



Escape the Carbon Handcuff's

Sustainable Development Officer

Ailsa Villegas

Policy Assistant Sustainable Development

Noel McAllister

The Highland Community

Welcome, housekeeping. Who we are and what we do at the Council..... The outline for the day



"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The Highland Community

Why are we here?



It is accepted that everybody present is here because they are committed to tackling climate change. As green Ambassadors we are already sympathetic to the cause.



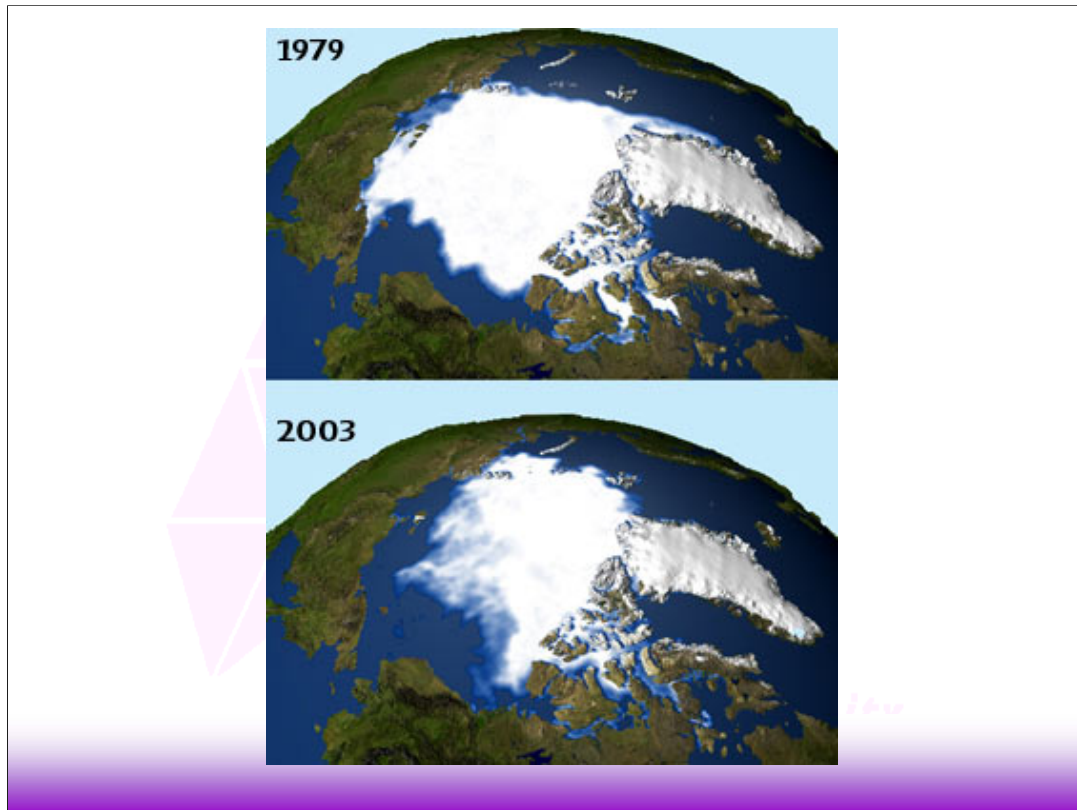
The Highland Community

My Story of the Polar bears at Singapore Zoo. Green with Algae. Kept in permanent shade and constantly wet with air conditioned fans that blow cold mist on to them daily. At night they sleep in a freezer. 35 degrees and 100% humidity. Are they there for conservation purposes or for human entertainment. How sad it would be if this was all we knew of polar bears in the future.



The Highland Community

Wouldn't we rather see polar bears thriving in their natural environment?

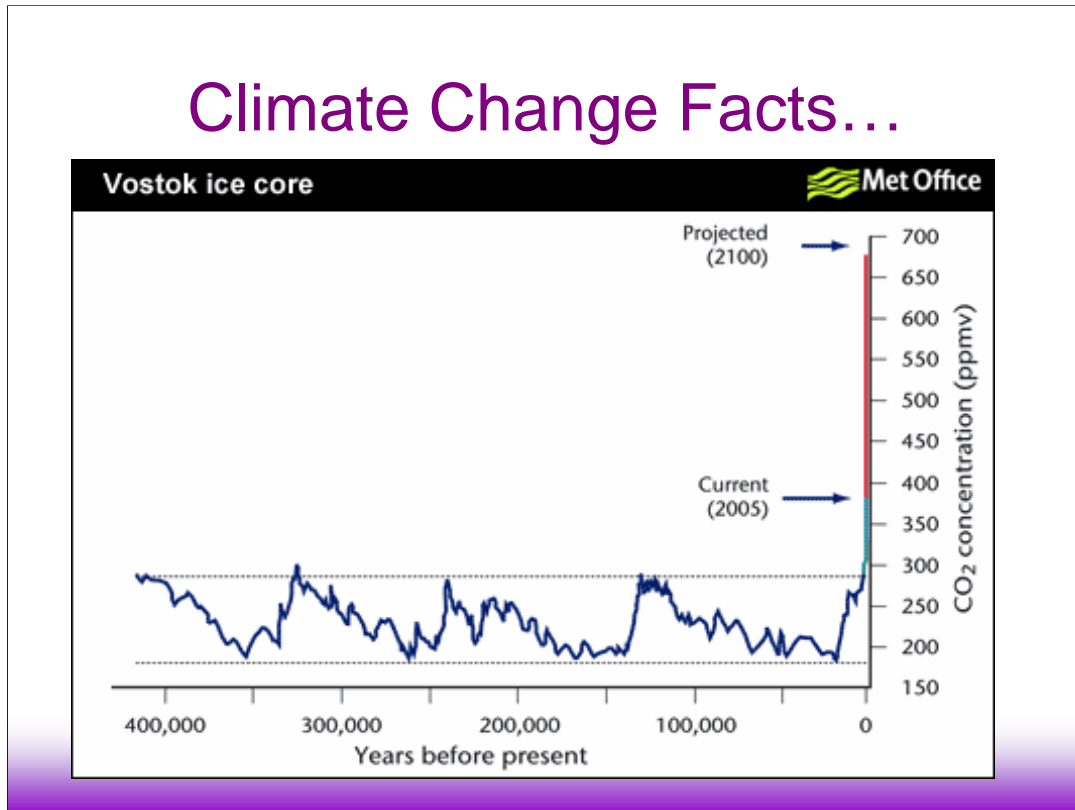


But that natural environment is declining due to climate change. This picture shows the receding ice of the arctic. Scientists predict that by 2080 there will be no summer sea ice at the north pole.

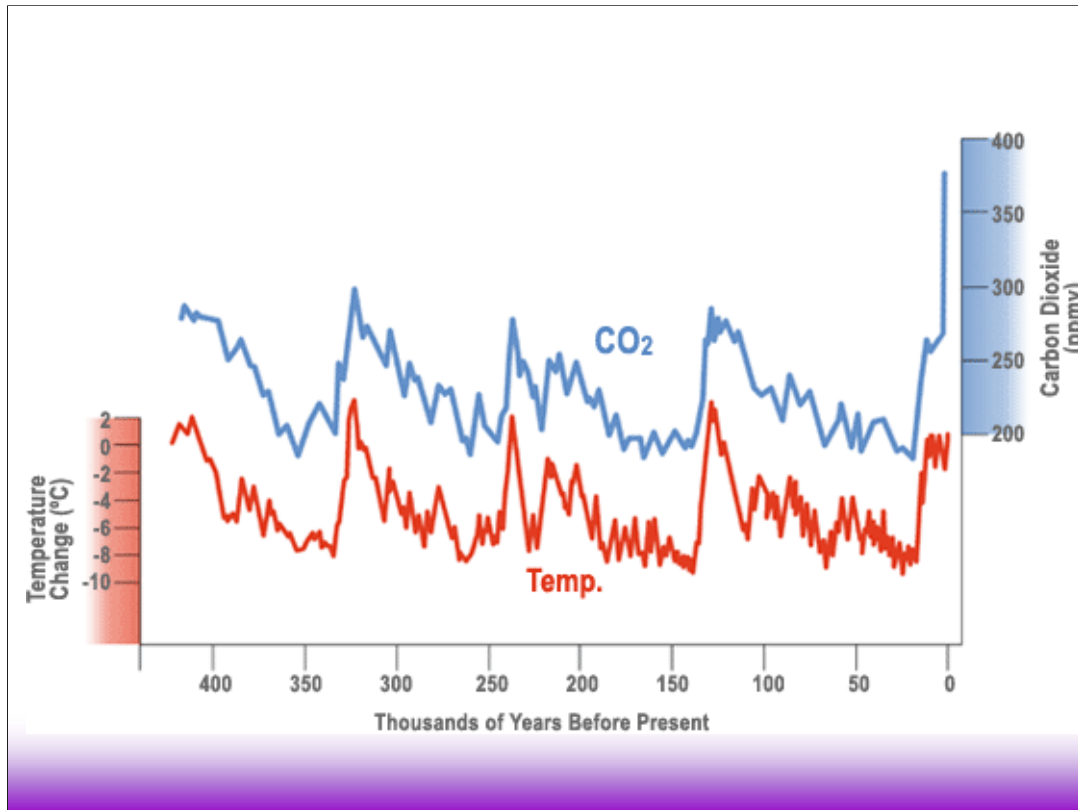


So what are we going to do about this??

Climate Change Facts...



This picture shows Co₂ emissions found in ice taken from the Antarctic vostok Ice core dating back 400 000 years. It clearly shows fluctuations in atmospheric Co₂ emissions levels but it is clear that present day levels are higher than they have ever been at 380 parts per million. Scientists predict that without efforts to cut emissions this could rise to as much as 680 parts per million by 2100. but what does this mean??

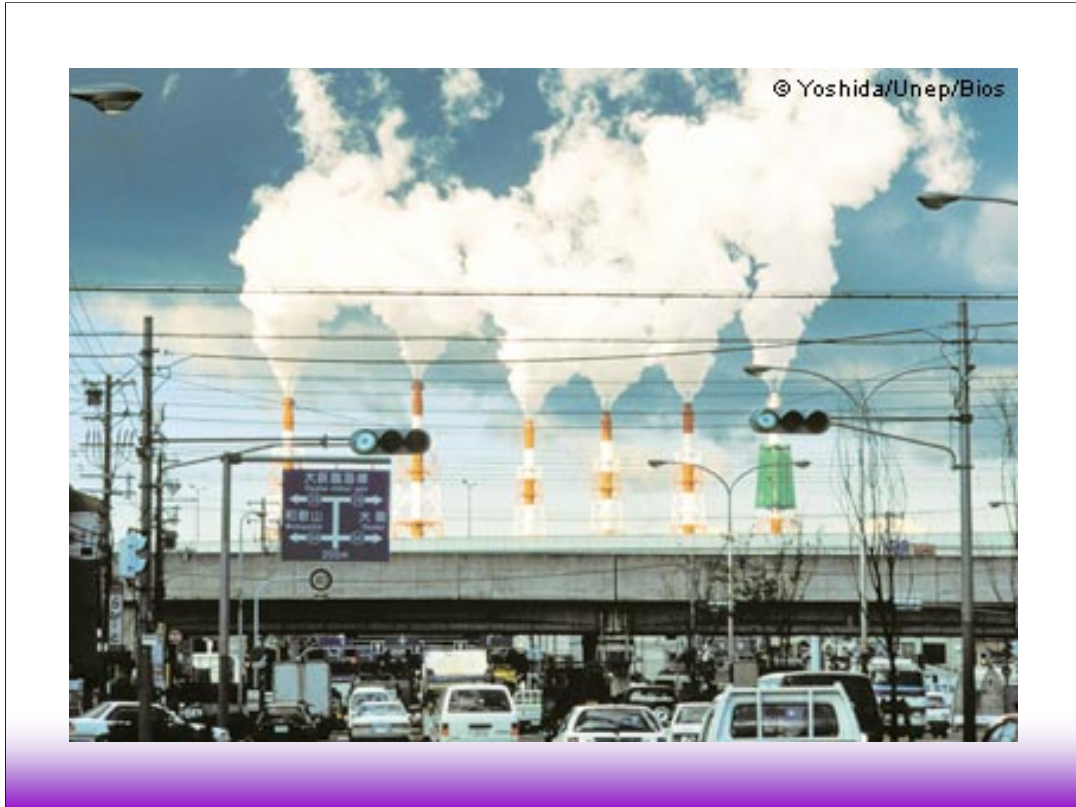


Well this second graph shows how the Earth's temperature and CO₂ emissions are clearly related. So as CO₂ emissions rise we can expect global temperatures to rise too.

The Culprits?



And what is to blame for this sudden rise in co2



Since the industrial revolution humans have been burning fossil fuels resulting in increased Co₂ emissions. Change is normal and as can be seen in the previous graphs. The current rate of change however is not normal. This is what we call anthropogenic climate change.



We also damage the natural systems of Earth, designed to absorb and recycle CO_2 . Because its vegetation continuously recycles carbon dioxide into oxygen, it has been described as the "Lungs of our Planet". About 20% of earth's oxygen is produced by the Amazon rainforest.

Today, more than 20% of the Amazon rainforest has been destroyed and is gone forever. The land is being cleared for cattle ranches, mining operations, logging, and subsistence agriculture. Some forests are being burned to make charcoal to power industrial plants. More than half of the world's rainforests have been destroyed by fire and logging in the last 50 years. Over 200,000 acres are burned every day around the world, or over 150 acres every minute. Experts also estimate that 130 species of plants, animals, and insects are lost every day. At the current rate of destruction, it is estimated that the last remaining rainforests could be destroyed in less than 40 years.

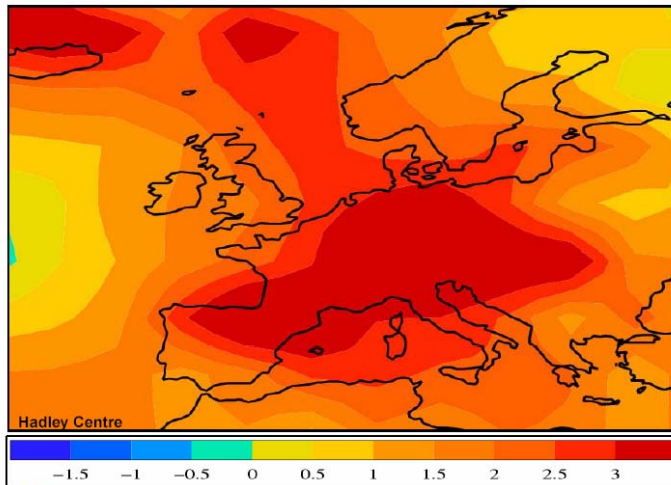
An area the size of ? Felled every dingle year!

What's the impact?

The LCLIP principle applied

stage 1

recent extreme event: the heat wave in Europe of 2003



Europe:

30,000 deaths attributed to the heat wave

Forest fires and crop damage seriously impacted economy

Economic losses in excess of £7.5bn

England (3-14/8/03):

Excess mortality

All ages: 2091(17%)

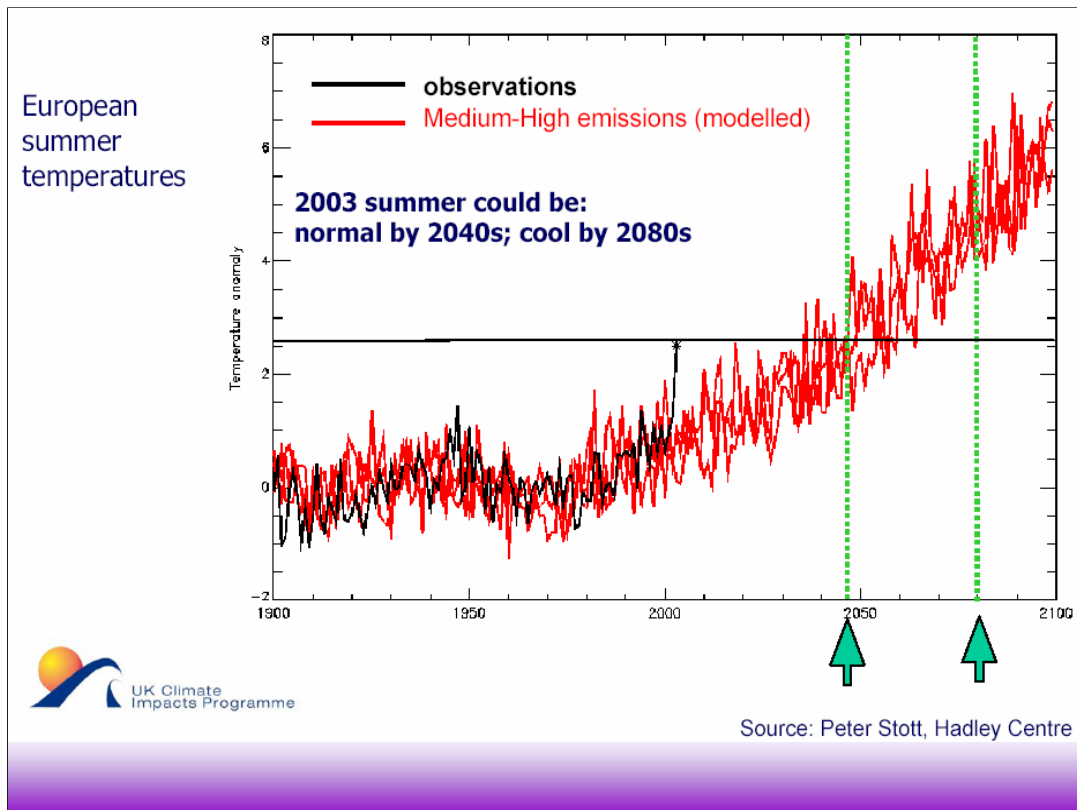
>75: 1781(23%)

Emergency hospital admissions (>75)

1490 (6%)

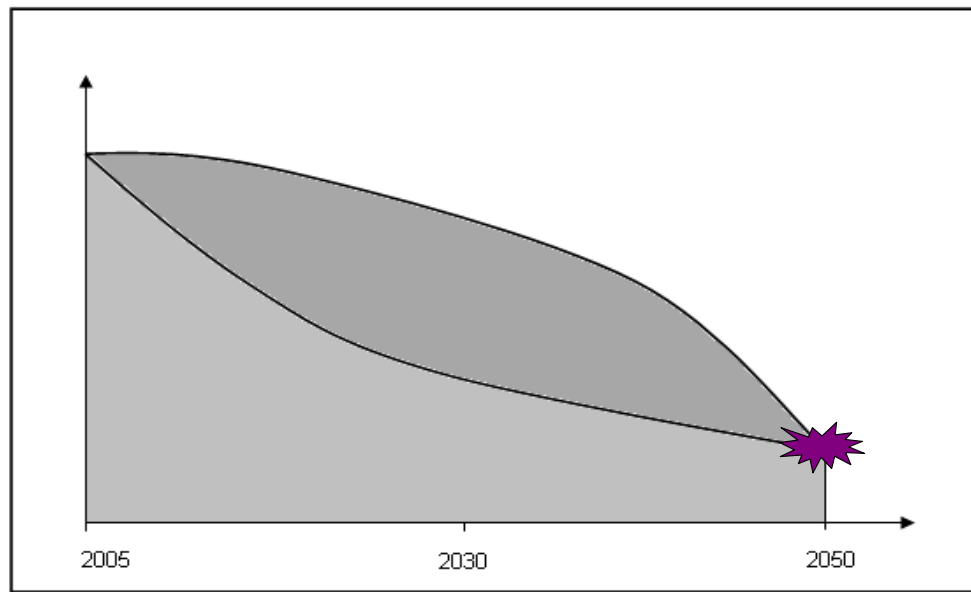


This shows the impacts for people of changing climatic conditions. Heat wave in Europe in 2003.



This graph shows that by 2050 such a heat wave could be the norm for an average summer and that by 2080 it would be considered a cool summer.

How do we tackle it...reduce Co2



Mention Kyoto protocol:

The **Kyoto Protocol** is a [protocol](#) to the [United Nations Framework Convention on Climate Change](#) (UNFCCC or FCCC), an international [environmental treaty](#) produced at the [United Nations](#) Conference on Environment and Development (UNCED), informally known as the [Earth Summit](#), held in [Rio de Janeiro, Brazil](#), from 3–14 June 1992.

Under Kyoto, industrialized countries agreed to reduce their collective GHG emissions by 5.2% compared to the year 1990. National limitations range from 8% reductions for the [European Union](#) and some others to 7% for the United States, 6% for Japan, and 0% for Russia. The treaty permitted GHG emission increases of 8% for Australia and 10% for Iceland.]

UK Climate Change Bill....

Passed by parliament, originally aimed at 60% emissions reductions. Scotland 80%, now upped this to include shipping and aviation

Scotland Climate Change Bill...call for evidence on draft Bill out just now.

This graph shows that if we act early and reduce emissions fast we can achieve 80% emissions reduction target for 2050 and save the excess Co2 emissions that would be emitted if we delayed action (dark grey). As Co2 can remain in the atmosphere for 50 years or more this excess could have devastating consequences

Highland Council Commitment

“We will produce and implement a climate change strategy for the Highlands which will reduce our impact on the environment and adapt our service to cope with the impact of climate change.”

What are the council doing about it?

Scotland's Climate Change Declaration

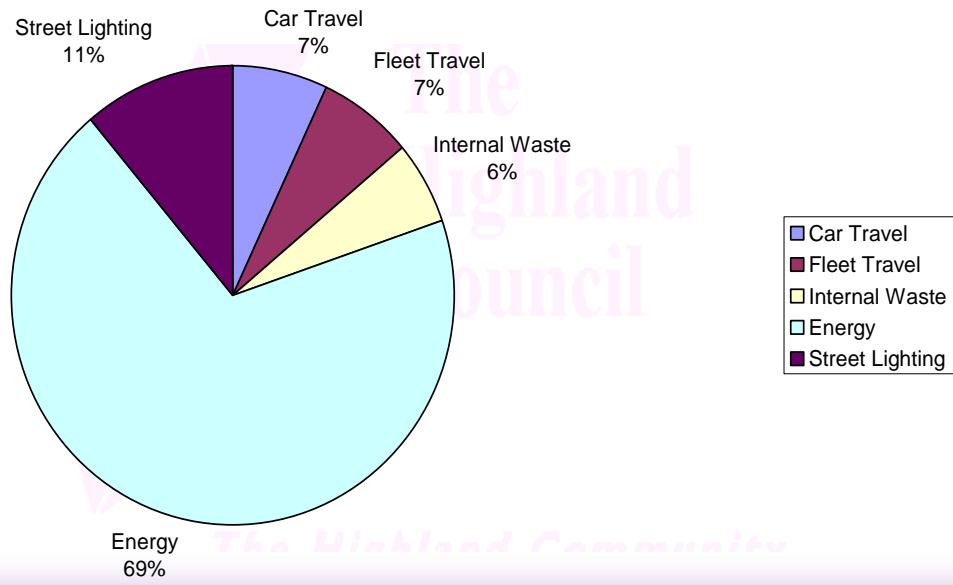


- Reducing emissions from our own services and operations.
- Reducing Emissions in the wider Highland Communities.
- Adapting to the impacts of Climate Change.

The Council signed Scotland's Climate Change Declaration in January 2007 and then the new administration re-affirmed their commitment in 2008. As a signatory we are committed to:

1. Reducing emissions from our own services and operations.
2. Reducing Emissions in the wider Highland Communities.
3. Adapting to the impacts of Climate Change.

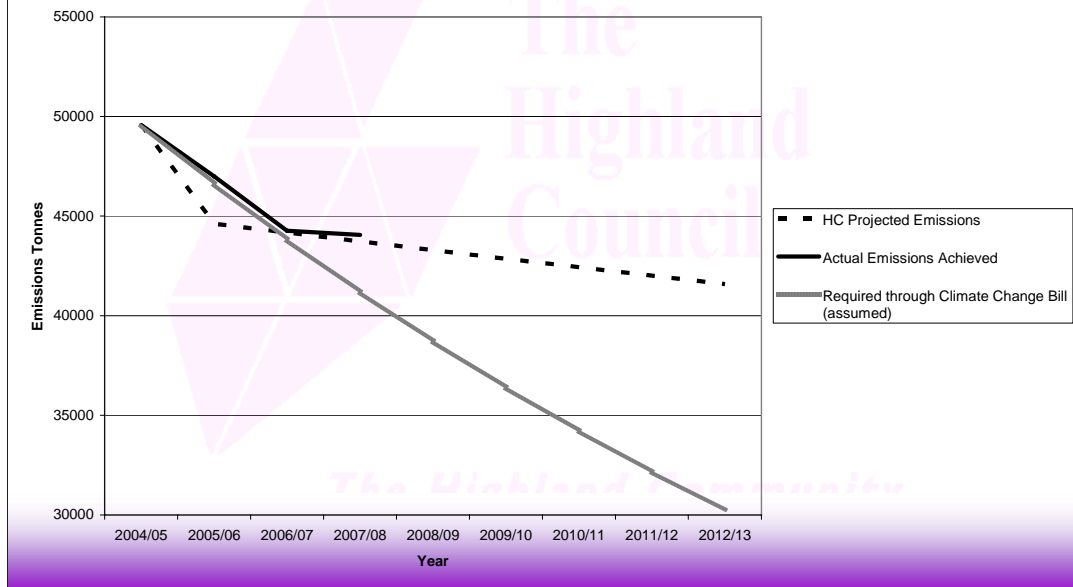
Highland Council Carbon Emissions by Sector 2007/08



What are the Council's Carbon Emissions?

Energy Management Performance Plan

Proposed Reporting of Carbon Emissions Against National Target



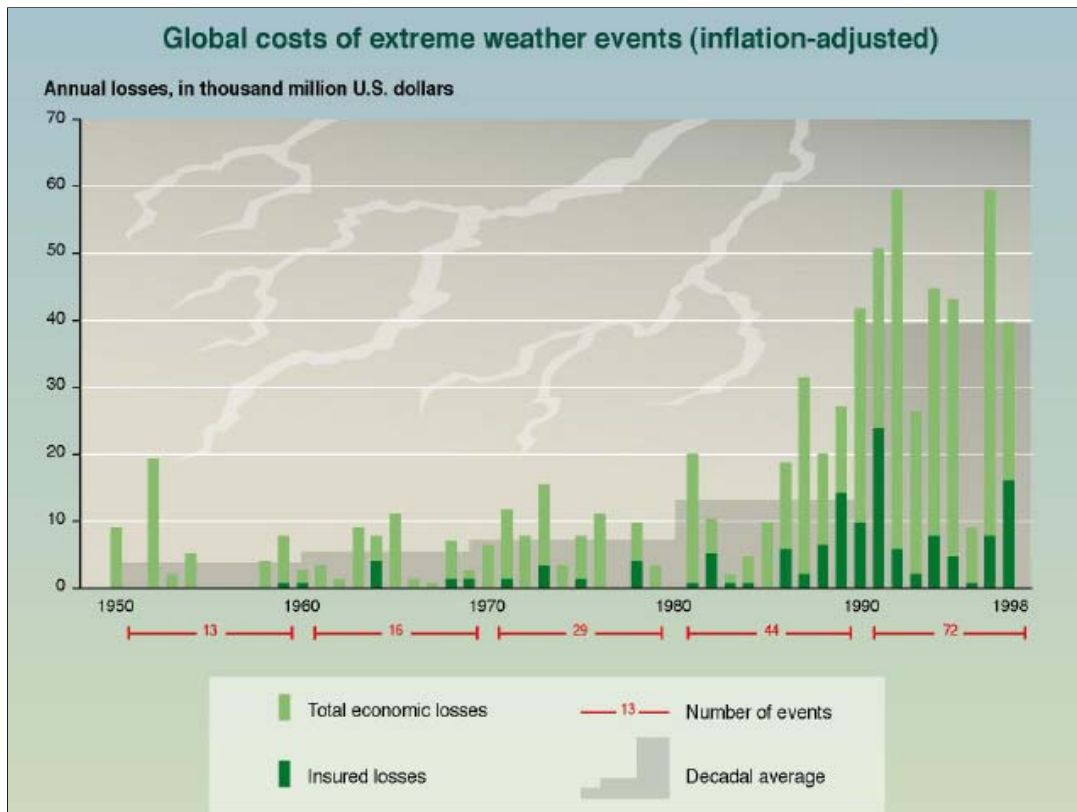
Save 15% emissions and costs by 2010 and avoid costs of £1.4 million in energy bills.

So far saved 12.5% energy, 11% emissions and avoided just under £1 million in costs.

Carbon Management Plan

- Target 1: 12% in Council properties:** This will include all Council owned properties and schools but excludes any PPP schools. The aim will be to save 5286 tonnes of Co2 by 2012.
- Target 2: 12% in staff travel:** This will include all business travel by Council employees but excludes commuting to and from work. The aim is to save 522 tonnes C02.
- Target 3: 5% in the Council's fleet:** This will include all Council owned vehicles but excludes school transport (which is contracted out) and plant machinery. The aim will be to save 207 tonnes C02.
- Target 4: 20% in internal waste management:** This will be achieved by reducing waste and increasing recycling of materials from all Council premises. By 2012, 831 tonnes of C02 will have been saved.
- Target 5: 5% in street lighting:** This includes all street lighting but excludes road signs and bollards. The aim will be to save 353 tonnes C02 by 2012.
- Target 6: 10% from water:** This includes water consumed at Highland Council buildings with water meters installed. It excludes water usage from building charged a set rate. The aim is to save 14 tonnes of C02 by 2012

These figures are provisional as the CMP is still in draft form.



This shows that Climate Change has cost implications, both in financial losses as a result of changing weather events but also in the inability to insure.

The Environmental Cost



Top photo: Glacier in Patagonia, Argentina 1928. Glacier in Patagonia, Argentina 2004. 76 years of climate change. Then, and now. Scary.
Photo via Greenpeace

The Social Cost



Different parts of the world will be affected in different ways. The sad truth is that it is often the developing nations and those living in poverty that are worst affected.

The Human Cost



I've purposefully picked a shocking picture here to try and get people to have an emotional attachment to the issue.

Carbon Reduction Commitment

- Cap and Trade Scheme
- Carbon priced at £12 per tonne
- HC need to purchase £500 000 in first year.
- Fines of up to £40 per tonne
- Evidence packs, reporting, auditing, data gathering, forecasting and projecting emissions.

There will be huge costs associated with legislation that will come about as a part of climate change.

Trapped?



So there is the bad news. Having heard all this you may well feel trapped and helpless (don't worry the horse was rescued unharmed).

Change Can Happen



Our only security is our ability to change. ~John Lilly

The Highland Community

It is not necessary to change. Survival is not mandatory. ~W. Edwards Deming

But I believe change CAN happen and this is why we are all gathered today. Humans have been on this Earth a very long time and have proved to be adaptable. This is evidenced by our ability to utilise fossil fuels in such a way. We have the knowledge and technological ability to get ourselves out of this mess.

What follows is some information on what the Council is doing to tackle climate change and how it may affect your work in the future.