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A close-up photograph of a cow's nose, showing the characteristic black and white spots on the skin. The nose is the central focus, with the cow's eyes and fur visible in the background. A dark blue rectangular text box is overlaid on the lower half of the image.

MUCH ADO ABOUT NOTHING?

An assessment of nine
updated draft National Energy
and Climate Plans (NECPs)

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1 | Introduction

One of the central objectives of the European Green Deal is to shift Europe's economy and society to climate neutrality by 2050, which requires an unprecedented level of climate action across all economic sectors – including agriculture. While agriculture is a major contributor to the environmental crises and accounts for about 11% of EU-27 total greenhouse gas (GHG) emissions, agricultural emissions have remained roughly stable since 2005. According to the European Environment Agency (EEA), projections based on existing policies and measures across the EU indicate that there will be nearly no emission reductions in agriculture by 2030¹.

While emissions related to livestock, fertilisers and land management are adding greenhouse gases to the atmosphere (see Figure 1 below), intensive agriculture and land use changes limit the land's capacity for absorbing and storing atmospheric carbon.

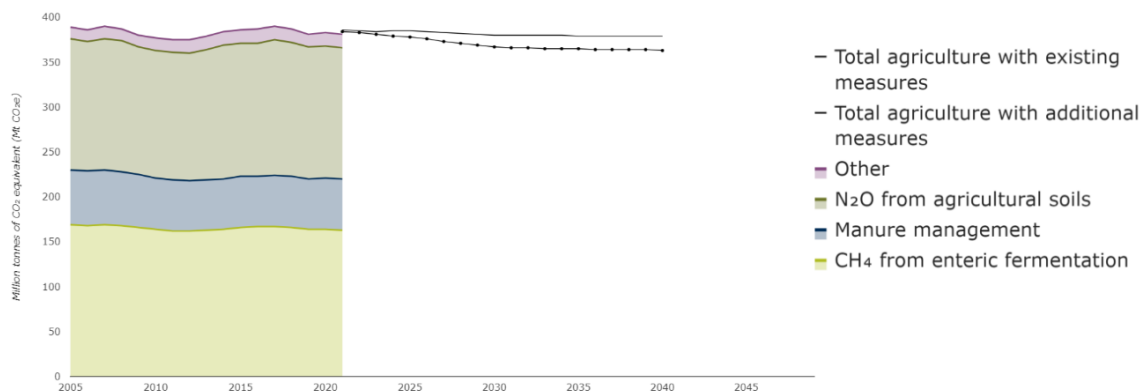


Figure 1: EU agricultural emissions by source and projected emissions
(Source: EEA 2022)

Introduced under the [Governance Regulation](#), to meet the EU's energy and climate targets for 2030, EU countries have established 10-year National Energy and Climate Plans (NECPs) for the period from 2021 to 2030. These Plans outline individual countries' energy and climate targets and explain the policy measures put in place to achieve them across all sectors. The "first round" of NECPs were submitted by the Member States in 2018-2019, and subsequently assessed by the European Commission and then finalised by each country in 2020-2021.

Unfortunately, the suggested measures for the agricultural sector have consistently been the weakest part of NECPs, with emissions from fertilisers (the reporting category called "agricultural soils") and livestock rearing left largely untouched, while emissions

from agricultural land-use - under the Land Use, Land Use Change and Forestry (LULUCF) sector - were not included in NECPs until now.

As a result of the revised EU-level GHG emission reduction targets in the Effort Sharing Regulation (ESR)² and LULUCF³ regulation, Member States had to submit their draft updated NECPs by the end of June 2023 to include these new legally binding targets. While emissions from agriculture cannot be completely eliminated, they can be significantly reduced, and the updated NECPs are a crucial tool in this regard, laying out key measures and policies at a national level in order to achieve climate reduction targets.

2 | Methodology




In the following assessment, we reviewed nine updated draft NECPs, specifically looking at the targets and measures proposed by Member States to reduce GHG emissions in the agricultural sector. Although all EU-27 Member States were supposed to submit a draft of their revised NECPs by the end of June this year, only 15 plans were made available on the [Commission's website](#) by early October 2023. Several Member States are delayed and have yet to hand in their updated NECPs. For this reason, this assessment focuses on a limited number of countries: The Netherlands, Portugal, Denmark, Spain, Italy, Estonia, Hungary, Sweden, and Slovenia.

This report assesses the drafts of these revised NECPs for the level of ambition seen in the suggested measures and targets for the agriculture sector. Our aim is to provide initial insight into whether EU Member States have used this fundamental opportunity to accelerate climate action and develop robust policies, measures and plans which address agricultural emissions, zooming in on measures proposed in relation to livestock, fertiliser, manure management as well as drained peatlands. Besides a desk-based analysis of the content of the Plans, the report aims to evaluate the overall level of ambition of measures and targets with input from national experts from the EEB's broad membership. In addition, the report takes a closer look at the public participation processes across the nine Member States, which were carried out ahead of the submission of the drafts to the European Commission.

3 | Level of ambition

Green arrow (↑): The 2023 NECP presents new targets

Country	Overall target	ESR target (2005 baseline unless stated otherwise)	Agriculture target
Denmark	<ul style="list-style-type: none"> • Zero net emissions by 2050 • 70% reduction by 2030 (1990 baseline) • The plan refers to the new government's intention to set new targets (neutrality by 2045 and 110% reduction by 2050). 	50% reduction by 2030 [previously 39%]	Reduction target for the agricultural <u>and</u> forestry sectors of 55% to 65% by 2030
Estonia	<ul style="list-style-type: none"> • Zero net emissions by 2050 ↑ 	24% reduction by 2030 [previously 13%]	None, Estonia is expecting an increase in its agricultural GHG emissions, mainly due to the expansion of livestock related emissions.
Hungary	<ul style="list-style-type: none"> • 52 - 85% reduction by 2050 (1990 baseline) • 50% reduction by 2030 (1990 baseline) ↑ 	18.7% reduction by 2030 [previously 7%]	None
Italy	<ul style="list-style-type: none"> • Zero net emissions by 2050 	43.7% reduction by 2030 [previously 33%]	None
Netherlands	<ul style="list-style-type: none"> • Zero net emissions by 2050 ↑ • 55% reduction by 2030 (1990 baseline) ↑ 	48% by 2030 [previously 36%]	5 Mt CO2e reduction by 2030 (equivalent to approximately -28% compared to 2005)
Portugal	<ul style="list-style-type: none"> • Zero net emissions by 2050 	28.7% reduction by 2030 [previously 17%]	11% reduction by 2030 (2005 baseline) [not new]

	<ul style="list-style-type: none"> • 55% reduction by 2030 (2005 baseline)  		
Slovenia	<ul style="list-style-type: none"> • At least 55% by 2033 (2005 baseline)  	28-31% reduction by 2030 [previously 20%]	1% reduction by 2030 (2005 baseline) [not new]
Spain	<ul style="list-style-type: none"> • Zero net emissions by 2050 • 32% reduction by 2030 (1990 baseline)  	43% reduction by 2030 [previously 26%]	21% reduction by 2030 (2005 baseline) [18% in original NECP]
Sweden	<ul style="list-style-type: none"> • Zero net emissions by 2045 	63% reduction by 2030 (1990 baseline, including LULUCF) [not new]	None

Given the urgency of the climate crisis, the EU's ambition to reduce net greenhouse gas emissions by at least 55% by 2030, and the limited time that remains before then, the updated NECPs are a crucial tool for Europe to transition to a net-zero emission union.

The substantial delays in the submission of revised draft NECPs by twelve countries is therefore concerning, especially seeing as several of the largest EU countries – France, Germany, Poland, and Romania – are amongst the laggards. This widespread delay does not send a positive message and offers a revealing glimpse into the (lack of) ambition of Member States concerning the implementation of EU climate obligations.

Regarding targets, it is positive that six of the nine countries included in the analysis have adopted new comprehensive GHG mitigation targets since the last NECP round: for both 2030 and 2050 in the Netherlands, for 2030 in Portugal, Spain, and Hungary, 2033 in Slovenia, and 2050 in Estonia. While Denmark and Sweden have not set new overall GHG targets in the last three years, the targets they had included in their original NECP were already the most ambitious in the EU. The same cannot be said for Italy, which still only has a long-term (2050) net-zero target and no national economy-wide target for 2030.

When it comes to reduction targets for ESR sectors, seven of the assessed countries stuck to the target mandated by the EU regulation, while Spain and Sweden both set themselves higher targets (although in the case of Sweden the target covers all non-ETS sectors and has a different baseline, making the comparison somewhat complicated).

Unfortunately, the picture is less positive when it comes to specific targets for the agriculture sector. The Netherlands, Spain, Portugal and Slovenia are the only assessed countries to identify a GHG target for the agricultural sector, although in the case of the

latter two countries these targets were already present in the original NECP and in the case of Slovenia shows a dire lack of ambition, while Denmark has a combined 2030 target for agriculture and forestry. The absence of any agricultural emission reduction targets in many countries' plans (despite the significant contribution of the sector to climate change) is particularly concerning, and sheds light on systemic reluctance to effectively tackle this major source of GHGs.

4 | Livestock and manure management

Whilst only accounting for 22% of the EU's calorie intake⁴, the livestock sector is a major contributor to climate change. Indeed, it is responsible for 86% of European agricultural GHG emissions⁵, 17% of the overall EU GHG emissions⁶, and 52% of total EU methane emissions⁷. Curbing livestock related GHG emissions is essential if the EU wants to meet its climate change mitigation obligations⁸. In fact, as the European Court of Auditors stated in 2021 in its Special Report *Common Agricultural Policy and climate*, there are “no effective and approved practices that can significantly reduce livestock emissions from feed digestion without reducing production. [...] Some of these practices [animal breeding, feeding, health and fertility management] encourage production expansion and may thus increase net emissions”⁹. Therefore, any measure aimed at effectively reducing livestock-related GHG emissions must envisage a reduction in animal food production and consumption levels¹⁰.

Nonetheless, from 2000 to 2020, European animal food production and consumption levels increased, respectively, by 18.12% and 7.39%¹¹, and this contributes to explaining why, despite improvements in its efficiency, the livestock sector has not achieved any significant emission reduction since 2005¹². This shows, again, that relying on industrialisation, intensification, and efficiency improvements in animal farming is not a practical approach for reducing greenhouse gas emissions.

Country	Measure description	Addressed areas of action	Comment
Denmark	<ul style="list-style-type: none"> • The Agreement on a Green Transition of The Agricultural Sector envisages the use of feed additives inhibiting production of methane from enteric rumen fermentation. • Better utilisation of manure as fertiliser, recycling and use of organic wastes for fertiliser purposes, and increase in biogas production. 	Manure management Feed Additives Biogas	Relatively high level of detail in the description of measures, but it is hard to see how they will add up to the ambitious GHG reduction target for 2030. The exclusive focus on technological solutions is direly insufficient in a country with extremely dense intensive livestock rearing and a long-standing nitrogen pollution problem.
Estonia	<ul style="list-style-type: none"> • Improving manure management • [Investments in animal welfare] 	Manure management	The measures proposed by Estonia are generic, poorly described, and very unambitious. It is also striking that the country is expecting an increase in its agricultural GHG emissions by 2030, which is hard to square with its ESR GHG reduction target.
Hungary	<ul style="list-style-type: none"> • Reducing GHG and ammonia emissions in the livestock sector. • Production, purification and feeding into the gas grid of biogas obtained from agricultural waste and sewage plants. • Changing the way manure is applied. 	Biogas Manure management	The Hungarian Plan includes very few measures to address agricultural emissions and provides scant detail, hindering a meaningful assessment.

Italy	<ul style="list-style-type: none"> • The main lines of action of the National Control Programme for Atmospheric Pollution cover the agricultural sector and may be implemented through regulatory instruments tackling livestock feeding strategies and manure management. • The National Recovery and Resilience Plan introduces incentives to produce biomethane from livestock manure. 	<p>Manure management</p> <p>Feed Additives</p> <p>Biogas</p>	<p>80-90% of intensive livestock farming is concentrated in the North of Italy, with a livestock density often exceeding the local environment's carrying capacity by 2-4 folds. While the solutions proposed by Italy can mitigate the most acute pollution emanating from the industry, they remain end-of-pipe fixes which do not address the fundamental issue of excessive livestock density, therefore missing the mark of structural change required by the climate and biodiversity crises.</p>
Netherlands	<ul style="list-style-type: none"> • National Programme for Rural Areas (NPLG) involves buy-out schemes for closure of husbandry sites in the overburdened Natura 2000 areas and price-setting policies. • Subsidy for farms to purchase a manure processing installation. • Subsidies for livestock farmers to improve their barns. • Outdoor-grazing scheme for dairy farming (CAP). • Research and innovation programme on an integrated approach to address ammonia and methane emissions. 	<p>Livestock units</p> <p>Manure management</p> <p>Grassland management</p>	<p>The Netherlands is the only country aiming to reduce animal numbers, which is the most widely proven approach to decrease livestock emissions. Yet, it remains to be seen if this measure will go far enough to bring the country's outsized livestock sector within carrying capacity. The technological measures listed by the Dutch NECP may slightly reduce GHG emissions, but risk further locking-in farmers into unsustainable production levels.</p>

Portugal	<ul style="list-style-type: none"> • Promote the installation or reconversion of effluent management and treatment systems to reduce GHG emissions. • Support improvements in digestibility in animal nutrition. • Promote integrated solutions for the treatment of agricultural and agro-industrial effluents (focused primarily on intensive pig and cattle farming). 	<p>Manure management</p> <p>Feed additives</p>	<p>Relatively high level of detail in the description of measures. Yet, measures are focused on techno-fixes in intensive farming systems instead of promoting extensive systems (with adequate animal density) and dietary shifts.</p>
Slovenia	<ul style="list-style-type: none"> • Investments in covered storage of livestock manure. • Reduction of methane releases from digestive livestock by optimising feed ration and feed additives. 	<p>Manure management</p> <p>Feed additives</p>	<p>High level of detail in the description of both manure management and feed additives measures, however the ambition with regards to manure management is rather underwhelming. The Slovenian Plan also refers to the environmental benefits of livestock farming, without making any distinction between extensive and factory farming.</p>
Spain	<ul style="list-style-type: none"> • Frequent emptying of slurry in pig housing. • Covering of slurry ponds in the new pig and cattle installations, in accordance with at least the conditions laid down in the corresponding and respective Royal Decrees governing the two sectors. • Solid/liquid slurry separation with subsequent storage of solids and emptying of the liquid fraction in uncovered anaerobic lagoons in high livestock concentration areas. • Manufacture of compost from the solid fraction of slurry. 	<p>Manure management</p>	<p>Although the high level of detail in describing manure management measures is welcome, the exclusive focus on a handful of end-of-pipe solutions without addressing the root problem of acute nutrient (and climate) pollution from the Spanish industrial livestock sector is direly inadequate.</p>

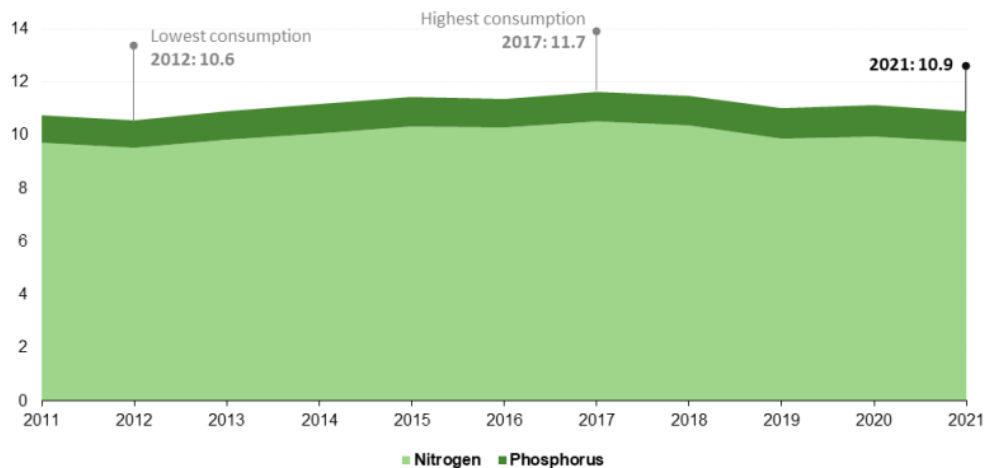
Sweden	<ul style="list-style-type: none"> • [Investments in animal welfare.] • Support scheme for biogas production through anaerobic digestion of manure. 	Biogas	<p>As Sweden already has very strict animal welfare legislation and the Plan does not give any detail on this measure, it seems dubious that this would deliver any significant cut in GHG emissions. With the only other measure being biogas production from manure, the Swedish Plan falls rather short and it is hard to see how its agricultural sector will contribute to its ambitious 2030 targets.</p>
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5 | Fertiliser

Plants need three primary nutrients for growth (besides carbon dioxide and water): nitrogen (N), phosphorus (P) and potassium (K). In healthy ecosystems, these nutrients are extracted from the soil by the plant's root system, with the help of soil micro-organisms which recycle nutrients from dead biomass (incl. plant residues or animal excrements from the surface). However, most agricultural land, degraded by decades of intensive agriculture, soil fertility is strongly reduced and farmers have come to rely on the use of fertilisers – in the form of organic fertilisers such as manure, compost, mineral, or chemical/synthetic fertilisers. The widespread use of nitrogen fertilisers throughout the world over the past decades has boosted crop productivity, however, its excessive use has simultaneously led to losses (or run-off) of these

Mineral fertiliser consumption in agriculture

(million tonnes, EU, 2011-2021)



Note: 2020 EU estimate, including 2019 data for Cyprus and Malta. 2021 EU estimate, including 2019 data for Cyprus and Malta, as well as 2020 data for Greece and Poland.

Source: Eurostat (online data code: aei_fm_usefert)

nutrients from farmlands to the environment, creating an imbalance of nutrients, GHG emissions and severely impact natural ecosystems and human health¹⁵.

Reducing the excessive use of nitrogen fertilisers and achieving balanced fertilisation (whereby crops take up all the nitrogen applied) is therefore key for reducing agricultural GHG emissions. Yet, the amount of mineral fertilisers used in agricultural production in the EU has remained broadly stable over the past decades (see figure above).

Country	Measure description	Addressed areas of action	Comment
Denmark	<ul style="list-style-type: none"> • Precision fertilisation (remote sensing, high precision positioning systems, sensors and variable rate technologies cultivation aimed at reducing nitrogen leaching from fields). • Maintenance and conversion towards organic farming, with the aim to double the surface of land farmed organically by 2030 (measure included in the CAP Strategic Plan). • Development of a new farm-level nitrogen regulatory model, which is expected to reduce nitrogen emissions by 6,500 tons by 2027. The regulatory model is expected to introduce farm-level measures i.e. crop selection, catch crops. • National regulations include <u>nitrogen quotas</u>, handling of manure, mandatory catch crops and later soil tillage. 	<p>Precision fertilisation</p> <p>Agroecological practices</p>	<p>Denmark shows strong ambition, with a diverse package of measures, including binding ones, aiming at improving nitrogen use efficiency and reducing related GHG emissions.</p>

Estonia	<ul style="list-style-type: none"> • Replacement of mineral fertilisers by organic fertilisers to reduce N₂O emissions from agricultural soils. 	Fertiliser replacement	<p>On its own, there is no guarantee that this measure will deliver any GHG emission reduction and it could even lead to a worsening of air and water pollution depending on how and how much organic fertiliser is applied. This simplistic measure must be accompanied by at least mandatory farm- and field-level nutrient management plans, low emissions spreading techniques, and agronomic practices to reduce the need for fertilisers.</p>
Hungary	<ul style="list-style-type: none"> • No measures identified in the NECP. 		<p>The lack of any measure to address emissions from agricultural soils in Hungary is unacceptable; especially in light of the acknowledgement that GHG emissions from agriculture have been increasing almost continuously since 2011, mainly due to fertiliser use and increased cattle farming.</p>
Italy	<ul style="list-style-type: none"> • Use of agricultural fertilisers with a lower emission impact. • Nitrogen management, taking into account the whole nitrogen cycle. • Low-emission manure storage and spreading techniques. • Possibilities for limiting ammonia emissions from the use of mineral fertilisers. 	<p>Different fertiliser use</p> <p>Manure management and storage</p>	<p>70% of mineral N fertiliser is used in the North of Italy and the country is in infringement procedure for both the Nitrates Directives. Therefore, greater targeting and higher ambition in addressing nitrogen pollution in Northern Italy is strongly needed.</p>

Netherlands	<ul style="list-style-type: none"> Fertiliser replacement and high-quality manure processing scheme, subsidizing the design (or re-design) of a high-quality manure processing installation. The aim is usually to reduce the mass of manure, to concentrate nutrients to improve their transportability and to produce such fertiliser products that replace mineral fertilisers and provide reduced emissions into the environment. 	Manure management and processing	The design and ambition of the proposed measure are good, although it lacks a more systemic approach aimed at reducing the need for fertilisers through agroecological practices that improve natural soil fertility
Portugal	<ul style="list-style-type: none"> Adoption of the Code of Good Agricultural Practice to reduce the use of nitrogen fertilisers. Improving the efficiency and effectiveness of land application of fertilisers (through expanding organic farming and precision farming). Replacement of mineral fertiliser with organic fertiliser. 	Fertiliser replacement Precision fertilisation	Vague description of measures and focus on improving environmental performance of intensive systems. Regarding the adoption of the Code of Good Agricultural Practice to reduce the use of nitrogen fertilisers, this code already exists since 2018, but Portugal rural extensions services do not monitor its proper implementation allow for proper implementation.
Slovenia	<ul style="list-style-type: none"> Support for low-emission fertilisation techniques (investments in equipment and co-financing of implementation). Support for measures requiring fertilisation based on soil testing. Support for the use of urease inhibitors. Nitrification and denitrification Support for precision fertilisation. 	Precision fertilisation	Slovenia's Plan has a narrow focus on technological solutions, with measures promoting agronomic practices that can reduce fertiliser use, such as organic agriculture, lacking. Furthermore, some of the measures proposed (e.g. nitrification and denitrification) are causes of concern due to the risk they pose to soil health and biodiversity.

Spain	<ul style="list-style-type: none"> • Promotion of conservation agriculture and crop rotations on arable land to improve nitrogen levels in soils and hence resulting in lower nitrogen fertiliser input from subsequent crops. • Development of a fertilisation plan that takes into account the needs of the crop, so that organic and inorganic fertilisers are used at appropriate doses and times. • Production of organic fertiliser (compost) from pig and cattle effluents in areas of high livestock concentration. 	<p>Agroecological practices</p> <p>Fertiliser management</p>	<p>While the combination of efficiency and agronomic measures is welcome, “conservation agriculture” is loosely defined and evidence is lacking that in its most commonly understood sense (no tillage), it can deliver significant cuts in nitrous oxide emissions. To the contrary, research has shown that sometimes ‘conservation agriculture’ practices can lead to greater N₂O emissions. The measure should therefore be improved by clarifying which combination of practices should be promoted to ensure climate and wider sustainability benefits.</p>
Sweden	<ul style="list-style-type: none"> • No measures identified in the NECP 		<p>This is underwhelming as low-hanging fruit measures remain available to Sweden, farm-level nutrient management plans are not mandatory and nutrient pollution is a significant issue. However, it should be noted that the Swedish CAP Strategic Plan supports training on minimising nutrient loss and includes (just) one eco-scheme on precision farming which requires nutrient balances, a fertilization plan and mapping.</p>

First, it is worth noting that there is a strong focus on promoting more efficient fertilisation and to some extent also promoting the use of organic fertilisers instead of mineral fertilisers. While organic fertiliser is often promoted as a more climate-friendly alternative to mineral and fossil-based fertilisers, inappropriate application and overuse may still cause adverse environmental side effects such as nitrate leaching to ground water and the air. This also applies to precision farming: there is no guarantee that any precision farming technologies will deliver emissions reductions if a measure promoting them does not include any benchmarks or requirements for actual input reduction. In other words, such measures on their own will not necessarily deliver significant improvement as they may still maintain over-fertilisation, yet we found that these measures remain the most prevalent in

addressing emissions from agricultural soils. Furthermore, the use of heavy agricultural machinery can lead to soil compaction, which can lead to an increase in nitrous oxide emissions, which is a real concern for the type of measures mentioned above.

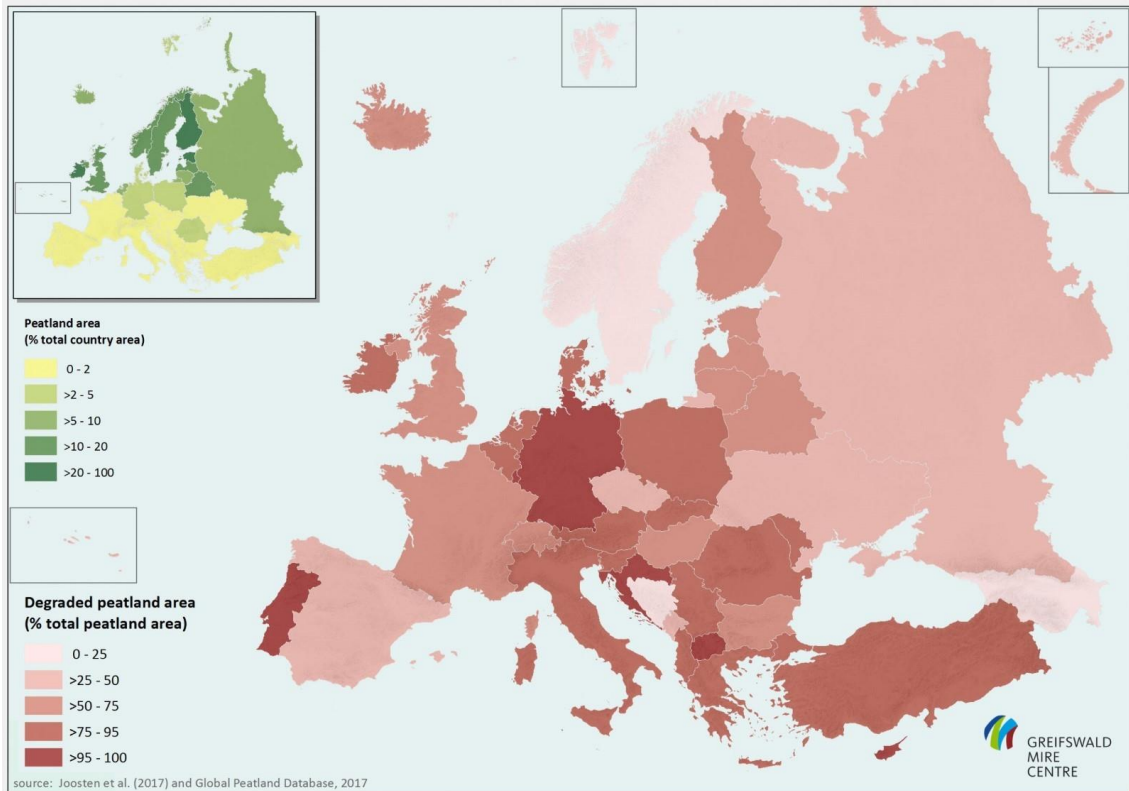
While Sweden and Hungary's draft updated NECPs suggest no measures to reduce synthetic fertiliser, all other countries suggest measures that are either aimed at improving the efficiency and effectiveness of fertiliser application or replacing mineral with organic fertilisers. Moreover, detailed nutrient management plans should be required at field and farm level to maximise nutrient-use efficiency, however, only the Spanish NECP mentions this measure.

On the other hand, we have far exceeded the planetary boundary for N and P, as demonstrated by the fact that so many water bodies in Europe are eutrophic, so in areas of high N and P pollution, maximising efficiency is not enough and we should instead aim to phase out any new N and P inputs in the form of synthetic fertilisers (as well as bringing livestock numbers within the carrying capacity of the local environment). This means promoting agroecological practices which can restore soil health and fertility and reduce (or eliminate) the need for synthetic fertilisers. In this context, only two NECPs suggest measures which can be classified as "agroecological practices": Spain refers to promotion of crop rotations on arable land to improve nitrogen levels in soils whereas Denmark lists their CAP eco-scheme on organic farming as a measure to address N₂O emissions.

In summary, the assessment of the draft updated NECPs shows that few countries are taking serious action to address emissions from agricultural soils. Ambitious schemes remain far and few between, and many of the suggested measures tend to promote techno-fixes and lack clear benchmarks to ensure more efficient nutrient use.

6 | Peatlands and wetlands

Peatlands are a type of wetland present across the globe but covering only about 3% of the Earth's land surface¹⁶. As the recently published *Peatland Atlas 2023* shows, peatlands are rich in terms of biodiversity and store twice as much carbon as all world forests combined¹⁷. It follows that, given their great capacity as carbon sinks and, at the same time, provided the massive amount of GHG emissions that is released as a consequence of peatland drainage and destruction, peatland protection and restoration should be a key priority in tackling the climate crisis.



Global Peatland Database - Greifswald Mire Centre (greifswaldmoor.de)

Yet, one tenth of the world's peatlands have been drained and, on average, 500,000 hectares of peatlands are destroyed every year, mainly as a result of short-sighted agricultural and forest policies¹⁸. In the EU, the majority of peatlands are degraded and 'much of the peatland is used for livestock, particularly for beef and dairy production and for growing fodder'. Consequently, peaty soils used in EU agriculture are estimated to emit around 166 Mt CO_{2e} each year, nearly as much as the total gross annual emissions from the Netherlands¹⁹.

Despite the evidence about the central role that peatlands play in biodiversity and climate protection, farming on drained peatlands continues and remains subsidised under the CAP. Although a new conditionality rule on "protection of wetlands and peatlands" was introduced in the last reform, its implementation is delayed in most EU countries and the specific requirements established by national governments will do little to stop ongoing harm²⁰.

Against this background, new measures for peatlands rewetting should be a priority in the updated NECPs of many EU countries.

Country	Identification of any measure on peatland	Measure description	Comment
Denmark	Yes	<p>Objective of rewetting 100,000 hectares of carbon rich peat soils through:</p> <ul style="list-style-type: none"> • Restoration of natural hydrology on 50,500 hectares of agricultural land. • Restoration of 38,000 hectares for extensive management. • Extensification of carbon rich soils by removing biomass and enforcing a ban on fertilisation. 	<p>The precise target presented in the Danish Plan is welcome, although what funding will be put forward to achieve these objectives is not clarified.</p>
Estonia	Yes	<ul style="list-style-type: none"> • The Plan states that 'Carbon stock changes for wetlands (including peat production areas) shall be assessed'. • The NECP recognises that 'the unconscious planning of [...] peat extraction poses a threat to the sustainability of key bioeconomy compartments for Estonia'. 	<p>The Plan does not refer to any target objective, means, or financial instrument. It recognises both the importance of accounting for peatland emissions, and the dangers arising out their bad management. However, it does not identify any 'sector adaptation action' related to it.</p>
Hungary	Yes	<ul style="list-style-type: none"> • Hungary's CAP strategic plan aims at improving the carbon sequestration capacity of soils and ecosystems, including wetlands. 	<p>The Plan does not explicitly refer to peatlands, but to wetlands instead. It does not introduce any element of novelty going beyond measures identified in its CAP strategic plan. Furthermore, beyond referring to its generic objective, it does not identify precise measures and financial means for its implementation.</p>

Italy	No		Italy has a very limited surface of peatlands and peat extraction or drainage for agricultural uses are not particularly relevant issue.
Netherlands	Yes	<ul style="list-style-type: none"> • Converting approximately 10.000 ha from agricultural land to agricultural nature and wet crops. • Increase about 80.000 ha of groundwater levels, use of infiltration and innovative drainage techniques and soil measures. Provinces draw up the peat grazing strategies. 	The Plan includes a high level of detail, as it both identifies precise target objectives, and measures to achieve them. The Dutch Plan does not provide a clear reference to the financial resources allocated for the implementation of peatland measures. Nonetheless, financial resources for peatlands do exist, and they have been allocated by the National Programme for the Rural Areas.
Portugal	No		Portugal has a very limited area of peatland, making this a less relevant issue, although it is worth noting that they are virtually all degraded (cf. map above)
Slovenia	No		In Slovenia, peatlands are rare and cover only a very small area.

Spain	Yes	<ul style="list-style-type: none"> • The 'Wetlands Strategic Plan 2020-2030' aims to halt wetland degradation and preserve habitats that provide important services and benefits to society. • Objective to achieve restoration of 50.000 hectares of wetlands until 2050. 	The Spanish Plan only refers to 'humedales' – or 'wetlands' - not specifically to 'peatlands'. The wetlands restoration objective is welcome, but the Plan does not provide any further information on the means for achieving it.
Sweden	Yes	<ul style="list-style-type: none"> • Sweden's CAP Strategic Plan includes basic conditions for receiving the aid, such as crop rotation requirements, the deposition of environmental surfaces, green land, and the protection of peatlands. • The Government has invested SEK 200 million a year (i.e., euros 17,226,868) in rewetting suckled wetlands. 	The Plan does not identify any specific target, but it does clarify both the measures and financial means to be used for the improvement of peatlands' status, which is welcome.

Out of nine updated NECPs which have been analysed, only six explicitly refer to the importance of implementing measures related to peatlands. In fact, Portugal, Italy, and Slovenia do not even mention peatlands in their updated NECPs, thus remaining silent on peatlands' mitigation potential. If, on the one hand, it could be argued that the neglect of peatlands in these Plans might be justified given the relatively small peatland areas in these countries, on the other hand, it is noteworthy that Portugal, Italy, and Slovenia rank among the EU countries with the highest percentage of degraded peatland. Thus, a more stringent protection of their peatland areas is particularly urgent. Furthermore, it is also the case of specifying that Spain's updated NECP actually refers, when it comes to the identification of policies and measures, to the role of '*humedales*', a term which can be translated to 'wetlands', and thus refers to a type of land which includes but goes beyond the more specific 'peatland' category. Secondly, out of the six NECPs referring to the role of peatlands as both carbon sinks and potential sources of emissions, only three (i.e., the plans drafted by the Netherlands, Portugal, and Spain) identify specific rewetting or restoration targets. Indeed, while the Netherlands commits to converting approximately 10.000 hectares from agricultural land to agricultural nature and wet crops, Denmark aims at rewetting 100,000 hectares of land, and Spain fixes a target of 50.000 hectares of wetlands to be restored by 2050. While these targets are welcome, they fall far short of the ambition needed; according to empirical studies, to meet the objectives of the Paris Agreement, Europe must rewet one million hectares of peatlands annually²¹.

Lastly, the potential for implementing ecologically sustainable agricultural practices in peatland areas through 'paludiculture', which is well recognised in scientific literature, should be acknowledged and leveraged by EU Member States. It follows that the updated NECPs should strive for greater specificity and attention to peatlands to effectively combat climate change and preserve biodiversity.

Cross-cutting observations

This analysis of NECP's climate action on three key agriculture-related sources of GHG emissions raises several critical issues, besides the content-related shortcomings already identified.

First, there are strong variations in the level of detail provided for the measures to be implemented from one NECP to another. For example, regarding manure management, while Estonia's NECP only generically refers to the improvement of manure management, Spain's NECP more specifically refers to measures as 'frequent emptying of slurry in pig housing', 'covering of slurry ponds in the new pig and cattle installations', and 'solid/liquid slurry separation with subsequent storage of solids'. The same went for peatlands, where only two plans among those analysed (*i.e.*, those submitted by the Netherlands and Sweden) provided some level of specificity on the measures to mitigate GHG emissions from peatlands, whereas Hungary's NECP for example barely refers to the aim of improving the carbon sequestration capacity of a list of soils and ecosystems, among which peatlands are included.

The lack of clarity and ambition is most blatantly problematic in NECPs where the issue (e.g. peatland degradation or livestock sector expansion) are recognised as environmental challenges, but nothing is proposed to address them (e.g. Estonia and Sweden re. livestock; Estonia re. peatlands). On the other hand, Slovenia's approach to the livestock sector, highlighting the environmental benefits arising out of animal farming without recognition of the issues linked with intensive rearing, lacks scientific rigour and fails to convincingly justify the lack of effective measures to mitigate livestock emissions.

Second, regardless of the level of detail provided, when it comes to addressing livestock and fertiliser emissions, none of the assessed NECPs identify specific targets for the implementation of the measure concerned (e.g., for its uptake or related emissions reduction), nor a dedicated budget to be allocated for its delivery. This is somewhat better in the case of peatlands-related measures, although Sweden is the only country to also specify the amount of money to be invested for the implementation of peatlands-related measures; but remains an exception rather than a rule. This reflects the looseness of the measures identified in updated NECPs, and Member States' unpreparedness or unwillingness to duly tackle GHG emissions in agriculture.

7 | Public participation

According to article 10 of Governance Regulation each Member State “*shall ensure that the public is given early and effective opportunities to participate in the elaboration*” of the draft NECP by carrying out a public consultation ahead of the submission of the draft to the European Commission²². These requirements also apply to updated NECPs as required in article 9(4) of the Regulation²³.

From the assessments of the nine draft NECPs the first thing to notice is the discrepancy in the level of details provided by the Member States. On average the dedicated section on the public consultation and stakeholder dialogues features two pages, whereas draft NECPs are hundred pages long. Some Member States made an effort to detail the process and timeline of the public participation consultation they carried out, going into greater detail than for their final 2019 NECP (Portugal, Italy), while other dedicated only to one page (or even half a page) on the topic (Hungary, Slovenia). Sweden, for example, copied the wording from its final 2019 NECP and only changed the part on the specific consultation carried out in the context of its national climate action plan.

These differences can be attributed directly to the level of involvement of stakeholders and citizens in the respective Member States. The widespread inaction and lack of citizen involvement by the Member States had been already evidenced by civil society back in April 2023²⁴. It is worth noting, that all nine Member States have conducted some sort of public consultation and stakeholder meetings. Many however carried out these processes without making a draft available to the public (eg. Italy, Spain), or in an untimely manner, not allowing the public to provide informed contributions (Estonia) and rendering their participation less meaningful.

The quality of the public consultation themselves is difficult to assess, primarily because the information provided in the draft NECPs lacks occasionally clarity (due to language translation barriers) and detail. Some Member States did not even follow the template for reporting on these processes, as for example the Netherlands which did not differentiate between stakeholders and citizen involvement and engagement with local authorities.

Lastly, some Member States demonstrated commendable effort by providing many details regarding the outcomes of the public consultation and stakeholder meetings. Denmark and Estonia, for instance, listed all the responses, specifying the capacity of the respondents and how and why these responses were incorporated or not in the

draft update. Some other Member States only provided basic information about the number and capacity of respondents along with a brief summary of the most frequently recurring themes in the responses without explaining how these views were taken into account (Italy, Portugal, Spain). As for the other Member States, the Netherlands gave a quick overview of the subjects mentioned during the public consultation, whereas Hungary, Slovenia and Sweden did not provide any of the aforementioned information.

8 | Conclusion

This assessment of nine draft updated NECPs shows that despite the significant contribution of the EU agricultural sector to climate change, Member States generally lack ambitious measures and long-term strategies to effectively tackle agricultural GHG emissions. Many Member States did not set any specific emissions reduction targets for the agricultural sector nor put forward properly quantified measures and well-designed policies addressing direct sources of greenhouse gas emissions stemming for instance from the overuse of synthetic fertiliser, intensive farming or the degradation of peatlands.

It should be paramount to cut livestock-related GHG emissions for the EU to meet its climate change mitigation obligations, yet none of the analysed Member States – except the Netherlands - are proposing measures to significantly reduce animal numbers. Measures tackling emissions from the excessive use of fertilisers (“agricultural soils”) are mostly focused on efficiency improvements and other techno-fixes which do not guarantee substantial climate benefits, while high-quality measures promoting agroecological practices to restore soil fertility and reduce the dependency on fertilisers are painfully absent. Similarly, Member States’ updated draft NECPs overall fall short of the ambition needed to address emissions stemming from farming on drained peatlands.

Key recommendations

Member States must

1. **Provide detailed plans with quantified targets to show concrete decarbonisation pathways to 2030 and 2050:**
Ensure that Member States develop and update plans with long-term pathways

and intermediary milestones. Member States should provide details on the plan's development process, including stakeholder consultations, national objectives, targets, national policies, and measures implemented to achieve those objectives and targets, as well as a description of the current situation and future projections. And finally, draw lessons from their initial NECPS to identify gaps and areas for improvement.

2. **Set out increased sectoral emissions reduction targets to reduce all emissions from agriculture:**

The updated NECPs should reflect and be aligned with the increased targets of the LULUCF and ESR Regulation. Member States should set clear targets and measures to increase the contribution of the agricultural sector to the EU's new climate targets, aiming to both cut non-CO₂ (methane and nitrous oxide) emissions from livestock, manure and fertiliser use; and cut CO₂ emissions and increase carbon sequestration on agricultural land (under LULUCF).

3. **Favour measures whose climate benefits are scientifically demonstrated and which do not risk harming other sustainability aspects:**

Achieving climate targets is contingent upon the identification of scientifically substantiated measures. The relevance of this point emerges quite blatantly when it comes to the analysis of livestock-related measures, where all NECPs except the Dutch Plan focus solely on efficiency-driven mitigation strategies and ignore the strong scientific evidence that in areas of densest livestock farming, a reduction in animal numbers is unavoidable. On the other hand, climate mitigation must go hand in hand with wider biodiversity and environmental protection and restoration, as these issues are intrinsically linked, meaning that measures which could cause negative trade-offs on biodiversity or soil health for example should not be promoted; a particularly relevant point when looking at fertiliser emission reduction.

4. **Guarantee public participation during the preparation of the updated NECPs within a transparent and fair framework:**

Member States should provide enough time for the public and stakeholders to be informed, participate, and express their views in the NECP revision process and ensure access to all relevant documents. Multilevel energy and climate dialogues (MCED) are required under the Governance Regulation (Article 11). As Article 3(2) of the Governance Regulation requires, inter alia, the NECP to include an overview of the process followed for establishing the NECP - including a description of the involvement of stakeholders as provided for in Article 11 - NECPs should include a description of any MCED established.

References

¹ [EEA Report No 10/2022](#)

² With regards to agricultural GHG emissions, the Effort Sharing Regulation's (ESR) target was increased from 30% to 40% reduction by 2030. This target covers emissions from agriculture, waste, buildings, transport, and small industries not under the EU Emissions Trading Scheme – giving Member States flexibility to achieve this aggregate target across the different sectors.

³ While emissions from agricultural activities (non-CO2 emissions) fall under the ESR, related land use CO2 emissions from croplands, grasslands, wetlands and forestry are currently governed by the [Land Use, Land Use Change and Forestry \(LULUCF\) Regulation](#). The revised proposal includes several updates, including a target to increase the EU carbon sink to -310 million of tonnes CO2 equivalent by 2030, equivalent to a rough 20% increase in net carbon sequestration compared to present.

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¹⁴ Rob Bailey, Antony Froggatt, Laura Wellesley, 'Livestock – Climate Change's Forgotten Sector' (2014) Chatham House.

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¹⁶ (IUCN, 'Peatlands and climate change' (2023): <https://www.iucn.org/resources/issues-brief/peatlands-and-climate-change#:~:text=Peatlands%20are%20a%20type%20of%20wetland%20which%20occur%20in%20almost%20habitats%20growing%20on%20the%20surface>

¹⁷ *Peatland Atlas* (2023): <https://eu.boell.org/en/PeatlandAtlas>

¹⁸ *Ibid.*

¹⁹ https://greifswaldmoor.de/files/dokumente/GMC%20Schriften/2021_Martin%26Couwenberg.pdf

²⁰ <https://eeb.org/library/peatlands-and-wetlands-in-the-new-cap-too-little-action-to-protect-and-restore/>

²¹ *Ibid.*

²² For a list of the requirements for conducting a public consultation, see EEB's Ten Steps for Public Participation in the NECPs, available [here](#).

²³ See all the legal requirements enshrined in the Governance Regulation and in line with the Aarhus Convention in Alistair McGlone, Legal obligations for public participation during the updating of the National Energy and Climate Plans, February 2023, available [here](#).

²⁴ See Climate Action Network Europe & WWF's report, Public Participation in National Energy and Climate Plans, Evidence of weak and uneven compliance in Member States, April 2023, available [here](#).



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