

Climate Change

Policy Sub-Strategy



Climate Change



Context and Rationale

Climate change is one of the defining challenges for Scottish agriculture. Farmers and crofters are already experiencing its impacts: increased flooding, more frequent droughts, unpredictable weather patterns, new pests and diseases, and heightened volatility in global markets.

At the same time, agriculture is both a source of greenhouse gas (GHG) emissions and a key part of the solution through sequestration, adaptation, and renewable energy generation.

Scotland's statutory targets for reaching net zero by 2045 cannot be achieved without a significant contribution from agriculture.

Yet policies must be realistic, farmer-friendly, and based on incentives rather than punitive regulation. A balanced approach is required that ensures emissions reduction and sequestration while protecting food production and rural livelihoods.

The priority must be to position Scottish agriculture as a climate solution - delivering measurable outcomes while enabling farmers and crofters to thrive.



Climate Change

.....

The Climate Change sub-strategy is built around six objectives:

- Mitigation – Reduce agricultural emissions through efficiency, innovation, and smarter nutrient management.
- Adaptation – Build resilience to climate risks at farm, catchment and landscape levels.
- Sequestration – Support on farm carbon storage through woodlands, peatlands, soils, and other natural capital.
- Renewable Energy and Circular Economy – Enable farms and crofts to generate clean energy and close nutrient and waste loops.
- Recognition and Reward – Ensure farmers and crofters are paid fairly for climate actions through public support and private markets.
- Evidence and Measurement – Build robust systems for monitoring, reporting, and verifying carbon outcomes.

Actions Required

a) Mitigation

- Nutrient Efficiency: Expand support for precision nutrient planning, low-emission slurry spreading, and enhanced manure management – including green ammonia.
- Livestock Emissions: Support research and adoption of feed additives, genetics, and grazing systems that reduce methane emissions but without compromising production.
- Energy Efficiency: Provide capital grants for energy-efficient equipment, housing, and on-farm storage and processing.
- Carbon Audits: Fund reliable, consistent and trusted farm-level carbon audits to identify opportunities for mitigation and track progress.

b) Adaptation

- Risk Assessment Tools: Develop farm-level climate risk assessment frameworks to guide adaptation planning.
 - Resilient Crops and Livestock: Promote research and uptake of resilient breeds, crop varieties, and production systems.
 - Water Management: Invest in infrastructure for water storage, efficient irrigation and water use, and flood mitigation.
 - Pest and Disease Monitoring: Expand early warning and response systems for emerging threats linked to climate change.
-

b) Sequestration

- Woodland Creation: Incentivise tree planting that complements food production, protects soil, and enhances biodiversity.
- Peatland Restoration: Fund restoration programmes while ensuring continued viability of surrounding and associated farming systems.
- Soil Carbon Management: Support regenerative practices such as cover cropping, reduced tillage, and organic matter incorporation.
- Landscape-Scale Schemes: Encourage collaborative sequestration projects across catchments and regions.

d) Renewable Energy and Circular Economy

- Renewable Generation: Expand grants and grid access for solar, wind, biomass, anaerobic digestion, and hydro projects on farms and crofts.
- Energy Storage: Support battery and hydrogen solutions to maximise on-farm renewable use and export.
- Nutrient Recycling: Promote on-farm use of digestate, compost, and circular waste streams to replace synthetic inputs.
- Low-Carbon Fuels: Support the decarbonisation of agriculture via a transfer to electric, biofuel and hydrogen-powered machinery.

e) Recognition and Reward

- Public Support Framework: Ensure climate-smart practices are embedded and rewarded in the future agricultural support system.
- Private Carbon Markets: Establish regulated, transparent markets that farmers and crofters can access fairly and profitably.
- Supply Chain Rewards: Encourage retailers and processors to pay premiums for climate-friendly (low carbon) production.

f) Evidence and Measurement

- Standardised Metrics: Develop Scotland-wide carbon measurement standards compatible with international reporting.
 - Digital Platforms: Create user-friendly systems for farmers and crofters to record and share carbon performance.
 - Independent Verification: Build trust through accredited verification of carbon outcomes.
 - Continuous Improvement: Use data to refine practices and update policies dynamically.
-

Delivery Partners



The success of this sub-strategy depends on shared responsibility:

- Scottish Government must provide funding, regulatory frameworks, and integration with its net zero targets and ambitions.
- NFU Scotland will advocate for farmer-friendly design, provide guidance, and ensure climate policy aligns with farming and crofting realities.
- Farmers and crofters should implement mitigation, adaptation, and sequestration practices on the ground.
- Research institutions must develop practical innovations and ensure effective knowledge transfer and exchange via effective and accessible advisory services.
- Retailers, processors, and investors must recognise and reward low-carbon primary production.
- Advisory services should deliver practical advice, training, and support in carbon auditing and climate planning.



Expected Outcomes

By delivering this sub-strategy, Scottish agriculture will:

- **Reduce Emissions:** Achieve significant cuts in agricultural GHG emissions without a reduction in production.
- **Enhance Resilience:** Farms and crofts better prepared for extreme weather, water stress, and market volatility.
- **Increase Carbon Storage:** More carbon captured in woodlands, peatlands, and soils, contributing to net zero targets.
- **Expand Renewable Energy:** Farms and crofts become clean energy producers, cutting costs and contributing to Scotland's energy security.
- **Fairly Rewarded:** Farmers and crofters financially recognised for their climate contributions, creating new income streams.
- **Stronger Public Support:** The agricultural sector seen as a climate solution, strengthening its legitimacy in public spending debates.

Interdependence with Other Sub-Strategies

Climate action is woven through every other theme:

- **Future Agricultural Support:** Funding frameworks must embed climate actions as core outcomes.
- **Farming Production Systems:** Emissions reductions and efficiency gains are central to systems innovation.
- **Fairness in the Supply Chain:** Supply chains should share responsibility for climate costs and rewards.
- **Land Use and Species Management:** Sequestration and adaptation depend on balanced land management and species control.