

A close-up photograph of a white lamb lying in a field of tall green grass. The lamb's eyes are closed, and it has a peaceful expression. It has a pink ear tag on its left ear and a yellow ear tag on its right ear. The background is a soft-focus field of green grass and small yellow flowers.

FARMING FOR THE FUTURE

SKILLS FOR NATURE- AND CLIMATE-FRIENDLY FARMING
EXECUTIVE SUMMARY



Acknowledgements:

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Front cover: Sheep on Middleton Croft, Elphin, Sutherland, Scotland. © David Bebbler / WWF-UK

This page: Organic vegetables grown at Little Trochry Farm, Dunkeld, Perthshire, Scotland.
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EXECUTIVE SUMMARY

WWF Scotland is committed to supporting the delivery of a just transition to a nature- and climate-friendly farming system that also ensures nutritional security. To meet this ambition, farmers, crofters, and land managers need trusted, independent advice and access to high-quality knowledge exchange, training, and innovation. A robust Agricultural Knowledge and Innovation System (AKIS) is the foundation for this transition.

AKIS refers to the integrated network of people, institutions, services, and flows of knowledge that support agricultural innovation and decision-making. This includes advisory services, education and training providers, research institutions, demonstration and monitor farms, digital tools, and farmer-led networks.

An effective AKIS bridges the gap between research and practice, ensures that farmers can learn from one another, and equips land managers to make confident decisions for their context.

WWF Scotland's Vision for Scottish Agriculture has three strategic pillars: funding climate and nature actions, investing in advice and skills development, and guaranteeing nutritional security. Through promoting these key areas, WWF Scotland has a key role to play in influencing policy design and public investment in AKIS. WWF Scotland commissioned this project to identify practical recommendations and priority investments that can strengthen Scotland's AKIS and unlock the uptake of climate- and biodiversity-positive farming practices.

Farmer Stuart checks bales of hay on Whitriggs Farm, Hawick, Scotland.



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Kirstin and Iain tending to the vegetables on Little Trochry Farm, Dunkeld, Scotland.

David Bebbet / WWF-UK

PURPOSE AND METHODOLOGY

The purpose of this report is to provide WWF Scotland with a range of options and recommendations on opportunities for influencing policy regarding developing an AKIS which is fit-for-purpose to enable a farming transition in line with Scotland's net zero and nature positive targets. This work had the following key objectives:

- 1 Assess the current knowledge exchange system, including funding history, and create a system map.
- 2 Conduct a gap analysis for current advisory system capabilities against the skills required for sustainable, regenerative, and climate-resilient farming, as outlined in policies and strategies such as the [Scottish Government's vision for agriculture](#), the [Agriculture and Rural Communities \(Scotland\) Act 2024](#), the [Agricultural Reform Programme](#), and [WWF's Vision for Agriculture](#).
- 3 Suggest an approach for bridging skills gaps, including an estimation of costs to the public sector.
- 4 Integrate findings from interviews and conversations with key stakeholders and experts throughout the report.
- 5 Identify implications for policy integration and make recommendations on levers and opportunities for WWF to influence related policy areas.
- 6 Deliver a workshop for key actors with regards to a future AKIS, including farmers, crofters, farmer groups / panels / committees, supply chain representatives, policymakers, advisors, education / training, and research / innovation. The workshop will present the findings from Parts 1-3 to gauge reactions, validate findings, capture any points of disagreement, and identify areas of future research.

KEY FINDINGS

1 Scotland's AKIS is fragmented and underfunded

Scotland lacks a coordination group or governance mechanism for AKIS and existing public investment in knowledge exchange is insufficient to enable the transition required. While the FAS programme has seen significant growth in funding, KTIF and other AKIS related activities occupy less than 1% of Scotland's annual farm support budget. Stakeholders also identified a lack of coordination across advisory services, research, education, and policy.

2 Farmer and crofter confidence requires trusted advice

Long-term, independent advice is critical to support decision-making for complex nature and climate actions. However, organisations with specialist expertise (e.g., RSPB, Soil Association) are sometimes unpaid for their advice and inputs. Access to trusted facilitators and advisors is unevenly distributed across Scotland.

3 Peer learning and demonstration farms work

Initiatives such as Monitor Farm Scotland and FAS Connect are seen as highly effective in supporting practice change. Safe, peer-to-peer learning environments are critical for uptake of regenerative practices. However, current reach is limited.

4 Scotland could learn from Ireland's AKIS Model

Ireland invests significantly more in AKIS functions, including through Teagasc's advisory and research service. Ireland commits over €150 million annually to Teagasc and has a formal AKIS Coordination Group. Scotland's investment in strategic policy, advice and facilitation is proportionally lower.

5 High-impact interventions are known but under-delivered

Farmers and crofters are aware of practices that support biodiversity and reduce emissions. There is a mature evidence base for many nature- and climate-positive practices, but uptake remains constrained by practical and cultural implementation barriers. Knowledge exchange is the critical bridge between evidence and adoption, requiring real-world examples, costed case studies, one-to-one and one-to-many support, and benchmarking tools.



Crofter Helen (centre) with fellow local crofters. Elphin, Assynt, Scotland.

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RECOMMENDATIONS AND CONCLUSIONS

WWF Scotland should advocate for a transformative investment in AKIS as part of wider just transition planning and agricultural reform. Seven priority recommendations are:

1 Ring-fenced specialist advisory grants

Advocate for small grants or contracts to be expanded for biodiversity, pollution and soil specialists to support on-farm advice and monitoring.

2 Expand monitor farms and demonstration networks

Help to grow the Monitor Farm Scotland network, supported by regional advisors and an increased digital literacy for open knowledge sharing.

3 Strengthen farmer networks and events

Support farmer-led events, regional innovation festivals, thematic gatherings (e.g., peatland or biodiversity), and small innovation grants.

4 Support the creation of an AKIS coordination body

Support the development of a coordination group or governing body to help strategically align AKIS funding, research translation, skills development, and policy alignment across government and delivery partners.

5 Dedicated facilitation funding

Campaign for facilitator roles embedded in regional structures (for a minimum of five years) to support integrated farm planning for biodiversity, climate and business outcomes.

6 Support inclusive education and CPD

Source funding for bursaries, scholarships CPD credits for under-represented groups (e.g., women, new entrants), and pilot nature-based modules in agricultural colleges.

7 Invest in digital literacy and benchmarking tools

Support digital literacy and upskilling for farmers, including in benchmarking tools (e.g., for nitrogen use, greenhouse gas intensity, biodiversity indicators), and virtual learning formats.



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Scotland has made important progress in recent years in recognising the role of AKIS in agricultural reform. However, to meet the Scottish Government's goals on climate, biodiversity and food security, more ambitious and coordinated investment in AKIS is required. Farmers and crofters are already experimenting with regenerative and low-emission practices, but need long-term support, clear pathways, and peer networks to drive adoption at scale. These key interventions are estimated to cost £26.2 million over five years, or £5–6 million annually – representing a modest increase in Scotland's AKIS funding relative to its total agricultural spend. The Scottish Government should commit this funding as a priority and increase AKIS funding year-on-year, to meet the Climate Emergency Response Group's call to scale up to £20 million per year in agricultural knowledge exchange annually.¹

WWF Scotland can continue to play a key role in catalysing this transformation, advocating for new investment in advice, skills, education and coordination as foundational pillars of a nature-positive food and farming system. This report provides an evidence-based foundation for that advocacy, and identifies a practical, costed roadmap for delivering change.



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¹ Climate Emergency Response Group (2022). [Unlocking Scotland's response to the climate emergency: 4 immediate actions to fast-track delivery for the Scottish Government](#)



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