

Climate change and wild deer management

Introduction

The aim of this guidance is to provide an introduction to climate change and wild deer management. It considers the management of wild deer up to the processing of the venison. It aims to provide practical suggestions for deer managers wishing to reduce their greenhouse gas emissions as a result of wild deer management. More research is being undertaken on this topic and it is anticipated that further guidance will be published in the future, as Best Practice Guidance, including the processing of wild venison.

What are greenhouse gas emissions?

The earth is surrounded by 'greenhouse' gases that trap heat from the sun. These greenhouse gases include:

- carbon dioxide.
- Methane.
- nitrous oxide.
- Hydrofluorocarbons.
- Perfluorocarbons.
- sulphur hexafluoride.

Over the last 200 years, the concentrations of these greenhouse gases has increased, trapping more heat, and causing the Earth to warm up. This effect is known as 'global warming' or the 'greenhouse effect'. The increasing global temperatures are now resulting in changes to our climate and we are seeing more extreme weather patterns in Scotland and across the world.

The concentrations of the greenhouse gases have risen as a result of people's everyday behaviour. For example by burning fossil fuels like coal, oil and gas to create energy to heat and light homes and to power transport. The Scottish Government recognises that climate change will have far reaching effects on Scotland's economy, its people and its environment and is determined to play its part in rising to this challenge. The [Climate Change \(Scotland\) Act 2009](#) introduces ambitious, world-leading legislation to reduce emissions by at least 80% by 2050 from baselines in the 1990s.

Deer and greenhouse gas emissions

Wild deer emit methane as a result of enteric fermentation. Methane is also produced through the decomposition of manure. Wild deer may also cause the release of greenhouse gases through the trampling and erosion of carbon rich soils. Browsing and grazing by wild deer may prevent the growth of vegetation that could absorb greenhouse gases.

As well as considering how wild deer management can contribute to the reduction of greenhouse gas emissions, it is important to consider how the changes to climate may impact on wild deer. Warmer wetter weather could be linked to increases in tick and other diseases. Changes in vegetation may lead to changes in the productivity and health of wild deer.

Deer management and greenhouse gas emissions

Practical management of wild deer including, carcass extraction, carcass washing, skinning and gralloching, counting, fencing and habitat management produces greenhouse gas emissions in the following ways:

- Fuel use for vehicles and machinery, including the transport of carcasses to the processors.
- Energy use in buildings, including cold storage in larders.
- Management of waste, for example by sending waste to landfill rather than recycling it where possible.
- Manufacturing of raw materials and equipment.

Potential options for reducing greenhouse gas emissions from wild deer management

- Reducing the use of helicopters for deer counting and using other methods such as ground counts if they enable the collation of robust information and are practical.
- An energy audit can be undertaken to assess where energy is being used, identify any wasteful practices and maintenance issues and consider opportunities for savings.
- Renewable energy generation could be installed, such as biomass, local wind generation, solar panels, ground source heat pumps and anaerobic digestion.
- Emissions can be reduced from fuel use by using fuel efficient vehicles. Fuel efficient driving practices include driving smoothly and avoiding sharp braking and acceleration. Well maintained cars tend to run more efficiently.
- Management of land for carbon sequestration includes the restoration and recreation of peatlands.
- Improved waste management and resource efficiency.
- Implementation of water efficiency measures.

Deer Commission for Scotland

DCS has been taking action to reduce greenhouse gas emissions over the last few years. Emissions from offices and travel have been reduced. The use of helicopters to count deer is a major source of emissions. Alternative ways of counting deer are being considered where practical such as thermal imaging, remote sensing, dung and ground counts. The amount of carbon produced by DCS has reduced from 160,245kg in 2007/08 to 122,142kg in 2009/10.

Sources of further advice

Carbon Trust

Tel: 0800 085 2005

<http://www.carbontrust.co.uk>

Macaulay Land Use Research Institute

Tel: 01224 395000

<http://www.macaulay.ac.uk>

Energy Saving Trust

Tel: 0844 84 888 30

<http://www.energysavingtrust.org.uk/>

National Energy Foundation

01908 665555

<http://www.nef.org.uk/>

Envirowise

Tel: 0800 585794

<http://www.envirowise.gov.uk/>

Scottish Agricultural College

0131 535 4000

<http://www.sac.ac.uk/>

