S5M-20548: Tackling Climate Change, the Role of Scottish Agriculture

"That the Parliament welcomes the contribution of Scottish agriculture to protecting the environment and being part of the solution to tackling climate change; commends Scottish farmers, including those in the West of Scotland, for reducing greenhouse gas emissions by 29.4% since 1990; recognises that Scottish farmers already work hard to preserve the landscape, improve biodiversity, plant and manage woodland, restore peatland, improve water and soil quality and generate renewable energy; acknowledges the view that there is a need to develop a suite of joined-up, practical and progressive policies that allow food producers to continue running their businesses in a more sustainable and efficient manner, and looks forward to the new Agricultural Modernisation Fund assisting industry in this transition."

Scottish Land & Estates welcome the discussions on climate change and the constructive effort being made to ensure land managers and those in rural areas are able to play their part in achieving net-zero. Through joint briefings with WWF for the Climate Change (Emissions Reduction Targets) (Scotland) Act and the Climate Emergency Response Group we have been very supportive of efforts to enable Land Managers to tackle climate change.

However, it is understood that considerable further effort is needed to facilitate behavioural change and help farmers understand the need to adapt management practices and reduce GHG emissions. Through Farming for a Better Climate, the Young Farmer Climate Champions and the recently announced Beef Sector Climate Group we ought to be able to disseminate the knowledge required to facilitate change.

Through afforestation, regeneration of peatland and renewable energy projects farmers and land managers are already making significant efforts towards the reduction of GHG emissions and atmospheric carbon levels. The clear issue in how land management efforts and related emissions are recorded mean that Agriculture will never reach net-zero, however land management activities do sequester carbon either in soils or as biomass such as timber. Providing access for the development of renewable energy is also not attributed to agriculture or land use but to the energy sector.

For the purpose of international reporting it is right that activities be separated however domestic conversations, starting at a parliament level, must do more to recognise the contribution land managers already make and encourage them to do more.

There is the opportunity to do more and with the right policies, support, advice and training in place, farmers and land managers can deliver a great deal in implementing the change that is needed to deliver these ambitious targets. This requires strong leadership, support and

long-term direction from the Scottish Government. The Government's clear commitment to tackle climate change is very welcome but we must now identify the pathway to achieve the overall net-zero target.

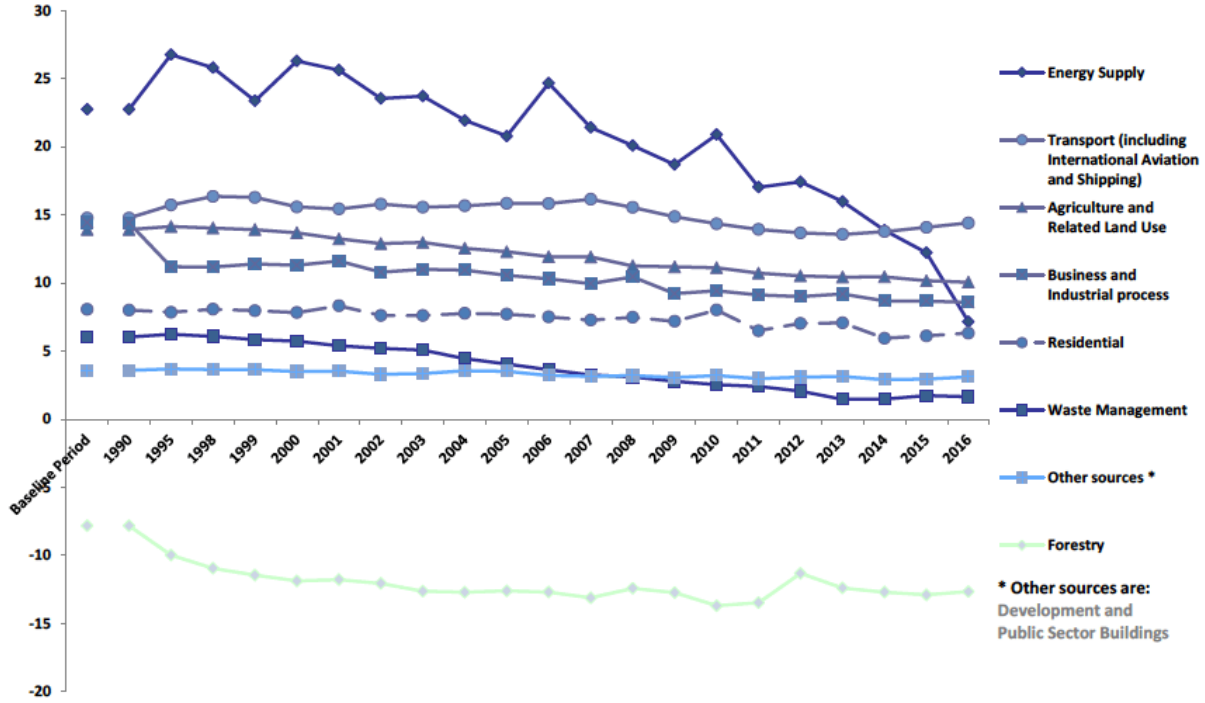
Current Situation

The definition of agriculture as it stands will never allow the sector to be anything but a net emitter of greenhouse gases. Whilst technical definitions can be argued and debated this should not take away from the fact that land managers are well placed to contribute to reducing emissions and increasing carbon sinks.

Definitions related to the sector, used in statistical reporting.

Agriculture and Related Land Use- Net emissions from cropland, grassland along with net emissions from land converted to cropland and grassland. Also covers emissions from livestock, agricultural soils, stationary combustion sources and off-road machinery.

Forestry- Changes in net emissions relating mainly to stock changes, resulting from afforestation, deforestation and harvested wood products.



Since 1990 (Baseline Period)

- Forestry net sink has increased from -7.9 megatonnes to -12.7 megatonnes
- Agriculture & Related Land Use emissions have reduced from 14.5 to 10 megatonnes.
- Energy Supply has gone from a 1995 Peak of 27 megatonnes to 8.6 megatonnes
- Transport has maintained a near constant 15 megatonnes

Energy Supply emissions have largely decreased as coal and gas energy generation has decreased whilst renewables and nuclear energy generation has increased. The majority of renewable energy generation is enabled by land manager cooperation. This is the same for the increase in the Forestry net sink which is largely as a result of land management decisions.

Scottish Government have stated their intention to follow the Committee on Climate Change (CCC) recommendation to achieve net-zero greenhouse gas emissions by 2045. The revised CCC recommendations are said to be achievable with known technologies, alongside improvements in people's lives and at an affordable cost. The CCC recommended that Scotland has, proportionately, a greater potential for emissions removal than the UK overall and can credibly adopt a more ambitious target. The principle behind this recommendation reflected the CCC view that Scotland has excellent opportunities to remove CO2 from the atmosphere through afforestation and carbon capture.

Whereas other industry reductions will require investment in technology and the scaling up of research outcomes, carbon sequestration through peatland restoration, afforestation and improved agricultural soils can all be instigated today**.**

Agricultural Transformation Fund

Agriculture is one of the first sectors to experience the effects of climate change. Many activities to mitigate, and to adapt to, these effects will also reduce emissions. However, current land management practices, market returns and rural policy do not encourage the change in activity required to reduce emissions. Whilst many of the mitigation measures available will save farmers money in the long term, the upfront costs and perceived risks are often prohibitive. Which is why we have been so supportive of an Agricultural Transformation Fund.

The fund should provide support for activities which go above the regulatory baseline and standard business practice, but which do not qualify for existing subsidy payments. Importantly, the required agricultural transformation must be a sustainable one, integrating emissions reductions with other major land use benefits in Scotland (e.g. food and drink production, water quality, flood protection, biodiversity and rural livelihoods).

A wide range of activities can reduce emissions while improving efficiency and enhancing productivity. These include improving nitrogen use efficiency, soil management, animal health and genetics, slurry and manure management and farm system changes, supported by data collection such as carbon auditing, soil testing, use of nitrogen balance sheets etc. Optimal maintenance of existing equipment should be supported through advice and knowledge sharing as it is also important in ensuring efficient production, where capital investment is too expensive, or timescales don't fit the current machinery replacement plan..

The fund should look long-term in the context of net-zero to 2045, identifying ways in which climate change will require changes in order to adapt to changing weather patterns, improve productivity and simultaneously reduce emissions (the 'Climate-Smart' approach). The support should overtly link with the government's commitment to regional land use frameworks, a climate emergency skills action plan, and to its sustainable diet guidance, so as to help guide how Scottish agriculture and its workforce will need to change at sub-national scales and how these changes can provide products consistent with climate-friendly and healthy diets.

The recent WWF "Delivering on Net Zero" report identifies practical solutions available for the reduction of emissions and increase of sequestration.

What can we change?

Importantly there is no single solution in tackling climate change, the big wins have largely all been achieved with the closing of coal fired power stations. We now need to focus on efficiencies and the multiplier effect of several smaller changes. Reports to government have all highlighted the potential land has for rapidly sequestering carbon through afforestation and soil restoration.

Whereas other industry reductions will require investment in technology and the scaling up of research outcomes, carbon sequestration in peatland restoration, afforestation and improved agricultural soils can all be instigated today.

As land managers we need to adapt to a changing climate, fortunately a lot of the recommended adaptations also help to reduce emissions. Adaption strategies can lead to multiple benefits but only if businesses make action a priority and allocate the necessary resource for successful implementation. Considerable knowledge and skills are required to assess and respond to climate change risks and opportunities.

Scottish Land&Estates

Route2050: A direction of travel for Scottish land management to 2050

#Route2050 sets out our priorities for future rural investment and reward. SLE is in an almost unique position, with members involved in a range of sectors including agriculture, forestry, housing, & tourism. Each of these require high standards of land management and each is reliant on the other to deliver their full potential. Climate Change and productivity have been placed at the core of this paper. We believe that rural businesses will underpin increased societal and environmental wellbeing throughout Scotland, along with the direct creation of jobs and the indirect increase in opportunities for product and service provisions. What seems clear is that if it is managed in an integrated way, the land can deliver more in the way of outcomes to society.

Helping it Happen:

Through our Helping it Happen Awards we have identified many land based businesses already engaged in activity that will reduce emissions and increase carbon sequestration. Some key case studies can be found from the links below.

Lochrosque and Kinlochewe Estate, Wester Ross- Native woodland reintroduction, hydroelectricity scheme, Peat Wetland project.

Durie Farms, Fife- a 'soil-centric' approach to sustainable farming is paying off in a profitable business, with wider environmental benefits.

Sweethope Farm, Borders- Understanding yield potential and managing costs of arable production.

Aberarder Estate - River Nairn Restoration- Natural flood management and improved biodiversity.

For more detailed information

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