

# Climate Change in Scotland

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Global levels of the main climate change gas carbon dioxide (CO<sub>2</sub>) have increased since pre-industrial times and may be double these levels by the 2050s. The world is now at least 0.5°C warmer than it was 100 years ago. The climate is certainly changing, and the scientist of the Intergovernmental Panel on Climate Change (IPCC) have agreed that humans are causing those changes.

## The signs of climate change

- Globally, six of the 10 warmest years ever recorded were in the 1990s; the other four were in the late 1980s.
- 1998 was probably the hottest year of the last millennium.
- The first three months of 2002 were the warmest globally since records began in 1860.
- The growing season in Europe is now 11 days longer than it was 35 years ago.
- Arctic ice cover is shrinking by an area the size of the Netherlands every year.
- In the last hundred years global sea level has risen by 10-25 cm.

Even if we could put an immediate stop to all climate change emissions the world would still get warmer as climate change gasses stay in the atmosphere for a long time. If we carry on as we are global temperatures could be warmer by as much

as 6°C by 2100.

These are big changes - more rapid than anything experienced during the last 10,000 years.

## What will happen in Scotland?

- Scotland is expected to get warmer with increased rainfall in the west and more frequent droughts in the east.
- Temperatures in Scotland are expected to increase by between 1 and 3°C by 2080.
- Winter precipitation is expected to increase by an average of between 10 and 35%, with winter rainfall increasing in some parts of Scotland by up to 40%.
- Although Scotland is still rising after the last ice age there will be a real rise in sea-levels of up to 0.8 metre by 2100.

**Flooding** - by 2050 sea levels are predicted to rise by an additional 8 – 30cm, when combined with future storm surges, could make most of Scotland's coasts below the 5 metre contour more vulnerable to flood risk. Approximately 170,000 (one in 12.5) residential properties are at risk from flooding in Scotland.

**Wildlife** - where the climate of Scotland is their most southerly limit wildlife is threatened, threatened species like the Scottish Primrose, the snow bunting, ptarmigan and the dotterel may disappear.

**Tourism** - snowfall in the western half of Scotland and the Highlands could

decrease by 40-60% by 2080 and by 90% in the east, resulting in the loss of the skiing industry.

## **Climate change emissions in Scotland**

- Scotland, with 9% of the population, produces 13% of UK carbon dioxide emissions.
- Divided up between the population, each Scot is responsible for over 10 tonnes of carbon dioxide being emitted each year (India emits only 1 tonnes per person and Kenya 0.2 tonnes per person).
- Friends of the Earth have calculated that Scotland needs to reduce carbon dioxide emissions by 6.6 tonnes per person by 2010 and to only 1.1 tonnes by 2050.

## **What action has been agreed?**

- At the Kyoto conference, Europe agreed to reduce the emissions of the six main climate change gases by 8% on 1990 figures by 2008-2012. The UK subsequently agreed to a 12.5% cut for these gases and the Labour Party made a commitment to a 20% cut in CO<sub>2</sub> in the 1997 manifesto.
- At present Scotland is only committed to achieving an 'equitable share' of the UK's Kyoto target. What Scotland's 'equitable share' is has not been defined.
- The Royal Commission on Environmental Pollution recommends a cut of 60% in emissions by 2050.

## **Scotland is falling behind in tackling climate change.**

- Between 1990 and 1999, Scotland's carbon dioxide emissions fell by only 3.5% while England's fell by 11.5%.
- Research for the Scottish Executive looks at carbon dioxide emissions for Scotland between 1990 and 2020. It shows that, even if the current UK and Scottish Climate Change Programmes are effective, Scotland cannot reach the Labour Party commitment of a 20% cut in CO<sub>2</sub> from

1990 levels by 2010. In the best case Scotland's emissions might be 16.6% below 1990 levels, in the worst case they would be only 4.7% below.

## **What needs to happen?**

- The Scottish Executive should set a climate change target for Scotland broken down to sectoral guidelines.
- All major policies and projects should be CO<sub>2</sub>-proofed.
- The PIU energy efficiency targets of a 20% improvement by 2010 and a further 20% by 2020 should be adopted.
- Building regulations should be extended to cover existing stock.
- All buildings should be energy labelled as is required by a new EC Directive.
- There should be a major shift in transport resources to public transport, cycling and walking.
- Transport charging regimes, such as cordon charging and trunk road user charging, should be introduced.
- The target of producing 18% of Scotland's electricity from renewable sources by 2010 should be revised to 25%.
- Aviation is the fastest growing source of greenhouse gasses - plans for future airport expansion in Scotland should be halted.