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Clean Air Strategy Public Consultation
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Public Consultation on Updating Clean Air Strategy 2025

The An Taisce Climate Committee welcomes the opportunity to make a submission as part of the public consultation on updating the Clean Air Strategy 2025.

1. Legislation to Meet WHO Standards

A lack of urgency to address persistent air quality concerns, such as agricultural ammonia, or new ones (including aviation and data centre expansion) is evident in the current Clean Air Strategy (CAS) and its two progress reports. An update to the CAS may be useful but the Strategy is not currently delivering rapid improvements to Ireland's air quality or targeting zero air pollution emissions soon enough.

Radical interventions are needed on transport, agriculture, home heating, data centres, and aviation, underpinned at all times by the principles of Just Transition and meeting the legally binding five-year carbon budgets, which are aligned with global climate justice. Once again the Climate Action Plan is being delayed contrary to scientific concerns.

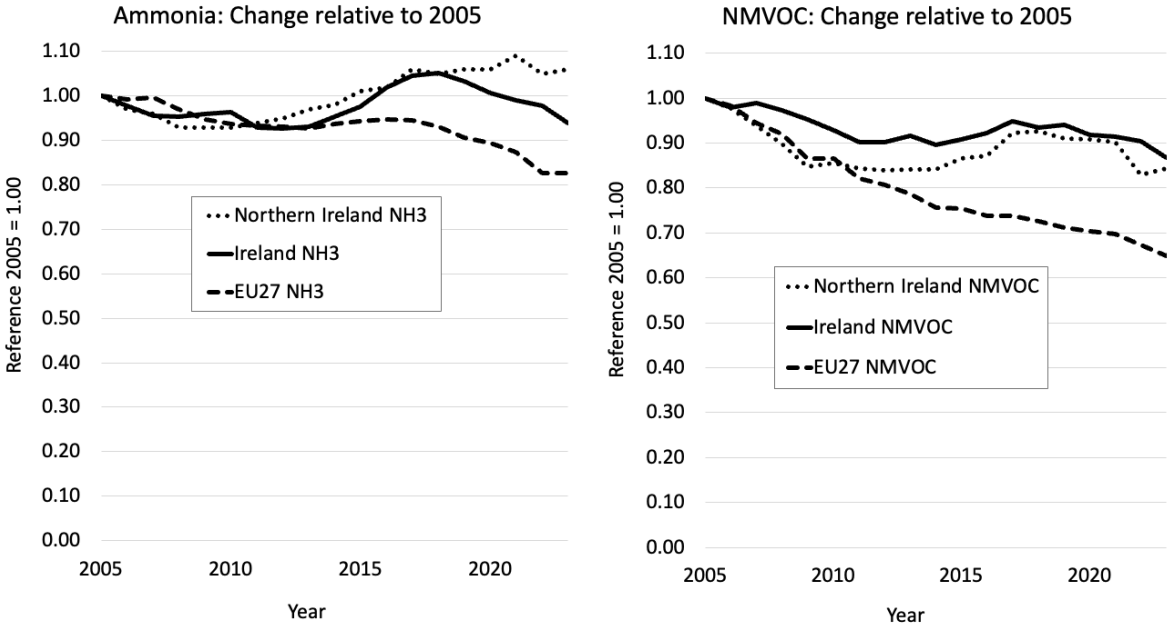
We need adequate legislation, which commits Ireland to achieving WHO Clean Air Limits by 2030. The Air Pollution (Amendment) Bill 2025[1] was advanced in July 2025, but it has not yet been enacted. It is insufficient to meet WHO standards by 2030 and it fails to provide sufficient urgency to support a just transition or reduce pollution rapidly enough.

2. Agriculture and Ammonia

99% of ammonia pollution in Ireland (and 97% in Northern Ireland) is due to agriculture, the majority of which is due to fertiliser spreading to grow animal feed (grass and crops) and nitrogen excretion from animals (beef cattle, dairy cows, sheep, pigs and poultry). Much non-methane volatile organic compound (NMVOC) pollution in Ireland is strongly related to animal agriculture, including animal excreta and a large increase in meat and dairy product food processing since 2010.

[1] https://sfmi.ie/wp-content/uploads/2025/10/2025-10-28_bill-digest-air-pollution-amendment-bill-2025_en.pdf

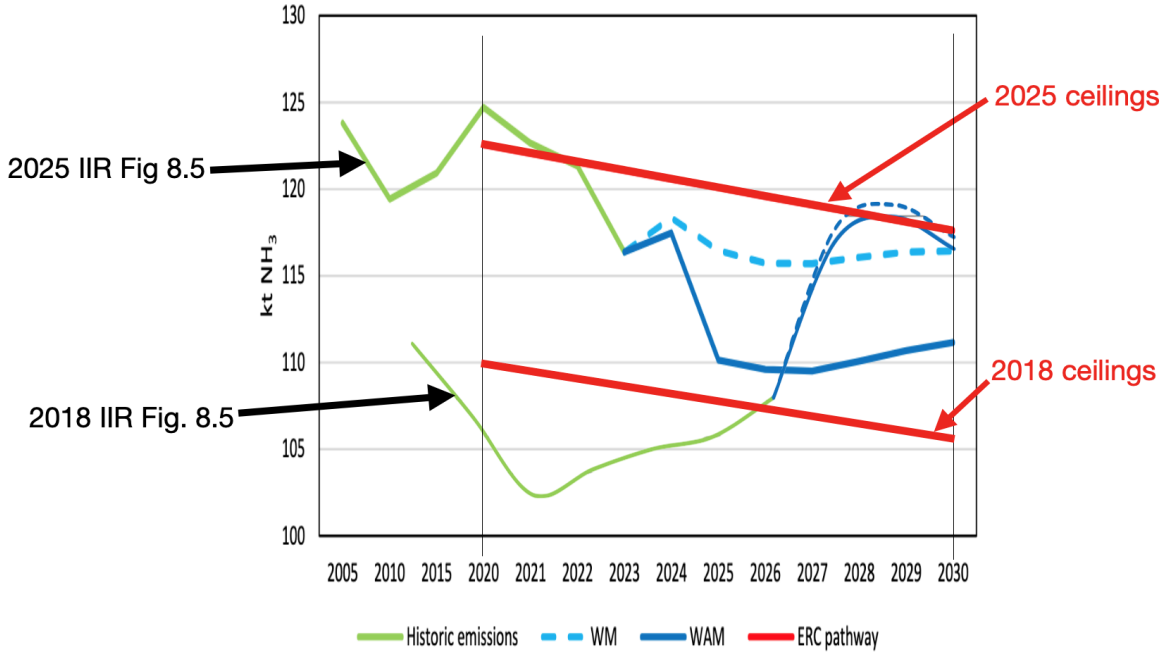
For ammonia (NH3) and NMVOCs air pollution emissions the charts below, using EEA and UK data, show the for 2005–2023 change relative to each area's 2005 reference year value.



The data shows that NMVOC pollution reduction in Ireland is seriously lagging EU average progress. This appears to be especially due to the expansion in animal agriculture and the increase in related food processing.

The National Emission Reduction Commitments Directive (the NEC Directive) sets national emission reduction commitments for Member States and the EU for five important air pollutants: nitrogen oxides (NOx), NMVOCs, sulphur dioxide (SO2), ammonia (NH3) and fine particulate matter (PM 2.5). The current reduction obligations apply from 2020 to 2029, while stricter obligations will apply from 2030 onwards. Although Ireland is currently in compliance with requirements for the 2020-2030 targets, recent increases in ammonia emissions threaten to reverse this compliance and particularly threaten exceedance of the more stringent requirements post 2030.

As the chart below shows, contrary to there being no safe limit for air pollution, there has been an unwarranted increase in the ceiling for ammonia pollution. This increase is apparently due to agri-food sector political lobbying. Allowing more ammonia pollution degrades public health and ecological protection.



For ammonia and other pollutants, explanations of any upward revision of ceilings, slow progress, or large changes in pathway calculations (as has occurred) should be required in the CAS Update.

Failure to comply with the NEC Directive reductions targets will leave Ireland open to penalties by the EU. In addition, it could undermine Ireland's marketing strategy, promoted via Origin Green, of Irish agriculture as sustainable and 'green'. This warning was given by Teagasc in 2018:

> *"the clean green image of the sector highlighted in the Food Harvest 2020 and Food Wise 2025 agri-food sector development strategies could be vulnerable if customers internationally and at home form the impression that Ireland's agri-food sector is not contributing to national emission reduction obligations."*

Monitoring of ammonia is particularly defective in Ireland. The EPA report *Air Quality in Ireland Report 2024* makes no mention of ammonia, despite the significant health and environmental impacts mentioned below. The updated CAFÉ Directive states that:

> *"It is important that pollutants of emerging concern, such as ultrafine particles, black carbon and elemental carbon, as well as ammonia and the oxidative potential of particulate matter, be measured at monitoring supersites at both rural background locations and urban background locations in order to support scientific understanding of their effects on human health and the environment, as recommended by the WHO."*

Nitrogen pollution in the form of ammonia poses a serious risk to biodiversity, leading to species decline via eutrophication, acidification and direct toxicity to a range of habitat types. Numerous studies have highlighted the link between nitrogen pollution and species decline. As ammonia levels increase, fast growing generalist species begin to dominate, and out-compete the more specialised species which are predominantly slow growing and nutrient sensitive.

The European Union's Habitats Directive (92/43/EEC) and Birds Directive (2009/147/EC) require EU Member States to identify and maintain the Natura 2000 network of designated sites in "favourable conservation status". The latest 'health' report of 2025 found that 90% of Ireland's protected habitats are in 'unfavourable' conservation status, while 51% are showing deteriorating trends across their

national ranges, which includes sites that are designated as Special Areas of Conservation as well as the wider countryside. The habitats identified as having bad status include peatlands, including raised and blanket bogs, and heaths; and biodiversity rich grassland areas, including orchid-rich and species-rich grasslands. These are the very habitats which are most susceptible to ammonia pollution. Bog and peatland habitats are home to sensitive lichens and mosses, which are impacted by even low levels of ammonia pollution (5-10 kg/ha/yr). Grasslands, heathlands and forests are also susceptible (10-25kg/ha/yr). Nitrogen deposition on Irish grasslands may be as high as 22kg/ha/yr. If ammonia pollution is extensive enough, the change of species composition and rate of extinction may alter the nature of the habitat entirely, and certain sensitive habitats may be lost. This would have serious ramifications for Ireland's obligations under the Habitats Directive.

Under the NEC Directive, ammonia must be monitored on biodiversity rich sites such as Natura 2000 sites15, and it should be predicated on a risk based approach. without detailed mapping of ammonia emissions, it will be extremely difficult to identify which Natura sites are most at risk of impacts caused by elevated ammonia emissions.

Given the paucity in the data, and the requirement under the NEC Directive to have a risk based approach which incorporates sensitive sites, An Taisce submits that in order to assess any positive impact of abatement measures for sensitive sites, a robust monitoring network should be in place, particularly in sensitive Natura 2000 sites.

In addition to the environmental impacts, ammonia also poses a serious health risk. Fine particulate matter with a diameter less than 2.5 micrometres (PM2.5) is well known to be harmful to health, with the capacity to penetrate deep into the lungs. Ammonia is wind borne and can mix with industrial and car fumes, forming PM2.5, which is linked to higher death rates, respiratory problems, cardiovascular diseases, cognitive decline and low birth weights. The concentration of fine particulates in the atmosphere could be halved by preventing the release of ammonia due to agricultural activities. A 50% reduction in ammonia would decrease mortality from PM2.5 by 20%, and 50,000 European deaths per year could be prevented.

In high concentrations, exposure to ammonia causes immediate burning of the nose, throat and respiratory tract. Generally speaking, ammonia is a reactive gas and much of it is deposited close to where it is emitted, however, some may reach higher levels in the atmosphere and be wind dispersed for long distances, potentially hundreds of kilometres once it binds to sulphur and nitrogen oxides20. As such, the ever increasing ammonia emissions have serious health implications for those living within the zone of impact of the more intensive farms where ammonia concentrations will be highest, in addition to the communities further away that will also be impacted by the PM2.5 which is wind borne. This also poses a direct and serious risk for personnel working on intensive animal farms, with studies demonstrating that the levels of particulate matter in these facilities is over the safe limits of exposure. This may give rise to future legal action by such workers whose health may be seriously impacted by the working conditions.

Thus, the State has an obligation to reduce the national emissions of ammonia for public health reasons, in addition to environmental reasons. Elevated ammonia has been proven to be detrimental across the board, and abatement measures must be rigorously enforced and effective.

The problem of transboundary ammonia pollution must also be considered, as even with abatement by Ireland, emissions from Northern Ireland will further elevate ammonia levels in the ROI. The ammonia emissions in Northern Ireland are also highly elevated, representing 12% of UK ammonia emissions, due primarily to a high prevalence of intensive pig and poultry farms, many of which occur along the north-south border. Transboundary consultation will be a necessary step in the reduction

of our ammonia emissions, and should be a major consideration in the licencing of further intensive agricultural facilities.

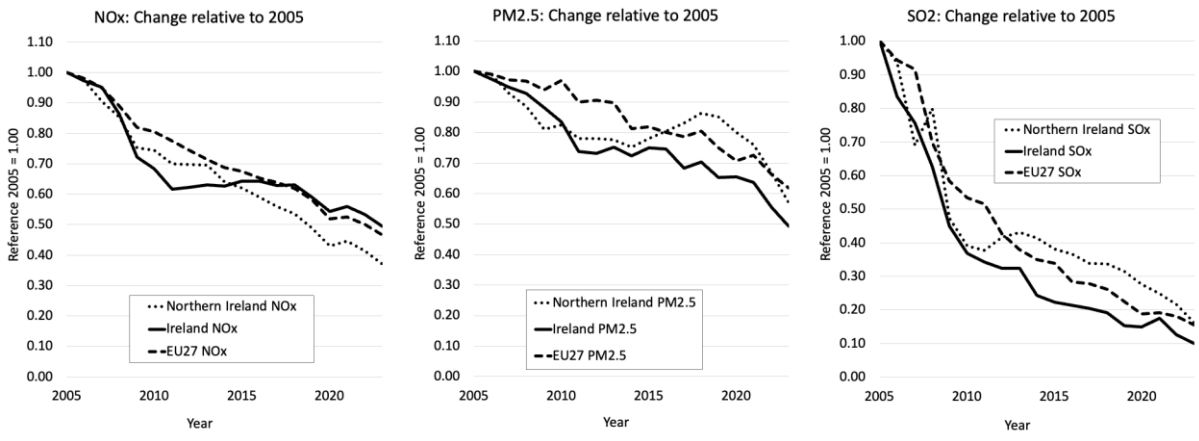
Ireland's agricultural intensification programme is increasing the volumes of animal manure produced, and is also increasing the volumes of synthetic fertiliser required for the production of grass to feed this increasing herd. Though slight declines have occurred in recent years, greatly increased cattle numbers since 2011 have contributed to an increase in ammonia emissions. Should contravention of the NEC Directive occur after, or before 2030, this will expose the State to legal action both at national and EU level.

The claimed progress due to MACC measures is largely illusory. Non-policy effects (high fertiliser prices, bad weather, nitrates derogation uncertainty) have been largely responsible for recent reductions in calculated ammonia. The recent lowering of fertiliser prices and what An Taisce considers to be the unwarranted extension of the derogation recent has resulted in increased use of nitrogen fertiliser that will increase animal nitrogen excretion, which will in turn cancel out most of the recent reduction in ammonia. The CAS Update needs to ensure that plans and progress reports account for non-policy effects to ensure that false claims of progress are not so easily made.

In the light of these environmental, health and legal concerns, the sustainability of Ireland's intensive agricultural system must be seriously called into question as regards currently increasing ammonia emissions. An Taisce submit that in order to comply with the NEC Directive in a meaningful way, and indeed the Water Framework Directive and Habitats Directive, the sheer numbers of animals, bovine, poultry and pig will have to be reduced (and farmers supported to do so), in addition to significant reductions in fertiliser use. Nitrogen excretion limits need to be aligned with Water Framework Directive requirements for each river basin and estuary, and with ammonia limits for all affected sensitive habitats.

3. Energy

For NOx, PM2.5, and SO_2 air pollution emissions, the three charts below, using EEA and UK data, show the 2005–2023 change relative to the 2005 reference year value.



These emissions categories primarily relate to fossil fuel combustion for electricity generation, heating and transport. SO_2 in particular has declined due to reduction in coal burning at Moneypoint and for home heating. Ammonia from agriculture combines with carbon emissions from fossil fuel combustion to create PM2.5 particles that affect urban as well as rural areas.

Therefore, the charts show that Ireland's progress to date in limiting such pollution parallels the reduction across Europe, which particularly relates to moving electricity production from coal and peat to fossil gas.

Multiple scientific studies now confirm that there is no realistic future for hydrogen or biogas in substantively replacing fossil methane to decarbonise heating or electricity generation, so the gas grid faces a demand death spiral. Farming solar energy using large PV arrays generates no local air pollution and is far more land efficient than AD biomethane production.

We therefore submit that the CAS Update requires a timeline for the removal of fossil gas from Ireland's energy system and a planned closure of much of the gas grid.

3.1 Data Centre Expansion Increasing Air Pollution

Additional activities that increase electricity and gas grid consumption, over and beyond that existing at the time of the 2015 Paris Agreement or the 2016 NEC Directive, inevitably increase the consumption of fossil gas relative to a transition away from fossil fuel. New data centres are diverting renewable energy away from decarbonising existing activities, thus corporate power purchase agreements (CPPAs) are not being effective in offsetting data centres' emissions.

The rapid expansion in data centre numbers in both Ireland and Northern Ireland is therefore having direct and indirect effects, increasing both the costs of electricity supply and increasing total resultant air (and GHG) pollution, compared to an alternative scenario in which no new data centres had been allowed. SEAI project that the additional data centres result in an additional 4.5 MtCO2e in GHG emissions, which will have the corresponding effect on air pollution from burning this additional fossil gas.

Limiting data centre numbers is now urgently required to limit air pollution, meet national carbon budgets, and to limit electricity costs for households and industry.

4. Home Heating and Cooking

A large-scale transition to heat pumps for domestic heating will require access to the European Social Climate Fund.

England's Chief Medical Officer's 2022 Annual Report on Air Pollution states that burning dry wood emits about a quarter of the PM2.5 fine particles compared to burning wet wood. However, dry wood emits four times as much PM2.5 particles compared to burning smokeless coal. Therefore, we consider that sales and deliveries of dry wood to urban areas need to be restricted due to high air pollution impact.

As with wood stoves, multiple scientific studies (also here) are showing that gas cookers are major sources of indoor air pollution, both NOx and particulate matter. The CAS Update needs to address this issue as a matter of urgency and outline the need for supports to transition households to induction electric cooking, which is also better aligned with household solar.