

Agricultural Transition in Scotland: first steps towards our national policy

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Scottish Government
Riaghaltas na h-Alba
gov.scot

Ministerial Foreword



The Scottish Government has a positive vision for our land based industries - one in which our world-class producers thrive and along with our other land managers contribute to our world-leading climate change agenda and response to the biodiversity crisis.

Farmer Led Groups were established across all sectors- suckler beef, arable, hill, upland and crofting, dairy and the Scottish pig industry- with the aim of developing advice and practical recommendations to help drive the change needed to help us meet these challenges.

I cannot express how grateful I am to the Farmer Led Groups for the work they undertook, many of which were set up and asked to report in very short order to provide us with the platform to drive forward the necessary changes. The reports from the groups reflect the engagement with the issues they were asked to consider, and demonstrate the willingness to take action that will help deliver the outcomes for climate mitigation and adaptation, nature restoration and high quality food production on which I am focused. I personally want to thank all the Chairs and Group members for the huge amount of time and resource they committed to this work, not forgetting the very many people who provided evidence to the groups in writing and in person.

This Government was elected on a manifesto that made the following commitments:

“We will support farmers to produce more of our own food needs sustainably and to farm and croft with nature, including through enhanced animal welfare and health approaches and better adoption and deployment of technology and innovation, as recommended by the recent work of farmer-led groups set up in the last parliament. A single implementation board with representation from all farming sectors and types will be established to drive this work forward.”

Recognising the importance of the Farmer Led Group work, our 100 days document set out that we will:

“Establish the integrated implementation board to develop new proposals for sustainable farming support and drive forward the recommendations of the farmer-led groups. This will include consulting on proposals for a sustainable suckler beef scheme.”

I have established an integrated Agriculture Reform Implementation Oversight Board (ARIOB) as set out our manifesto commitments, to help us achieve these aims and to develop new proposals for sustainable farming support. This paper plays a crucial first step to help that group drive forward and advance the recommendations made

by the Farmer Led Groups. Over the coming months we will undertake a fully participative approach to this consultation, including a series of workshops to identify the key issues and stimulate further ideas as we develop concrete proposals for a replacement to Common Agricultural Policy. This will reflect and build on the work of the Farmer Led Groups to ensure the needs of our communities and our environment are fully met.

We know that we can only deliver the change and the outcomes required by working with and through our producers and land managers. It is their expertise that will ensure that actions are achievable and that support truly delivers sustainable food production and the necessary land use change.

A citizen-centred approach is at the very core of our thinking. We will carry out rigorous and robust research with those farmers land managers and rural communities impacted by our policies, to ensure that the true needs of our producers and land managers are fully understood. Co-development and co-design with rural partners will be the foundational approach to the development of future support structures and delivery.

I know that this will not be easy and that reaching a common consensus on the right approach forward will require us all to go on what will be a difficult journey together. However, we all know we have to change the way we farm, produce our food and use our land and I am confident that we will be able to collectively deliver and ensure Scottish farming maintains its world leading credentials in an ever-changing environment.

Mairi Gougeon
Cabinet Secretary for Rural Affairs and Islands

Responding to this Consultation

We are inviting responses to this consultation by 17 November 2021.

Please respond to this consultation using the Scottish Government's consultation hub, Citizen Space (<http://consult.gov.scot>). Access and respond to this consultation online at <https://consult.gov.scot/agriculture-and-rural-communities/agricultural-transition-in-scotland>. You can save and return to your responses while the consultation is still open. Please ensure that consultation responses are submitted before the closing date.

If you are unable to respond using our consultation hub, please complete the Respondent Information Form to:

Agricultural Transition Consultation
Agriculture Policy Division
Scottish Government
D Spur
Saughton House
Broomhouse Drive
Edinburgh
EH11 3XG

Handling your response

If you respond using the consultation hub, you will be directed to the About You page before submitting your response. Please indicate how you wish your response to be handled and, in particular, whether you are content for your response to be published. If you ask for your response not to be published, we will regard it as confidential, and we will treat it accordingly.

All respondents should be aware that the Scottish Government is subject to the provisions of the Freedom of Information (Scotland) Act 2002 and would therefore have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

If you are unable to respond via Citizen Space, please complete and return the Respondent Information Form included in this document.

To find out how we handle your personal data, please see our privacy policy: <https://www.gov.scot/privacy/>

Next steps in the process

Where respondents have given permission for their response to be made public, and after we have checked that they contain no potentially defamatory material, responses will be made available to the public at <http://consult.gov.scot>. If you use the consultation hub to respond, you will receive a copy of your response via email.

Following the closing date, all responses will be analysed and considered along with any other available evidence to help us. Responses will be published where we have been given permission to do so. An analysis report will also be made available.

Comments and complaints

If you have any comments about how this consultation exercise has been conducted, please send them to the contact address above or at agriculturaltransition@gov.scot

Scottish Government consultation process

Consultation is an essential part of the policymaking process. It gives us the opportunity to consider your opinion and expertise on a proposed area of work.

You can find all our consultations online: <http://consult.gov.scot>. Each consultation details the issues under consideration, as well as a way for you to give us your views, either online, by email or by post.

Responses will be analysed and used as part of the decision making process, along with a range of other available information and evidence. We will publish a report of this analysis for every consultation. Depending on the nature of the consultation exercise the responses received may:

- indicate the need for policy development or review
- inform the development of a particular policy
- help decisions to be made between alternative policy proposals
- be used to finalise legislation before it is implemented

While details of particular circumstances described in a response to a consultation exercise may usefully inform the policy process, consultation exercises cannot address individual concerns and comments, which should be directed to the relevant public body.

Section 1 - Introduction

Following on from the period of simplicity and stability we are moving forward to put in place a successor to the Common Agriculture Policy that will guide farming, food production and land use for many years to come. Our approach will support farmers and crofters to ensure their economic sustainability as we deal with the twin global emergencies of climate change and biodiversity whilst also continuing to produce high quality food. Reforming our approach to land use and management will be core to delivering all the requirements set by Parliament for Scotland's efforts to reach Net Zero.

Whilst change is needed it needs to be fair and equitable and set out in the terms of a Just Transition that ensures a sustainable future for a reformed agriculture sector. It needs to be open to the opportunities to adopt new approach to policies for agriculture and food production and realise our collective desire to ensure Scottish policy, regulatory and funding frameworks will enable investment in rural businesses and rural communities. This will enable them to lower emissions from production, be profitable, efficient and productive whilst playing their part as land managers to tackle climate change and enhance biodiversity.

To help deliver a new successful framework a number of Farmer Led Groups¹, that covered the suckler beef, arable, dairy and pig sectors as well as the hill, upland farming and crofting sectors (including the sheep sector), were established at various points between Spring 2020 and December 2020 to recommend ways farmers and crofters could consider the effects of land use change and cut their emissions to help tackle climate change.

The groups energised debate within farming communities and started the process of engagement in how the industry can adapt to help Scotland deliver on its commitments to being global leader in sustainable farming. Key to their success was bringing together people who have knowledge and expertise to propose practical workable solutions at a sub-sector level, resulting in a series of reports²³⁴⁵⁶ and recommendations being submitted to the Government towards the end of the last Parliamentary term.

Each of the Groups followed a broadly similar remit although each identified specific areas of interest to their particular sectors; such as peatland, woodland expansion, and plant and animal health. Full remits of each group and their respective memberships can be found on <https://www.gov.scot/policies/agriculture-and-the-environment/farmer-led-climate-change-groups/>.

¹ [Agriculture and the environment: Farmer-led climate change groups - gov.scot \(www.gov.scot\)](https://www.gov.scot/policies/agriculture-and-the-environment/farmer-led-climate-change-groups/)

² [Dairy Sector Climate Change Group - gov.scot \(www.gov.scot\)](https://www.gov.scot/policies/agriculture-and-the-environment/farmer-led-climate-change-groups/)

³ [Arable Climate Change Group | SASA \(Science & Advice for Scottish Agriculture\);](https://www.gov.scot/policies/agriculture-and-the-environment/farmer-led-climate-change-groups/)

⁴ [Hill, Upland and Crofting Group - gov.scot \(www.gov.scot\);](https://www.gov.scot/policies/agriculture-and-the-environment/farmer-led-climate-change-groups/)

⁵ [Pig sector - reducing greenhouse gas emissions: bringing home the bacon - report - gov.scot \(www.gov.scot\)](https://www.gov.scot/policies/agriculture-and-the-environment/farmer-led-climate-change-groups/)

⁶ [Suckler Beef Climate Group Programme Board - gov.scot \(www.gov.scot\)](https://www.gov.scot/policies/agriculture-and-the-environment/farmer-led-climate-change-groups/)

This paper provides an overview of the key themes and recommendations emerging from the Farmer Led Group process. The paper also sets out a number of key questions on the groups recommendations which are intended to inform wider work on the development of agricultural policy and in particular the replacement to CAP.

It forms part of a fully participative model that will gather responses to published papers and through workshops that will be facilitated towards stimulating further ideas over the coming months.

We will then report on this participative model of consultation, to contextualise it towards deliverability, and to seek insight and guidance from the Agriculture Reform Implementation Oversight Board” (ARIOB) which will support the Scottish Government to ensure that the future shape of support lives up to our vision, is truly capable of bringing about the change that is needed, and does so in a user-centred way that recognises the need to have a Just Transition towards a Green Economy.

The ARIOB features representation of land based businesses from across Scotland and will gain insight from practitioners in differing farm types and land use. It will also be supported by the expanded Scottish Government Academic Advisory panel that will supply robust evidence to help its progress and ensure that we are able to draw on the best available science, knowledge and expertise and evidence that exists in a rapidly growing evidence base, including through RESAS (Rural and Environment Science and Analytical Services).

This ARIOB will support and inform the development of the Statutory Consultation that we will seek to publish in 2022 and that will set-out our full rationale and proposals for a future Agriculture Bill.

Section 2 - Overview of FLG Recommendations

Climate Change

Reducing GHG emissions was core to the work of the Farmer Led Groups. All the reports included numerous mitigation measures and recommendations for wider initiatives. These provide a substantial basis for reducing the sectors' GHG emissions (agriculture needs to reduce its emissions by 31% from current levels by 2032, to meet its envelope under the Climate Change Plan Update⁷ (CCPu.)

The reports include recommendations for specific technology and efficiency measures that are intended to directly reduce emissions (and emissions intensity) from agriculture as well as other practical steps and proposals that will enable or encourage farmers towards reducing emissions. Some recommendations may inform progress towards climate change envelopes (e.g. peer collaboration or carbon audits).

A number of the recommendations also have the potential to reduce emissions outside of agriculture, such as under the Land Use, Land-Use Change and Forestry (LULUCF)⁸ and/or energy sector envelopes. The Groups observed that an individual farm business might contribute to both the LULUCF and Agriculture sectors of the GHG inventory. They also understood that the introduction of forestry, hedgerows, and other changes to land use would not contribute towards the GHG reductions required within the Agriculture sector of the CCPu. There was a clear call for research and development, particularly with respect to national inventory(s).

There was consensus of the need for businesses to clearly understand the starting position if progress towards the emission reduction targets are to be achieved. There was also broad agreement for universally adopted methodologies for the collection, analysis, application and sharing of data to inform decision making/actions on farm. However, there was less agreement on what data might ultimately be used for and by whom e.g. underpinning future support, business to business assurance, business to consumer assurance.

The provision of data with respect to conditionality was also a significant issue for the Groups. All the reports emphasised requirements for soil testing, carbon audits and biodiversity assessments or audit as being necessary to access public funding.

The Groups advocated an integrated cross sectoral approach to addressing the challenges of climate change, e.g, through Integrated Farm Management Plans or Whole farm approaches. Some of the groups also recommended new approaches to tackling climate change, e.g. shared brokerage for carbon credits.

The greenhouse gas emissions inventory was highlighted as an area for further development, to ensure it reflects modern agricultural methods and the Scottish context.

⁷ [Securing a green recovery on a path to net zero: climate change plan 2018–2032 - update - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/secure-recovery/consultation/2021-06-23/section-2-2021-06-23.pdf)

⁸ [Land Use, Land-Use Change and Forestry \(LULUCF\) | UNFCCC](https://www.unfccc.org/land-use-land-use-change-and-forestry)

Land Use

The Groups addressed land use in two main ways. The main approach of the Hill Upland and Crofting Group (HUCG) examined changes from agriculture into other land uses such as peatland or forestry. Others, such as the Arable Group, focused more on changes of land use in terms of alternative cultivation systems and crop rotations incorporating, for example, more legumes or novel crops to assist in reducing GHG emissions or deliver environmental benefits.

The HUCG gave over a significant proportion of their consideration to peatland restoration and management. They also received evidence relating to commercial forestry, agroforestry and the challenges or competing requirements of deer and sporting estate management to peatland restoration or agroforestry.

There was very limited support across all groups for significant land use change from agricultural use to forestry, with firm views being expressed about loss of productive agricultural land to forestry. However there was strong agreement for an increased role for woodlands/agro-forestry/hedgerows alongside peatland/wetland restoration.

Biodiversity

It is recognised that we are facing not just a climate emergency, but also a biodiversity crisis. The Farmer Led Groups were therefore asked to take account of improving biodiversity and wider environmental benefits in their work. The Hill Upland and Crofting Group in particular, had an interest given the importance of High Nature Value farming in those areas. The Group was very clear that biodiversity should be recognised as an output alongside agricultural activity.

This group had a number of helpful suggestions around improving biodiversity and wider environmental benefits, including the importance of appropriate grazing management with future support being linked to delivering biodiversity benefits and environmental enhancements. Across the groups there were also suggestions for enhancing biodiversity centred on actions across peatland, wetland and woodland creation and management; preventing habitat loss and damage; and promoting natural regeneration. There is acknowledgement that it will be important to seek actions that support both emissions reduction, enhancing biodiversity and wider environmental outcomes.

There are opportunities to build on this work by considering targeted biodiversity measures or nature based solutions through the integration of wider environment and ecosystem services across farm landscapes e.g. water quality and reduced diffuse pollution.

The Arable Group set out a proposal for the development of an Integrated Farm Management (IFM) approach, delivering biodiversity improvements and wider environmental benefits (similar to the LEAF Marque Standard)⁹.

⁹ [LEAF Marque Standard | LEAF \(Linking Environment and Farming\)](#)

Most of the Groups proposed a baseline environmental audit as an essential part of any future mechanisms based on conditionality.

Business Growth

All the groups emphasised the importance of maintaining agricultural activity and food supply and thus avoid offshoring of GHG emissions. There was a consensus around need to increase business efficiencies to deliver GHG emission reductions and improved business performance in areas such as breeding management, health and welfare, nutrition grazing management, soil health and use of nutrients.

The groups were very clear about the need to strengthen the role of producers in the supply chain and suggested a number of ways this could be achieved, including the development of quality marks or brands to boost business performance through the reinforcement of the green credentials of Scottish Agriculture.

Increased use of technology and data coupled with appropriate training and skills was considered crucial for business development as were improvements to the food supply chain.

Policy Frameworks

All the groups agreed that radical change was required with respect to the policy framework, the nature of public support and the need to focus on outcomes, with several approaches suggested. These will be considered in the context of the specific recommended actions and as part of the wider policy development process but is likely to include options, as suggested by the Farmer Led Group, based on a Climate Smart Agriculture framework road map to the adoption of mitigation practices that lead to reduced emissions and the sustainability of agricultural incomes.

High Level Analysis of the Farmer Led Groups Recommendation

Section 3 captures the key issues emerging from the Farmer Led Group process and asks key questions on these issues and the recommendations. To assist you in developing your response to these questions the Scottish Government has carried out an assessment on the recommendations provided and how they can contribute to helping the sector meet the statutory climate change targets as set by Parliament which requires Agriculture to reduce its emissions from current levels by 2.4 MtCO₂e by 2032, a reduction of 31%, to meet its envelope under the Climate Change Plan update (CCPu).

Working in conjunction with ClimateXchange, we commissioned sector experts at SRUC to assess the potential impact of mitigation measures in agriculture, drawing in a wide range of Scotland specific and international studies¹⁰ⁱ. The mitigation measures, and potential emission savings identified in this report were then cross referred to the quantifiable recommendations in the Farmer Led Groups reports to produce an overall assessment of the emission savings which they could potentially achieve.

In doing so it was noted that the understanding of the emission savings that individual measures can achieve continues to evolve as new scientific evidence becomes available and is also highly contingent on policies applied to encourage or mandate them. Likewise, the range of technical measures which can be adopted by the agriculture sector is constantly changing as new products and processes enter the market. This pace of change is expected to accelerate in the coming years as more countries accelerate the decarbonisation of their agricultural sectors.

The analysis to date suggests that the quantifiable measures in the reports could provide abatement of up to around 1 MtCO₂e, 40% of the necessary reductions, if applied to their maximum technical potential by all relevant farmers. The policy mechanisms to deliver these measures will be a key driver of their uptake and voluntary uptake may only go so far. In addition, where further research is required before measures can be deployed at scale, it will take time for the emission reductions to be achieved. For example, methane inhibitors, which a number of studies suggest have the potential to substantially reduce emissions from livestock, are not yet commercially available in Scotland.

Whilst this analysis helpfully suggests that adopting the Farmer Led Group recommendations can make significant progress on GHG reduction for the sector it also highlights the very substantial remaining challenge that a very significant reduction of at least 1.4 MtCO₂e or 60% of GHG emissions is still to be addressed.

¹⁰ [Marginal abatement cost curve for Scottish agriculture \(climatexchange.org.uk\)](https://www.climatexchange.org.uk)

Section 3 – Key issues emerging from Farmer Led Group process

Baselining

All the groups recognised the starting position for the sector in terms of greenhouse gas emissions was clearly understood as part of the National Greenhouse Gas Inventory and that the sector as a whole had a defined target.

- The groups recognised that for individual businesses to make progress and to understand and be recognised for the progress made, then baseline data at sub sector level was required. There was also a shared desire that this information could be used to improve the quality of information in the UK Green House Gas Inventory and to make it more relevant to Scottish Agriculture.
- There was broad agreement for universally adopted methodologies for the collection, analysis, application and sharing of data to inform decision making/actions on farm. There was less agreement, however, on the potential for further use of data and who might use it e.g. underpinning future support, or business to business, and business to consumer assurance. There is also a question around where baselining as a measurement tool crosses into conditionality, and links to continuous improvement.
- The Suckler Beef report identified a number of baseline requirements that businesses should adopt (in effect minimum good practice requirement for receipt of payments). These included completing a farm business carbon audit, a breeding and marketing plan, a nutrient management plan and carrying out soil, forage and manure analysis as well as farmers undertaking continuing professional development and committing to data sharing.
- The Arable Group stated that the establishment of baseline measurements at individual farm level are integral to their recommendations.

A challenge therefore for government and the sector is to ensure that if baseline data is being gathered it has a value at the farm level in terms of driving business improvements (profitability, productivity and efficiency) =, and more broadly value for money to the taxpayer where the collection and sharing of data underpins payments to businesses..

The Scottish Government currently provides fully funded Carbon Audits through the Farm Advisory Service (FAS) as well as being a mandatory element of the Beef Efficiency scheme and as a result has supported 3,150 carbon audits since 2016. The FAS Carbon Audit also provides benchmarking which enables businesses to compare their enterprise's carbon footprint and resource use against similar farms and identifies the areas of greatest opportunity for improvement. The carbon audit report provides a bespoke action plan to support the business to take steps to improve its efficiency and sustainability.

The Scottish Government will continue the work already started to develop understanding of stakeholder experience, including current gaps in measuring capability, use of the data generated and likely future needs to meet climate change and biodiversity targets

In taking this forward, we will work with ARIOB and a broad range of stakeholder groups to develop our combined understanding of baselining needs for businesses.

This will also include baseline and ongoing data collection and measures of progress such as:

- carbon audits
- biodiversity scoring and monitoring

The Farmer Led Groups have identified baselining as a key element of driving emissions and environmental, technical and economic progress on Scottish farms and crofts.

Should agricultural businesses receiving support be required to undertake a level of baseline data collection?

Should collected data be submitted for national collation?

If yes, what information should be collated nationally?

What are the next steps that can be taken to commit businesses to continuous improvement utilising the information presented by carbon, soil, biodiversity auditing?

How can baselining activities be incorporated in to common business practices across all farm types?

Capital Funding

Farmers, crofters and growers have often remarked on the challenges of investing in an industry where profits can be marginal. In order to allow farm businesses to invest in capital items, which can aid emissions reduction, the Farmer Led Groups called for varying degrees of capital funding.

While some calls were specific in terms of the capital that required funding, others were more general in their recommendations. All groups were of the view that capital funding is going to be a key element of support for transformational change within each agricultural sector.

- Support called for was often first and foremost related to production. Some was related to purchasing capital equipment for improving animal feeding and health, others to improve performance grassland or crops for grazing.
- Use of smart farming/precision farming technologies in the arable and live-stock sectors were called for to increase production efficiency and minimise inputs.
- Many recommendations and associated improvements to production would likely reduce greenhouse gas emissions intensity as a secondary outcome.

- Other calls for capital funding were directly related to greenhouse gas emission reduction such as those relating to slurry storage, slurry spreading and anaerobic digestion.
- There was less of a call for capital funding directly related to biodiversity or wider environmental improvements although some of the capital items e.g. those relating to slurry storage and spreading, would have environmental benefits in areas such as water and air quality as well as greenhouse gas emissions reduction.

The pilot Sustainable Agriculture Capital Grant Scheme (SACGS) has covered a number of the capital items that were recommended in the Farmer Led Group reports and the Scottish Government is considering how SACGS might be developed to assist agricultural transformation in the future.

Capital funding has also been provided through the Agri-Environment Climate Scheme (AECS) and further consideration is being given as to what funding might be provided in the shorter term until longer term support outcomes and delivery mechanisms are established.

Should capital funding be limited to only providing support for capital items that have a clear link to reducing greenhouse gas emissions? If not, why not?

What role should match funding have in any capital funding?

What capital funding should be provided to the sector to assist in transformational change, particularly given that in many instances the support called for was directly related productivity or efficiency, that should improve financial returns of the business concerned?

Biodiversity

It is recognised that we are facing not just a climate emergency, but also a biodiversity crisis. The Farmer Led Groups were therefore asked to take account of improving biodiversity and wider environmental benefits in their work.

- The Hill, Upland and Crofting Group in particular, had an enhanced requirement in its remit to consider biodiversity given the importance of High Nature Value farming in those areas.
- A number of the Groups worked with NatureScot and supported a baseline environmental audit. This could be a valuable tool if integrated with broader conditionality requirements, to ensure all farmers and crofters consider biodiversity within their management, potentially as part of a whole farm plan.
- Water quality and reducing diffuse pollution was a key area raised, as well as the biodiversity benefits on animal health and welfare.

- Other suggestions included emphasising the importance of appropriate grazing management, soil health, creation of connected field margin corridors, future support being linked to delivering biodiversity benefits and environmental enhancements and the gains that might be achieved from agro-forestry. The group did, however, highlight the potential conflict between GHG emission measures conflicting with improving biodiversity e.g. a focus on energy crops may have the potential to impact on biodiversity. It will be important to take account of consequences across the whole range of outcomes under consideration.
- The Arable Group provided a proposal for development of a whole farm approach similar to the LEAF Marque assurance scheme that delivers biodiversity improvements and wider environmental benefits.

A range of CAP schemes including Greening and the Forestry Grant Scheme provide funding in this area, with £214 million committed through the Agri-Environment Climate Scheme (AECS) since 2015. We are seeking to improve and simplify these measures in the short-term, while piloting new approaches through NatureScot between 2021 and 2024.

Should all farm and crofting businesses be incentivised to undertake actions which enhance biodiversity?

What actions would be required by the farming and crofting sectors to deliver a significant increase in biodiversity and wider-environmental benefits to address the biodiversity crisis?

Just transition

All the groups understood the need for a Just Transition, where , farmers and crofters played their part in reducing carbon emissions, improving efficiencies, and being more innovative, including through diversification of activities.

- There was a prevailing view from most groups that maintaining sustainable food production and income support is essential to future of some aspects of the sector, albeit with conditionality attached.
- A key theme of the groups was the importance of skills and knowledge transfer for a Just Transition (as discussed below). The Dairy Group also reported that to deliver change there needs to be capability, opportunity and motivation.
- The groups considered integrated land uses and the issues and opportunities that may arise from these, including woodland on agricultural land, peatland and biochar.
- A number of the groups noted the aspiration for the financial benefits of land-use change to be retained in land-based businesses and the rural economy.

- Concerns were raised in the tenanted sector of land use change being potentially imposed on tenants who might not then benefit from any of the financial benefits that might be available.
- It was acknowledged that when considering a Just Transition to recognise the complexity of issues of land use change and the potential for trade-offs and the impact on all concerned.

Partnership is key to achieving a fair transition. We are committed to working with the sector to ensure farmers crofters and land managers, as well as wider rural and island communities, share the benefits that come from these opportunities.

Scottish Forestry for example, is working with the Scottish Government, the Scottish Tenant Farmers Association and others to encourage more tenant farmers to get involved in planting woodlands, to better understand the barriers, and to identify from case studies what would make tree planting more attractive for farmers.

We will continue to work with a wide range of stakeholders to consider the complex issues around achieving our multiple objectives and identify the best way to ensure delivery of these outcomes in line with Just Transition principles.

What do you see as the main opportunities for farmers and land managers in a Just Transition to a net zero economy?

What do you see as the main barriers for farmers, crofters and land managers in a just transition to a net zero economy?

Sequestration

Carbon sequestration is the process whereby carbon is removed from the atmosphere and stored in soil and vegetation.

Noting the importance of sequestration there was a call from the Farmer Led Groups for an increased role for woodlands/agro-forestry/hedgerows alongside peatland/wetland restoration.

- There was general acknowledgement that increasing soil carbon sequestration should be promoted. This will benefit climate change and will lead to wider ecosystem and biodiversity enhancements by the provision of suitable habitats and soil improvements, while reducing soil erosion and nutrient losses.
- The importance of planting the right types of trees in the right environment was identified as key, with priority given to the restoration and management of existing woodland together with appropriate enhancement where possible to deliver the widest range of benefits. It was noted that any land use change should not be seen as a single approach but encouraged as collaborative ventures that will not be detrimental to the tenanted farming and crofting sectors.

- The Hill Upland and Crofting Group recommended that a review of all future support for the hill, upland and crofting sector be carried out to better recognise the role that this sector can play to help increase total woodland cover without compromising agricultural activity, sustainability and production levels, soil carbon stores (particularly on peaty soils), and the biodiversity benefits that this sector supports.
- Peatland restoration was seen a priority with a view that support should be available for the removal of woodland on these areas, and prevention of any woodland planting in future. Furthermore there was a view that peatland management guidance should be reviewed and that support should not be lost when the activity centres on maintenance.
- The Hill Upland and Crofting Group also noted the negative impact of high deer numbers on different key and fragile habitats, adding that addressing this will require a collaborative approach given the competing land use impacts and associated economic implications.

The Scottish Government has provided support through the Agri-Environment Climate Scheme¹¹ (AECS) and SACGS to assist in delivering climate related benefits. Restoration of peatland is also being supported through a multi-million pound package.

Forestry Scotland is also supporting carbon sequestration activity, providing ring fenced support for small scale, woodland creation and processing schemes, as well as supporting larger scale forestry projects.

The Scottish Government is exploring potential opportunities for woodland creation and peatland restoration on Crofting common grazing land¹².

How best can land use change be encouraged on the scale required for Scottish Government to meet its climate change targets?

Productivity

The opportunity to reduce GHG emissions through improvements in on-farm productivity levels was highlighted by all of the Farmer Led Groups. They emphasised the importance of improving efficiency in productivity across all sectors in order to ensure the sustainability of the industry, protecting rural jobs, and also to meet net zero climate targets.

- It was recognised that farmers could target the use of inputs more effectively to boost productivity whilst reducing emissions with the aid of analysis. Recommendations were made on forage analysis and manure/slurry analysis, with some reports looking to make these a conditionality of future support.
- The role of breeding decisions and genetic potential in reducing emissions and improving productivity was outlined by all groups, with calls for optional

¹¹ [Agri-Environment Climate Scheme \(ruralpayments.org\)](https://www.ruralpayments.org/)

¹² [Crofting: national development plan - gov.scot \(www.gov.scot\)](https://www.gov.scot/national-development-plan/)

funding which would target the improvement of overall productivity, through fertility, health, welfare, rearing & finishing percentages, using data recording to assess regular and continuous progress.

- It was suggested that targeted support to encourage farm businesses to undertake planning around feed, breeding, livestock health, soil health, grassland management and nutrient management could result in enhanced productivity on farms and crofts.

Scottish agricultural businesses need to be resilient to meet the challenges of reducing overall emissions and enhancing biodiversity. Measures may be needed which can improve business resilience and productivity and can complement the need to enhance the natural world.

Would incentives for farm plans specifically targeting flock/herd health, soil health, & crop health (for example) demonstrate real improvements in productivity over time?

Should future support be dependent on demonstration of improvements in productivity levels on farm? If so how would this be measured?

Research & Development

The groups made numerous suggestions for research and development to be undertaken in order to help the farming sector meet its climate change targets. They also highlighted the importance of improving knowledge transfer and ensuring research outcomes are applied.

- Key suggested research areas included: soil carbon measurements; grassland management best practice; on-farm carbon capture and storage technologies; carbon audit systems; whole supply chain emissions analysis; breeding and genetics for livestock (including genetic profiling and investigation into naturally low methane emitters); breeding and genetics for crops (including novel crops and Scottish legumes); feed additives and methane inhibitors; crop nutrient use efficiency; nitrogen inhibitors and slow release fertilisers; and alternative feed proteins.
- A common theme emerging was around data for baseline measurements. The Dairy group suggested the creation of an Agricultural Climate Change Centre of Excellence for scientific research and innovation with knowledge transfer at its core.

The Scottish Government currently supports a wide range of relevant research and development. RESAS, the Rural and Environmental Science and Analytical Services division of the Scottish Government, recently ran a consultation and in March 2021

published its strategy for research into the environment, natural resources, and agriculture¹³ establishing research priorities, with approximately £250 million in spending across 2022-2027. Furthermore, Scottish Government supports centres of expertise on climate change, knowledge exchange, plant health, biodiversity, and other areas of agriculture in addition to our established and internationally renowned research institutes.

The Scottish research consortium SEFARI¹⁴ offers the SEFARI Gateway, a knowledge exchange and impact hub to improve the flow of research, knowledge and expertise to and from policy, industry and the public.

In light of ongoing research activities supported by the Scottish Government and the 2022-2027 research strategy, are additional measures needed to ensure research is supporting the agriculture sector to meet its climate change targets? (If yes, please specify.)

Knowledge & skills

All the Groups recognised the importance of a robust agricultural knowledge and innovation system (AKIS¹⁵) that enables businesses to prosper and meet their environmental and climate change goals. There was also a recognition that improvements to productivity would be greatly enhanced through upskilling and acknowledgment that a strategic approach (alongside funding akin to KTIF¹⁶) to support knowledge exchange, training and innovation was necessary to maximise the opportunities for co-ordinated engagement and action across the supply chain.

Suggestions included:

- Appropriate training to existing business employees
- Apprenticeship programmes, to enable businesses to take on apprentices, trainees and new employees
- Support for Continuous Personal Development (CPD)
- CPD a minimum requirement for accessing public funding.
- A supportive advisory network (multiple issues/pan sectoral)
- Peer-to-peer learning and knowledge exchange to deliver tangible and lasting change, e.g. through monitor farms, innovation brokerage

There is no doubt of the importance of a well-functioning AKIS as part of a broader innovation pipeline. We need to learn from and build upon the successes of Scottish

¹³ [Environment, natural resources and agriculture research: strategy 2022 to 2027 - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/environment-natural-resources-and-agriculture-research-strategy-2022-to-2027/pages/1-introduction-and-contents.aspx)

¹⁴ [SEFARI - Leading Ideas for Better Lives](https://www.sefari.gov.scot/)

¹⁵ [2report-preparing-for-future-akis-in-europe_en.pdf \(innovarurale.it\)](https://www.innovarurale.it/wp-content/uploads/2021/02/2report-preparing-for-future-akis-in-europe_en.pdf)

¹⁶ [Knowledge Transfer and Innovation Fund \(ruralpayments.org\)](https://www.ruralpayments.org/knowledge-transfer-and-innovation-fund/)

Government funded programmes such as Farming for a Better Climate¹⁷, Rural Innovation Support Service¹⁸, Farm Advisory Service¹⁹ and the Rural Leadership Programme²⁰ alongside other initiatives as we look to the future. A future AKIS may also be informed through the work of the recently announced Commission for the Land Based Learning Review²¹.

The sharing and building of knowledge and skills in an open way that creates space to develop ideas will be essential to business innovation where end user needs are better understood and interactive collaboration between parties is the norm for delivering desired outcomes. Achieving this will rely on a combination of education providers, trainers, policy makers, farmers, entrepreneurs, researchers, advisors, funders and others.

What importance do you attach to knowledge exchange, skills development and innovation in business?

What form should tailored, targeted action take to help businesses succeed?

Should continuing professional development be mandatory for businesses receiving public support funding?

Supply Chains

While the Farmer Led Groups focused primarily on on-farm actions to deliver emissions reduction and biodiversity enhancement, there were comments and suggestions about the role that supply chain initiatives could play in supporting improvement. Recommendations were made that supply chain partners and government work to explore the opportunities for low emission logistics and food processing opportunities.

- Support for co-operatives, producer organisations and greater collaboration was noted as an area of interest for delivering greater efficiencies, with calls for more exploration of public and private partnerships through supply chain collaboration. There was a call for the extension of investment schemes to allow vertical investments across the supply chain.
- There were calls for government facilitation to provide greater transparency in order to bolster the sharing of best practice to deliver improved carbon efficiency.

¹⁷ [Farming for a Better Climate - Farming for a Better Climate](#)

¹⁸ [Welcome to the Rural Innovation Support Service \(RISS\) \(innovativefarmers.org\)](#)

¹⁹ [Home - Farm Advisory Service | Helping farmers in Scotland | Farm Advisory Service \(fas.scot\)](#)

²⁰ [Leadership programme aimed at rural businesses - Scottish Enterprise \(scottish-enterprise.com\)](#)

²¹ <https://www.gov.scot/groups/commission-for-the-land-based-learning-review>

- The Suckler Beef Climate Group called for the development of a new ‘quality standard trademark’ to reassure consumers that Scottish beef is produced sustainably. The Arable Group called for something in a similar vein, linked to an integrated whole farm management approach based on LEAF principles.
- There were calls for continued support for food processing and manufacturing with ongoing support delivered via the Food Processing, Marketing and Co-operation (FPMC) Scheme²² noted.

The primary role of most farming businesses is to produce for the food supply chain. The challenge of reducing emissions and enhancing biodiversity is a challenge that needs to be recognised by the whole food supply chain, not just by primary producers and actions need to be identified that will help whole supply chains meet these challenges.

We have recently launched a consultation on local food strategy²³ which is seeking views on how supply chains can be strengthened and in particular identify actions to foster short and circular supply chains.

How can the green credentials of Scottish produce be further developed and enhanced to provide reassurance to both businesses and consumers?

Should farm assurance be linked to requirements for future support?

How can ongoing data capture and utilisation be enhanced on Scottish farms and crofts?

²² [Food Processing, Marketing and Co-operation \(ruralpayments.org\)](https://www.ruralpayments.org/)

²³ [Local food for everyone – a discussion - gov.scot \(www.gov.scot\)](https://www.gov.scot/)



Respondent Information Form

Please Note this form **must** be completed and returned with your response. To find out how we handle your personal data, please see our privacy policy: <https://www.gov.scot/privacy/>

Are you responding as an individual or an organisation?

- Individual
 Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email Address

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

- Publish response with name
 Publish response only (without name)
 Do not publish response

Information for organisations:

The option 'Publish response only (without name)' is available for individual respondents only. If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

- Yes
 No

Agricultural Transition in Scotland: first steps towards our national policy

Consultation questions

Baselining

- a. Yes
- b. No
- c. I don't know

B. Please explain your answer

2. Should collected data be submitted for national collation?

- a. Yes
- b. No
- c. I don't know

B. If yes, what information should be collated nationally?

C. Please explain your answer

3. What are the next steps that can be taken to commit businesses to continuous improvement utilising the information presented by carbon, soil, biodiversity auditing?

Please explain your answer

4. How can baselining activities be incorporated in to common business practices across all farm types?

Please explain your answer

Capital Funding

5. Should capital funding be limited to only providing support for capital items that have a clear link to reducing greenhouse gas emissions?

- a. Yes
- b. No
- c. Don't know

B. If not, why not?

6. What Role should match funding have in any capital funding?

Please explain your answer

7. What capital funding should be provided to the sector to assist in transformational change, particularly given that in many instances the support called for was directly related productivity or efficiency, that should improve financial returns of the business concerned?

Please explain your answer

Biodiversity

8. Should all farm and crofting businesses be incentivised to undertake actions which enhance biodiversity?

- a. Yes
- b. No
- c. Don't know

9. What actions would be required by the farming and crofting sectors to deliver a significant increase in biodiversity and wider-environmental benefits to address the biodiversity crisis?

Please explain your answer

Just transition

10. What do you see as the main opportunities for farmers and land managers in a Just Transition to a net zero economy?

Please explain your answer

11. What do you see as the main barriers for farmers, crofters and land managers in a just transition to a net zero economy?

Please explain your answer

Sequestration

12. How best can land use change be encouraged on the scale required for Scottish Government to meet its climate change targets?

Please explain your answer

Productivity

13. Would incentives for farm plans specifically targeting flock/herd health, soil health, & crop health (for example) demonstrate real improvements in productivity over time?

Please explain your answer

14. Should future support be dependent on demonstration of improvements in productivity levels on farm?

- a. Yes
- b. No
- c. Don't know

B. If so, how would this be measured?

Research & Development

15. In light of ongoing research activities supported by the Scottish Government and the 2022-2027 research strategy, are additional measures needed to ensure research is supporting the agriculture sector to meet its climate change targets?

- a. Yes
- b. No
- c. Don't know

B. If yes, please specify

Knowledge & Skills

16. What importance do you attach to knowledge exchange, skills development and innovation in business?

Please explain your answer

17. What form should tailored, targeted action take to help businesses succeed?

Please explain your answer

18. Should continuing professional development be mandatory for businesses receiving public support funding?

- d. Yes
- e. No
- f. Don't know

Please explain your answer

Supply Chains

19. How can the green credentials of Scottish produce be further developed and enhanced to provide reassurance to both businesses and consumers?

Please explain your answer

20. Should farm assurance be linked to requirements for future support?

- a. Yes
- b. No
- c. Don't know

Please explain your answer

21. How can ongoing data capture and utilisation be enhanced on Scottish farms and crofts?

Please explain your answer





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