



ROBERT J. PARK

ENVIRONMENT · CARBON · PUBLIC AFFAIRS
NORTHERN IRELAND

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Focus on Agriculture

Saving agriculture, saving the land: how innovation is building food security and better husbandry in Northern Ireland.

5.76 Mt

farm emissions in 2024,
10% above 1990

79%

of all NI methane
comes from livestock

-37%

carbon per kg of milk
since 1990

25%

of nitrogen now leaves
farms as food (16% in 1991)

Inside

- Then and now: farm emissions, methane, nitrogen and land
- Where farm emissions come from, and how they compare with the rest of NI
- Fertiliser and nutrients: DAERA's new soil nutrient balance
- Scopes 1, 2 and 3 for NI farming
- Saving the land, innovation in husbandry, security and deadlines
- Three things a farm can do this month

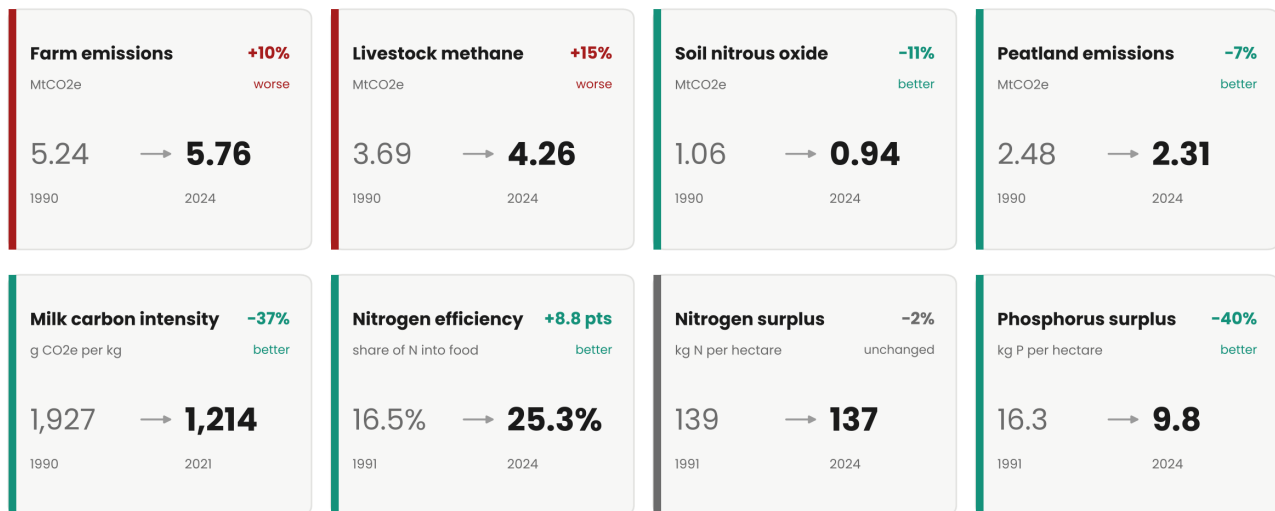
HEADLINE

More food from every kilogram of nitrogen. Farm emissions still above 1990.

Northern Ireland farming produced 5.8 MtCO₂e in 2024, 10% more than in 1990, while the rest of the economy cut its emissions by about 40%. Yet each kilogram of milk now carries 37% less carbon than in 1990, phosphorus surpluses have fallen by 40%, and over 540,000 fields have been soil-tested. This briefing sets out where farming stands and what is working.

Northern Ireland farming: then and now

More food from every kilogram of nitrogen, but total farm emissions are still above 1990.



Sources: DAERA/NISRA NI GHG inventory 1990–2024; DAERA Carbon Intensity Indicators 2024; DAERA Soil Nutrient Balances 1991–2024 (3-year averages).

This month in numbers

Measure	Then	Now	Change
Agriculture, all gases (ktCO ₂ e, 1990 to 2024)	5,238	5,762	+10%
Livestock methane (ktCO ₂ e, 1990 to 2024)	3,693	4,264	+15%
Soils nitrous oxide (ktCO ₂ e, 1990 to 2024)	1,057	941	-11%
Farm fuel and machinery (ktCO ₂ e, 1990 to 2024)	199	223	+12%
Peatland emissions (ktCO ₂ e, 1990 to 2024)	2,475	2,306	-7%
Nitrogen surplus (kg N/ha, 1991 to 2024, 3-year averages)	139	137	-2%
Phosphorus surplus (kg P/ha, 1991 to 2024, 3-year averages)	16.3	9.8	-40%
Nitrogen use efficiency (share of N inputs leaving in produce)	16.5%	25.3%	+8.8 points
Milk carbon intensity (g CO ₂ e per kg, 1990 to 2021)	1,927	1,214	-37%

Agriculture was 31.4% of NI emissions in 2024. Cattle numbers are roughly where they were in 1995; sheep are down a third, while pigs and poultry are up.

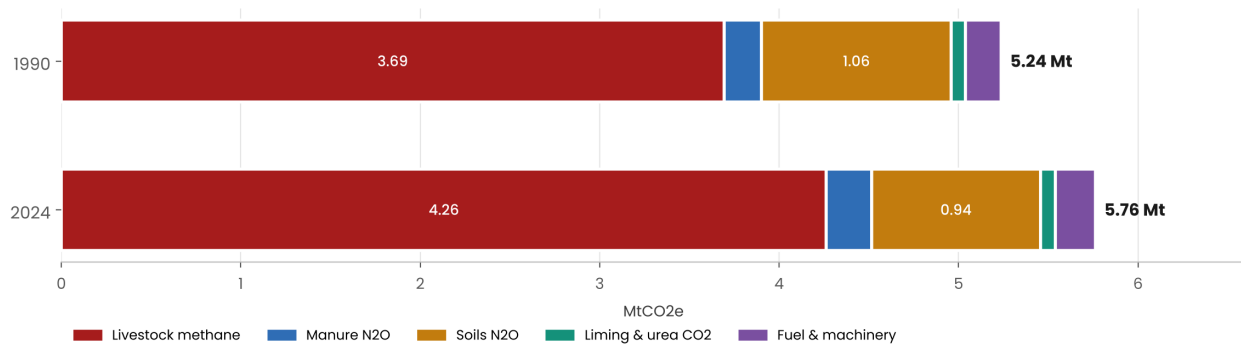
SOURCES AND TREND

Livestock methane is now three-quarters of farm emissions

Methane from cattle and sheep digestion and manure grew by 15% since 1990 and now makes up 74% of farm emissions. Nitrous oxide from soils, driven by fertiliser and manure spreading, fell by 11%.

Where farm emissions come from, 1990 and 2024

Livestock methane grew from 71% to 74% of the total; soil nitrous oxide fell.



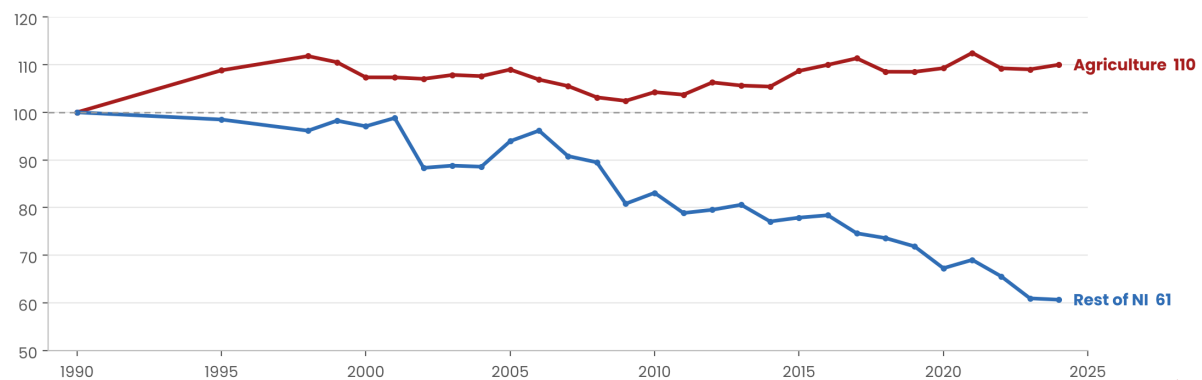
Source: DAERA/NISRA NI GHG inventory 1990–2024 (data updated 11 Aug 2026).



Farming has held roughly level while the rest of Northern Ireland's emissions fell by about two-fifths. That gap is why agriculture now decides whether NI meets its carbon budgets.

Farming has not followed the rest of the economy down

Emissions indexed to 1990 = 100. Gaps in the 1990s are years the devolved inventory does not publish.



Source: DAERA/NISRA NI GHG inventory 1990–2024. Rest of NI = net total minus agriculture (includes land use).



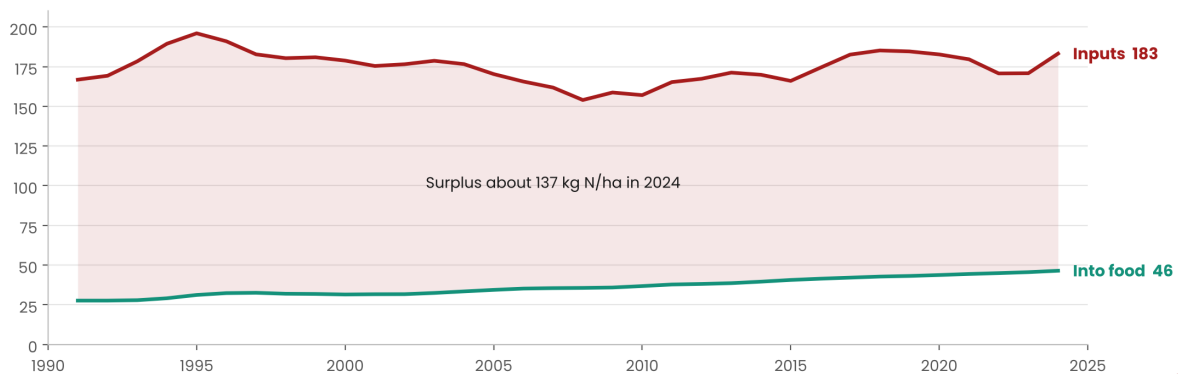
FERTILISER AND NUTRIENTS

Farms turn far more nitrogen into food, but the surplus has barely moved

- DAERA's soil nutrient balance shows nitrogen leaving farms in produce up 68% per hectare since 1991, while total nitrogen inputs rose 10%. The surplus is unchanged at about 137 kg N per hectare.
- Phosphorus is the success story: inputs are down 12% and the surplus is down 40%, which matters for Lough Neagh and other waters.
- Inputs jumped in 2024 (183 kg N/ha against 171 the year before), and farmers bought 20% more fertiliser in 2025. Both point the wrong way for nitrous oxide and water quality.
- The balance counts fertiliser, feed, manure and fixation together. It does not split out manufactured fertiliser, so it cannot yet size the carbon cost of making that fertiliser (Scope 3).

Nitrogen: more into food, but the surplus has not shrunk

kg N per hectare, 3-year averages. The shaded gap is the surplus left in soils and water.



Source: DAERA Soil Nutrient Balances for NI Agriculture 1991–2024 (published 28 Sep 2026). Inputs include fertiliser, feed, manure and fixation.

SAVING THE LAND

Peatland restoration is now funded and planned

- **Peatland.** The Peatland Strategy Delivery Plan (22 April 2026) puts 4,500 ha on the road to recovery by December 2027, towards 150,000 ha restored by 2050. The cross-border PEAT+ project (€19.2m, 19 sites) launched in February.
- **Woodland.** Forests for Our Future had created 2,016 ha by the end of 2025: 22% of its 9,000 ha target for 2030.
- **Soils.** Grassland soils remain a net sink of about 1.1 MtCO₂e a year. The Soil Nutrient Health Scheme gives each farm a carbon estimate for soils and hedgerows.

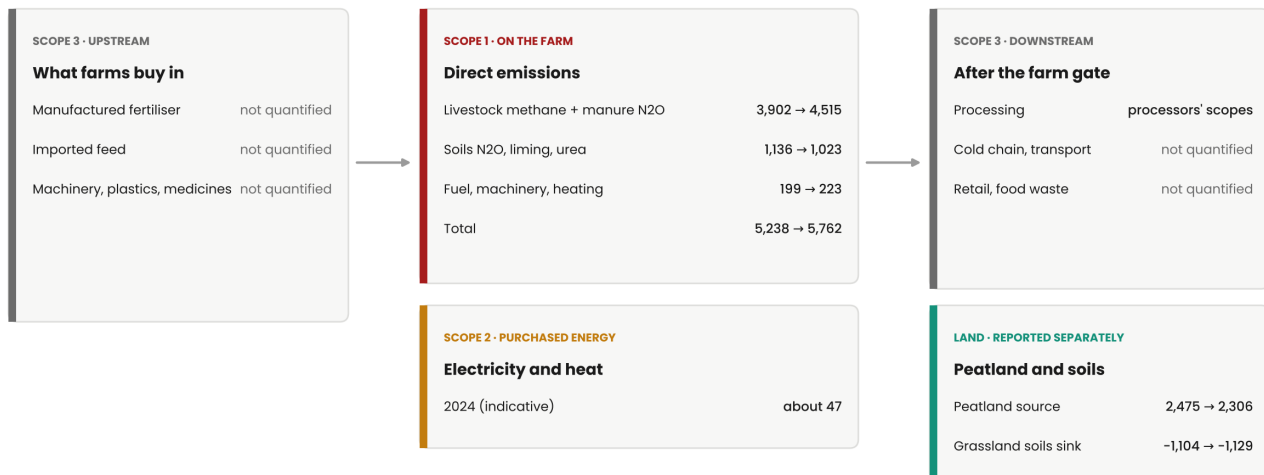
SCOPES 1, 2 AND 3

What NI farming emits, buys in and passes on

Scope 1 covers what happens on the farm. Scope 2 is electricity and heat bought in. Scope 3 covers fertiliser, feed and equipment bought in, and processing after the farm gate. Only Scope 1 is fully measured today.

Northern Ireland farming: Scopes 1, 2 and 3

ktCO₂e, 1990 → 2024. Scope 1 from the NI inventory; Scope 2 indicative; Scope 3 not yet quantified.



Sources: DAERA/NISRA NI GHG inventory 1990–2024 and bulletin (end-user share 31.4% of 18.5 Mt). Scope 2 = end-user minus by-source; inputs rounded.

INNOVATION IN HUSBANDRY

New research capacity arrives at Hillsborough in 2028

Programme	Lead	What it is testing	Status
Ruminant Emissions Research Facility	AFBI (DAERA funded)	Diets, slurry additives, flooring, genetics and combined measures for methane and ammonia	Build from 2026; trials from 2028
ARCZero	Queen's University Belfast and partners	Whole-farm carbon audits counting hedges, trees and soils	Two of seven farms net negative (2021)
Methane-inhibiting feed additives	Teagasc evidence, shared cross-border	3-NOP, oils and seaweed; slow-release forms for grazing	3-NOP cut methane 25–30% in beef trials
Beef Carbon Reduction and Suckler Cow schemes	DAERA	Younger finishing and tighter calving to cut lifetime methane	Open since 2024 and 2025

SECURITY

Incomes recovered, but farms remain exposed to imported inputs

- Total income from farming rose to £1.03bn in 2025, from £736m in 2024.
- Fertiliser and lime spending rose 32% to £133m; farmers bought 20% more fertiliser as prices eased, and emissions from manufactured fertiliser rose 16.9% in 2024.
- Precise nutrient plans from the soil scheme are both a carbon and a cost measure: every unneeded tonne of nitrogen avoided protects margins against the next price spike.
- Renewables supplied 50% of NI electricity in the year to June 2026, which helps cut farm energy emissions.

POLICY AND DEADLINES

NI is behind its first carbon budget

When	What	Who it affects
31 Dec 2026	ESOS phase 4 qualification date	Large agri-food businesses
1 Jan 2027	UK CBAM starts, including fertiliser imports	Fertiliser importers; costs pass to farms
30 Sep 2027	First EU CBAM declaration for 2026 imports, including fertiliser	EU importers; NI supply chains
31 Dec 2027	End of NI's first carbon budget (average 33% cut required; about 29.4% so far)	All sectors, agriculture most
2030	48% emissions cut and 70% recycling targets	NI economy

THIS MONTH

Three things a farm can do

- ☐ Register for the Soil Nutrient Health Scheme if not yet done, and book the CAFRE training it requires; it is a condition of the Farm Sustainability Payment.
- ☐ Plan spring nitrogen from the soil results: lime first, then only the N, P and K each field needs. Consider protected urea and clover-rich swards.
- ☐ Get a whole-farm carbon baseline (Scopes 1, 2 and 3) so hedges, trees and soil carbon count alongside emissions.

READING THESE FIGURES WITH CARE

Every figure is official; some need a caveat

- **Inventory revisions.** Each new NI inventory revises the whole series back to 1990. Figures here are from the edition updated in August 2026.
- **Livestock numbers.** The 1995 counts come from a secondary source (the Irish Almanac, via CAIN). Treat the percentage changes as indicative.
- **Nutrient balances.** DAERA publishes three-year averages per hectare, so single-year jumps are smoothed and 1991 is the earliest point.
- **Purchased energy (Scope 2).** Derived from rounded published figures: about 0.05 MtCO₂e, give or take the same again.
- **Scope 3.** Emissions from making imported fertiliser and feed are not in the NI inventory and are not yet quantified.
- **Milk intensity.** The latest published year is 2021, not 2024.

SOURCES

- NI greenhouse gas inventory 1990–2024 (DAERA/NISRA)
- NI GHG statistical bulletin 1990–2024
- Soil nutrient balances for NI agriculture 1991–2024 (DAERA)
- NI Carbon Intensity Indicators 2024
- June Agricultural Census 2025
- Livestock in NI, 1995 (CAIN)
- Agricultural incomes 2025 (DAERA)
- Peatland Strategy Delivery Plan (NIEL)
- PEAT+ launch (ABC Council)
- Forests for Our Future progress (Agriland)
- Soil Nutrient Health Scheme (AFBI)
- Ruminant Emissions Research Facility (AFBI)
- ARCZero (Farmers Weekly)
- Feed additive research (Irish Farmers Journal)
- Sustainable Agriculture Programme (Farmers Weekly)
- Electricity and renewable generation, year to June 2026 (DfE)

About this briefing. Focus on Agriculture is a monthly briefing by Robert J. Park, an independent environment, carbon and public-affairs consultant based in Larne, Northern Ireland. Robert helps farms, agri-food businesses and councils build carbon inventories (Scopes 1, 2 and 3), plan CBAM and reporting obligations, and make the case for land and peatland restoration.

Getting ready to report? The free **Farm Carbon Data Checker** walks through the records a farm needs for Scopes 1, 2 and 3 and shows the gaps to fill first.

Contact: LinkedIn [linkedin.com/in/robertparkuk](https://www.linkedin.com/in/robertparkuk) · WhatsApp @robertipark · [robertiparkuk.github.io](https://github.com/robertipark)