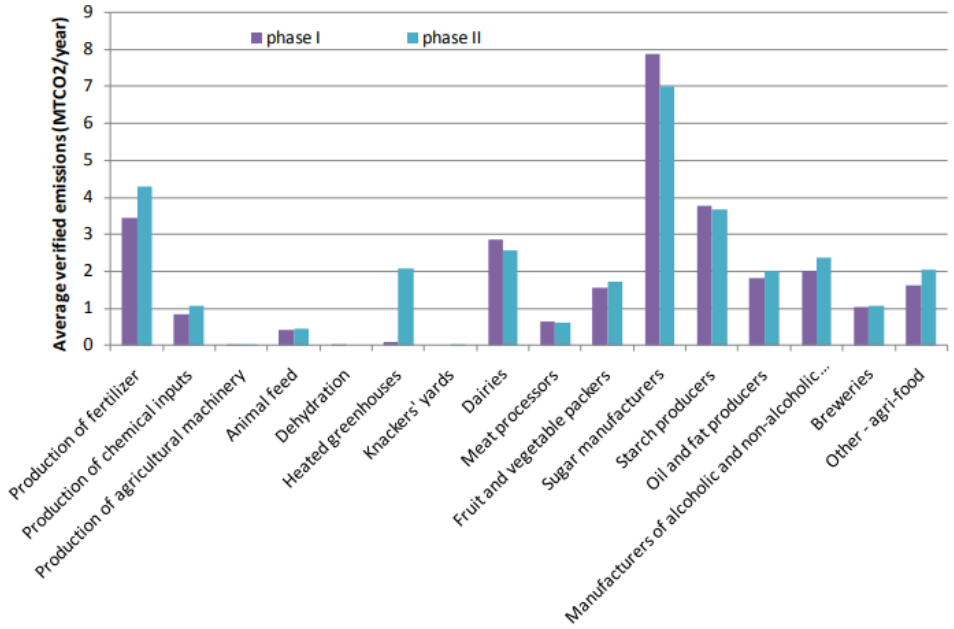
What we know:

- The EU agri-food sector is the only sector in the EU not yet part of any CO2 pricing system/ ETS, this is not a level playing field, a GHG-emission price has to be paid as fast as possible in the agr-food sector to reduce GHG-emissions in line with the Paris Climate Agreement, especially since GHG emissions in this sector did not reduce in the last years see EU Court of Auditor report 2021: https://www.eca.europa.eu/en/publications?did=58913
- The Farm to Fork Strategy announced "EU tax systems should also aim to ensure that the price of different foods reflects their real costs in terms of use of finite natural resources, pollution, GHG emissions and other environmental externalities". So an ETS for GHG emissions in the agri-food sector would be a good way to make sure foodprices and EU tax systems reflect their real costs in terms of GHG-emissions. The damage costs per ton GHG-emissions are calculated by the German government: 200 euro/ton CO2, other calculations range from 100-3000 euro/ton CO2 (wikipedia social cost of carbon). An ETS system for agriculture should be developed in such a way that the price for GHG emissions would be at least 100 euro per ton in the start and 200 euro/ton after 2030.
- **We do not want the integration of carbon allowances and carbon credits**, so the "disconnected markets" option (which only links the pots of money but not the units) is the only possible option for how to link emissions and removals. This is because of several reasons, including the reason that carbon credits may not be permanent (e.g. planting trees or carbon farming can be a temporary solution for reducing GHG emissions, but future owners can decide to cut trees or prepare the soil in ways the carbon storage is not permanent).
- **We do want the internalisation of external costs**, or the better application of the Polluter Pays Principle (PPP) . TAPP Coalition wrote a policy paper about how an ETS system for agriculture (mainly meat/dairy) could look like, internalising external costs of GHG emissions from the agriculture sector; https://www.tappcoalition.eu/images/ETS-for-livestock-amendment-1658826425.pdf

  TAPP Coalition defines the PPP (Polluter pays principle) in a broad sense: "The PPP in its implementation should ensure the full internalisation of negative environmental and social externalities. Contrary to what some special interests would like to reduce it to, the principle is explicitly not *merely* about making the polluter pay off a right to pollute, as that would create a perverse incentive. It is explicitly, as per the OECD, on pollution prevention. To be precise, it is about **making the polluter monitor, reduce, remediate and prevent pollution and provide a legal recourse for justice, enforcement and compensation for environmental and health damages**. The Polluter Pays Principle and the precautionary principle are two sides of the same coin." So outside GHG emissions in the agriculture sector, pricing is also needed for other polluting emissions like nitrogen.

- Remediation means that tax revenues from the ETS system for agriculture should partially be used for payments for the UN Loss and Damage Fund and the Green climate fund to remediate the damage caused by GHG emissions from European agriculture and food systems in low income countries.
- In the current political context, **a new pricing system applied at farm level is highly unlikely to be accepted** by the co-legislators, or if it was accepted, it would probably be made completely inefficient. A downstream ETS option however (dairy factories and slaugherhouse companies to pay for all agriculture GHG emissions linked to meat/dairy production) is likely to be accepted by policy makers, as this ETS option does not harm farmers (consumers will have to pay a little bit more for meat/dairy) . This option is also supported by the young farmer organisation CEJA: https://www.tappcoalition.eu/nieuws/20522/eu-commission-dg-clima-present-draft-study-ets-options-for-ghg-emissions-in-food-systems.
- **Some large agri-food actors are already covered by the existing ETS**, totalling 700-800 installations in 2011 (Cf I4CE report), both up (fertilisers, machinery, chemical inputs and feed producers) and downstream (dairies, meat processors, breweries, etc), but only for their direct CO2 emissions.. But only the largest companies are included, for instance only 121 out of nearly 12.000 EU dairy factories with a small fraction of CO2 from dairy factories. Source: https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/630345/EPRS_BRI(2018)630345_EN.pdf

Figure 1 – Average annual total verified emissions for phases I and II



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Questions and answers:

- **Are there reasons to reject *any type* of ETS-like system for emissions pricing in agriculture?**
- Will an ETS system lead to actual emissions reductions?
- Would there be negative impacts at farm level (eg lead to further intensification)?
- What would be the impact on food prices? Is it something to be concerned about?
- How to account for imports/exports? Link to CBAM? Other instruments?
- What is best: to start a new ETS for agri/food or link with the existing ETS for industry/energy?

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1. There are no reasons to reject any type of ETS-like systems for emission pricing in agriculture. However there are a few general concerns about the effectiveness see page 36 of report https://cedelft.eu/wp-content/uploads/sites/2/2023/03/CE_Delft_220109_Pay_as_you_eat_dairy_eggs_and_meat_Def_2.pdf. Other alternatiives like a high VAT rate on meat/dairy, environmental taxes on food, or carbon taxation for agri-food GHG-emissions (e.g. at the level of dairy factories, slaugherhouses or retail companies and food services) might work better (see link of CE delft report and report 'Sustainability Charge on Meat' , but the EU commission has not much authority to ask for taxes in EU Member states (now there is a unanimity vote for tax issues). An ETS system is not seen as a tax, and is already implemented in other sectors.

2. An ETS system will lead to actual emission reductions, including a reduction of livestock numbers. Reports in Denmark and New Zealand about ETS systems in their agri sector show large GHG emission reductions, depending on prices per ton CO2 eq. Since the EU ETS was introduced in 2005, emissions have been cut by 42.8% in the main sectors covered: power and heat generation and energy etc. ETS systems for industry/energy helped to reduce CO2 emissions a lot so there is no reason to believe this would not work in agri-food sectors too. https://www.just-food.com/news/farming-emissions-tax-of-dkk750-per-tonne-needed-to-meet-climate-targets-says-danish-climate-agency/

   According to the CE Delft report "Pay as you eat meat, dairy eggs", for beef and dairy farms, a shift to more extensive production methods like organic dairy/beef can be expected because of lower GHG emissions per kg milk/beef and per hectare in organic systems. For chicken and pig production further intensification could be a result, but this can be mitigated by introducing exemptions or reduced obligations in the ETS system for organic pig / poultry farms. Methane production (bio-energy) is a risk for intensification at farm level.

   An ETS for agriculture at farm level would probably not lead to higher prices for meat , dairy and eggs (or just a little bit) because supermarkets will try to keep prices low and negotiate with farmers to keep their prices and costs low too. If dairy factories and slaugherhouses however have to pay the GHG emission price in the ETS system, it is expected the additional price is moved fully towards the consumer / supermarkets. If a CO2 eq ETS price of 100 euro/ton would apply on cheese or beef, the price of 100 gram would only increase with 2 eurocents (assuming that 1 kg cheese/beef equals 23 kg CO2 eq). Imports to the EU of meat/dairy can be accounted in the same way like the CBAM in other ETS EU markets. Meat and dairy import companies would have to pay the same price for GHG emissions (import taxes) compared to slaugherhouses and dairy factories.

- What is best: to start a new ETS for agri/food or link with the existing ETS for industry/energy? There are pro and cons for a separate ETS system for agri/food. Keeping it separate means the ETS can be developed a bit different from the actual ETS system in industry. CO2, methane and nitrogendioxide emissions have to be included and emissions from landuse change (eg deforestation for soy animal feed). The advantage of including the agri-ETS into the existing ETS is that ETS prices per ton CO2 now are high (eg 80 euro/ton) which will bring change into the agriculture sector. However, there are reasons to believe that including the agriculture ETS into the existing ETS can lead to a fall of overall CO2 prices as GHG emission reductions in the agriculture sector might be cheaper compared to in industry/ energy.

Proposed position

- TAPP Coalition supports the application of the PPP in agriculture.
- Environmental impacts by agriculture are much broader than GHG emissions, so the EU needs to implement PPP also broader (eg. nitrogen, particulate matter, biodiversity loss, pesticides etc).
- We do support the creation of a new, separate ETS for agri CH4 and N2O and CO2 emissions in line with the draft report (commissioned by DG Clima) on ETS for agri proposal to have a maximum impact on reducing GHG emissions from agri-food systems. We support the downstream option where dairy factories, slaughterhouses and companies that import meat/dairy to the EU have the obligations to reduce GHG emissions and buy emission permits on the market if they can't reduce it themselves. We expect in this way meat and dairy prices will increase, and in this way meat/dairy consumption will be reduced, with benefits for the climate, the environment and biodiversity in Europa and globally.

- An alternative with less climate impact could be to include these CH4 and N20 emissions in the existing ETS by gradually expanding its scope
    - First, installations already covered by the ETS would be required to also purchase allowances for their scope 3 CH4 and N2O emissions, e.g. fertilisers manufacturers would be liable for N2O emissions; feed producers for enteric fermentation methane; and meat and dairy processors for manure management emissions
    - Then, more installations would be brought into the scope of the ETS (also medium-sized actors)
- Emissions and removals should always be kept separate.
- An ETS system for agriculture should be developed in such a way that the price for GHG emissions would be at least 100 euro per ton in the start and 200 euro/ton after 2030 to cover damage costs.
- Bring main Effort Sharing Regulation (ESR) agri GHG sources in ETS2/3 but also keep agriculture in the ESR
- Pricing agri emissions through integration of CH4 and N2O in existing ETS may be a useful tool to reduce these emissions but is not sufficient and must be complemented by other non-market based instruments (other tools include EPR schemes, regulation, etc) See wording in: Joint-statement-on-the-Commissions-proposal-for-a-Soil-Law_13-July-2023.pdf (eeb.org) & Soil Health Law position paper (eeb.org)
- Care must be taken to avoid negative impacts on more extensive farms (which – in the case of chicken and pork livestock – tend to be less GHG efficient and could therefore face higher carbon pricing per animal), we would want other sustainability dimensions (nitrogen balance / biodiversity / animal welfare) to be taken into consideration to counter this bias. Organic beef and dairy productiion is more GHG efficient per kg milk and per hectare compared to conventional dairy and beef production according to the latest scientific insights reported by CE Delft: https://cedelft.eu/publications/pay-as-you-eat-dairy-eggs-and-meat-internalising-external-costs-of-animal-food-products-in-france-germany-and-the-eu27/. So an ETS system for agri-food can be a trigger for farmers to shift towards organic milk and beef production, contributing to the goals of 25% organic farming in the EU by 2030.

Pros	Cons
Since ETS systems are the only EU Commission fiscal tools, a new ETS for agriculture is the only tool to apply the polluter pays principle in agri-food systems. Since the EU ETS was introduced in 2005, emissions have been cut by 42.8% in the main sectors covered: power and heat generation and energy etc. ETS systems for industry/energy helped to reduce CO2 emissions a lot so there is no reason to believe this would not work in agri-food sectors too. ETS ag systems bring in revenues that will have a double divdend: they can be used to pay farmers to reduce even more GHG emissions, they can be used to reduce prices for low carbon foot products, they can be used for a Social Climate & Food Fund (compensate low income groups and SME's harmed by an agri ETS) and they can be used to reduce the global climate finance gap for supporting low income countries that suffer most from climate change, caused by rich countries : Loss and Damage fund and Green climate fund (mitigation and adaptation). An ETS for agriculture with a carbon border mechanism for food imports to the EU (eg meat/dairy) will also encourage countries outside	**ETS 2 raised lots of concerns for social impacts – could backfire also in ag sector** --> who will pay the final price?? How to mitigate/ensure positive redistributive impact?? Biggest risk of going for any ETS (but especially a new, separate agri-only ETS) is that emissions and removals get mixed up. Risk of stronger impact on extensive livestock farms (applying carbon pricing via feed producers would mean that farms that are self-sufficient for feed would be unaffected, so this risk concerns mostly the pricing via downstream actors (dairies/meat processors)

the EU to reduce GHG emissions for the agriculture sector and to also start ETS systems for their agri sector. An ETS for agriculture will encourage farmers to shift to organic dairy and beef production because their GHG emissions per kg and per hectare are lower compared to conventional farming methods. (CE Delft report Pay as you eat meat, dairy, eggs, 20230. An ETS system for agriculture emissions is needed for the commitments made by the EU and EU member states to reduce methane emissions 30% by 2030 (Methane Pledge). Without a pricing system of methane, this goal will not be met.	

Other comments
New Zealand and Denmark already announced ETS systems for agriculture where farmers will have to pay for their GHG emissions and payments are given for planting trees etc.. Australia, different regions in the USA and Canada also have some forms of ETS systems with payments for farmers for GHG emission reduction. The Carbon Pricing Leadership Coalition is now having internal discussions about starting a High Level Committee on Carbon Pricing Agri-Food systems. The EU can play a leading role in pricing GHG emissions in ag systems, encouraging countries like USA, China and others to do the same. Pricing GHG emissions in the agriculture sector means that meat and dairy prices will go up mainly because the carbon footprint of EU diets is caused by meat and dairy for 80% of total GHG emissions from food eaten by EU citizens. (EU Court of auditors report on agri and climate, 2021). Reducing EU meat consumption per capita as a result of higher meat prices also leads to co benefits like public health and less biodiversity loss and more available land for nature conservation or biomass production for energy. ➢ If only GHG emissions will be regulated, the external cost coverage will be limited as over the value chain only 25-30% of the external costs of food systems in the EU are due to GHG emissions. Nitrogen and particlate matter emissions contribute more to external costs of meat/dairy. If slaughterhouses, dairy processing companies and/or retail are being regulated,the scheme could in theory be adjusted easily so that more external costs can be taken into account, like nitrogen emissions. ➢ Instead of EU slaugherhouses and dairy factories, another option for an ETS system in agri-food systems is that large retail companies and food services are included in the ETS system for their food related GHG emissions, calculated in annual reports (CSR directive).