

# Policy alternatives to reduce greenhouse gas (GHG) emissions in the agricultural sector

Greenhouse gas (GHG) emissions from the land use sector include Nitrous Oxide (N<sub>2</sub>O) from nitrogen fertilisers, methane (CH<sub>4</sub>) from livestock and peat bogs and carbon dioxide (CO<sub>2</sub>) from fuel burning and cultivation. The land use sector is responsible for approximately 20% of CO<sub>2</sub> emissions in Scotland, although a 60% reduction has been seen since 1990.

What effects would different policies have to reduce GHG in the agricultural sector?

## Incentive scheme

An incentive scheme would reward land managers who use the land in a way that emits less GHGs. However, this would require money from an external source.

## Taxation

A combination of taxation and incentives could be used, with revenue generated from taxing land managers who emit GHG emissions above a threshold. The money would then be distributed to land managers who adopt land use practices that emit greenhouse gases below the threshold. This is a 'cost-neutral' solution to reducing overall GHG emissions.

## Emission trading

Market mechanisms such as carbon credits may allow farmers to progressively adapt to the scheme constraints. At an individual level, the rate of on-farm compliance and the actual GHG emission reduction target will determine which strategy is the most efficient to cope with a trading scheme.

