

Air Pollutant Emissions in Ireland

1990-2030

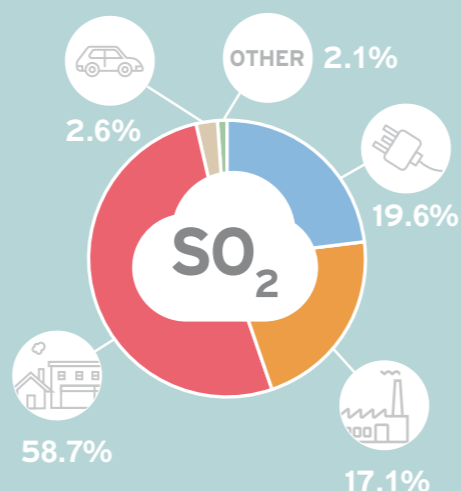
May 2024



SULPHUR DIOXIDE (SO₂)

Major precursor to acid deposition, which is associated with the acidification of soils and surface waters and the accelerated corrosion of buildings and monuments. Derived from the sulphur in fossil fuels such as coal and oil used in combustion activities.

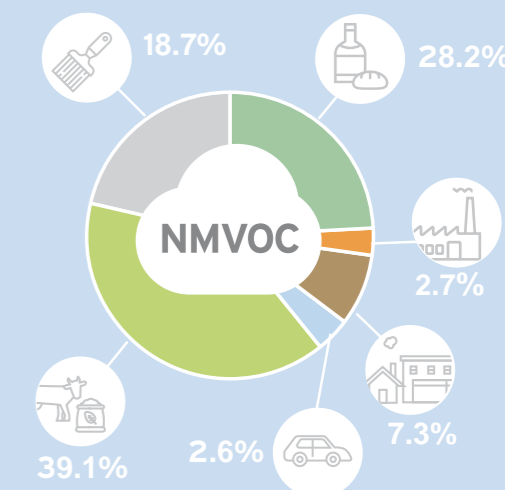
Emissions have decreased by 95% since 1990. Emissions from electricity generation have decreased by 98% and Residential & Commercial emissions have reduced by 85%. Fuel switching and reduced sulphur content of fuels are responsible for reductions.



Non-Methane Volatile Organic Compounds (NMVOC)

Are emitted by a wide array of products including paints, paint strippers, glues, cleaning agents and adhesives. They also arise as a product of incomplete combustion of fuels and from the storage and handling of animal manure and fertilisers in agriculture. Production of food and beverages also an important source.

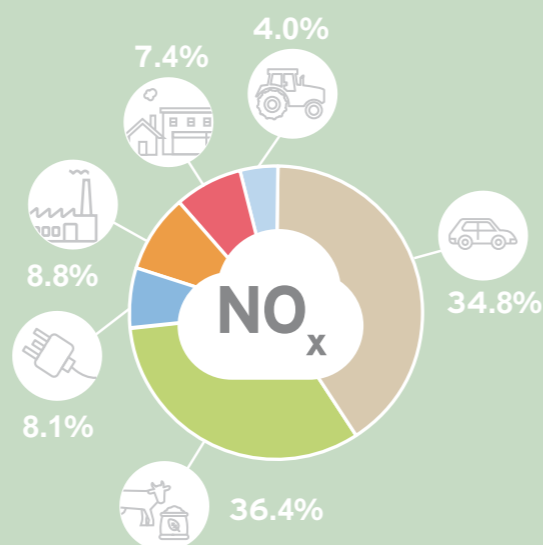
Emissions are 29% lower than 1990. Agriculture is the largest source accounting for 39%. Production of food and beverages (beer and spirits) accounts for 28%.



NITROGEN OXIDES (NO_x)

Contribute to acidification of soils and surface waters, ground level ozone formation and excess nitrogen or saturation in terrestrial ecosystems.

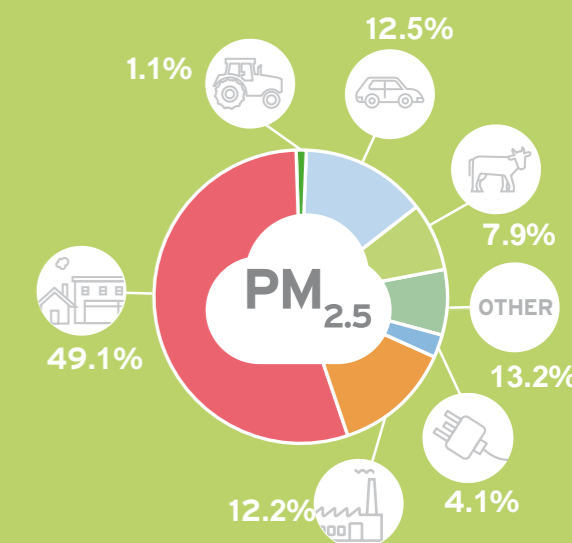
Emissions have reduced by 46% since 1990. Agriculture is largest source accounting for 36% of total emissions due to dung, urine, manures and fertilizer nitrogen application. Transport is the second largest source at 35%. Abatement technology in electricity generation and transport has led to reductions.



PARTICULATE MATTER < 2.5µm (PM_{2.5})

There are many sources of particulate matter (dust) including vehicle exhaust emissions, soil and road surfaces, construction works and industrial emissions. Particulate matter can be formed from reactions between different pollutant gases e.g. ammonia. Fine particulate matter PM_{2.5} is responsible for significant negative impacts on human health.

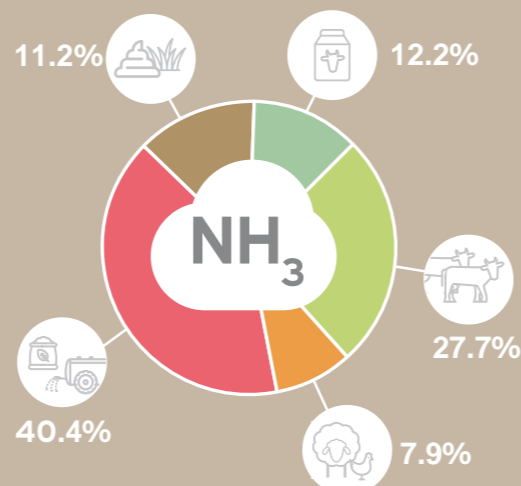
The main source is combustion of fuels in the residential & commercial sectors. Fuel switching from coal and peat to oil and natural gas has resulted in a significant reduction in emissions. However, localised air quality issues exist, which must be addressed.



AMMONIA (NH₃)

Associated with acid deposition and the formation of secondary particulate matter. The agriculture sector accounts for virtually all (>99%) ammonia emissions in Ireland.

Emissions are 11% per cent higher than in 1990. Animal manures produce about 90 per cent of ammonia emissions in agriculture and chemical fertilisers and transport account for the remainder. National emissions largely determined by cattle population and nitrogen fertilizer use.



KEY MESSAGES

Ireland is compliant with emission reduction commitments for



Energy efficiency measures across society, more fuel efficient vehicles REFIT support schemes and smoky coal ban, will have **sizeable impacts on reducing emissions into the future.**

Emissions of **NMVOC** need to be addressed in the context of increased emissions from some sectors of the economy.

Ireland is in breach of **NH₃** emission reduction commitment and will remain so in the short term. Expansion of the agriculture sector has led to the breach of **NH₃** reduction commitments. Encouraging signs of uptake of **NH₃** abatement measures such as low emission spreading techniques at farm level. Further uptake required to meet future emission reduction commitments.



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