

# NATIONAL TRANSPORT STRATEGY

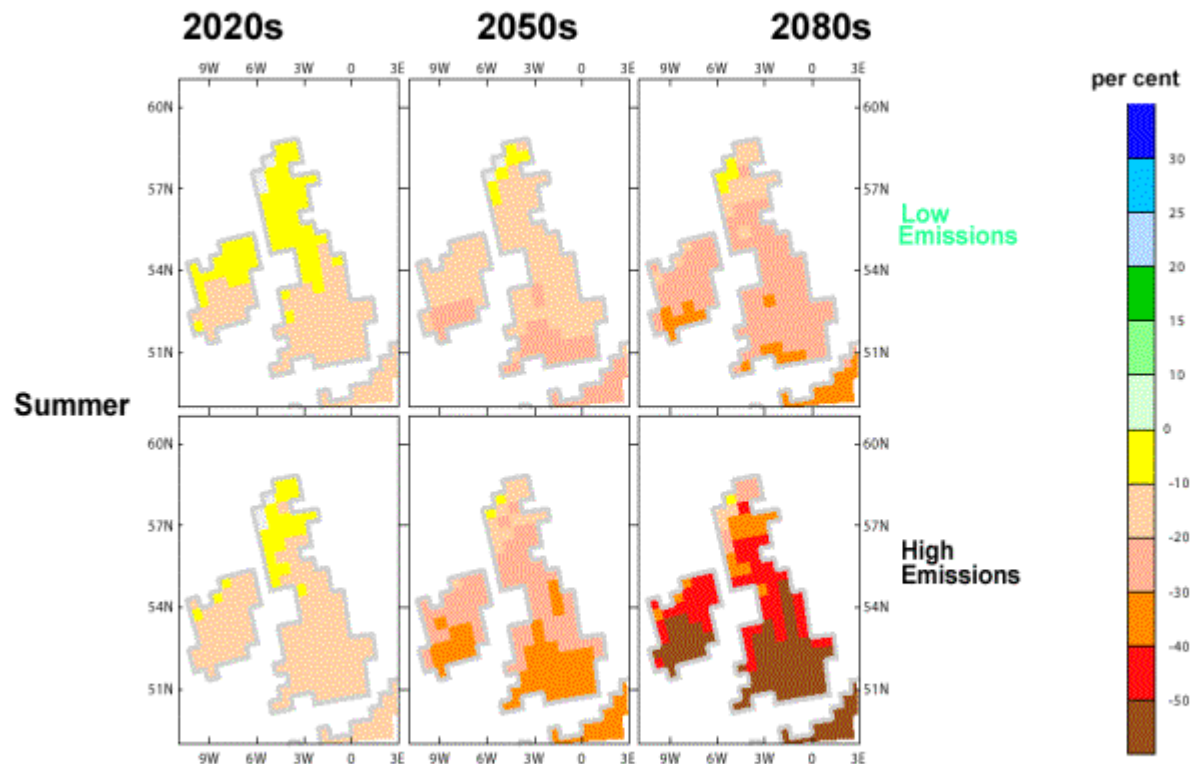
Growing a Sustainable  
Economy

Climate Change Branch, ACE  
Division

# From one extreme to another

- In 2003 Scotland experienced its warmest year on record
- In 2004 parts of Scotland had their wettest summer on record
- Britain has become twice as stormy in the past 50 years as climate change has forced the deep depressions that used to hit Iceland further south.

# Mean precipitation change



# Scottish Impacts

- **sea level set to rise** around Scotland - by up to 600mm;
- **increase in total rainfall in 24 hours** from 1 in 2 year storms, by up to 25 per cent, particularly in the east of Scotland;
- **summers may become generally drier** - may only be slight reduction in rainfall in the north-west but as much as a 40 per cent reduction in the south and east;
- **Scotland will become warmer** – perhaps by up to 3.5°C warmer on average during summer months, and around 2.5°C warmer during winter.
- **average snowfall amounts will decrease** - perhaps by up to 90 per cent depending on location.

# Flood risk and flood mapping

- Flood risk could double by 2080s.
- Flood maps indicating land at risk from fluvial flooding with 1:100 annual probability available from SEPA and local planning offices.
- SEPA producing 2<sup>nd</sup> generation indicative flood risk map.
- 2<sup>nd</sup> generation map will indicate land with 1:100, 1:200 and 1:1000 annual probability of flooding (coastal and fluvial).

# Adaptation Strategies

- Key issue

Maintenance of road and rail network, particularly against flooding and storm damage. The rail network is inherently more vulnerable than the road network.

- Scottish Road Network Climate Change Study.

# Climate Change Commitments and Objectives

- EU committed to reducing greenhouse gas emissions by 8% by 2008-2012.
- UK committed to a 12.5% reduction in greenhouse gas emissions.
- Executive committed to contributing to UK Kyoto target. Committed to climate change targets in areas of devolved responsibility.

# Domestic Targets

In addition to UK Kyoto target:

- **UK domestic target:** 20% reduction, against 1990 levels, in carbon dioxide emissions by 2010 (as set out in *UK Climate Change Programme*)
- **Long term UK domestic goal:** 60% reduction in carbon dioxide emissions by 2050 (as set out in *Energy White Paper*)

# Scottish Emissions

- Greenhouse gases fell by 5.7% between base years and 2002
- Carbon dioxide emissions fell by 3.5% between 1990 and 2002. Over 25% growth in the Scottish economy over the same period

# Scottish Transport Greenhouse Gas Emissions 1990-2002

|                               |            |
|-------------------------------|------------|
| ■ Total Emissions             | +8%        |
| ■ Road Transportation         | +10% (98%) |
| ■ Railways                    | -54% (1%)  |
| ■ Navigation                  | +13% (1%)  |
| ■ Other (Aircraft Support)    | +33% (<1%) |
| ■ [Civil Aviation (UK figure) | +35%]      |

# Energy Emissions by End User

|                              |     |
|------------------------------|-----|
| ■ Domestic Consumption       | 31% |
| ■ Service and Public Sectors | 17% |
| ■ Industry                   | 20% |
| ■ Oil Refineries             | 6%  |
| ■ Transport                  | 26% |

# Scottish and UK Climate Change Programmes

- Programmes subject of ongoing review
- Revised Programmes expected to be published towards the end of 2005

# Transport Measures

- Voluntary Agreements between the European Commission and the automotive industry;
- Vehicle excise duty and company car tax graduated according to carbon dioxide emissions;
- Enhanced capital allowances to reward the purchase by companies of very fuel-efficient cars.

# Transport Measures

- Biofuels
- Road Pricing
- EU Emissions Trading Scheme
- UK Emissions Trading Scheme