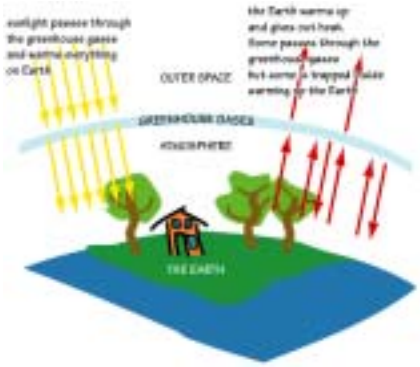
LOCAL AGENDA 21
FACTSHEET

ENERGY CONSERVATION & CLIMATE CHANGE

NUMBER 2 *DEC - JAN 2003 - 2004*

1) Introduction – What is climate change?



Climate change is one of the most significant environmental threats of today. The atmosphere is made up of a mixture of gases around the Earth – greenhouse gases. The most important greenhouse gages are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

Scientific evidence has shown that man-made greenhouse gas emissions are having a significant effect on the earth's climate, creating what is known as the greenhouse effect, which is causing global warming.

Image taken from www.defra.gov.uk

The temperature of the earth is determined via a balance of energy received from the sun – visible radiation/sunlight, and energy which constantly emitted from the earth's surface. Energy coming in from the sun passes through the atmosphere largely in an unchanged state and warms the earth. However, while some of the infrared radiation derived from the earth's surface is absorbed by gases in the atmosphere, some is also released downwards which further contributes to the warming of the surface of the earth.

This natural greenhouse effect is necessary to sustain life. However, as greenhouse gas concentrations increase above natural levels due to the activities of man, additional warming occurs and the heat is trapped – global warming, which threatens the sustainability of the planet.

2) Effects

A rise in the emissions of greenhouse gases has led to an increase in the earth's temperature, which has led to climate change. Increases in temperature will effect: -

- Weather – Both summer and winter months will get warmer.
- Sea Levels – Ice cap melting and ocean expansion.
- Farming – Change in temperature will effect viability of certain crops.
- Water & Rainfall – Although some areas will suffer drought others will experience flooding.

Image taken from www.environment-agency.gov.uk

- Ecosystems – Those that are dependent on certain temperature conditions will be under threat.
- Vegetation – Tropical rainforest could be lost, further enhancing the problem as vegetation absorbs carbon dioxide.
- People – Those who reside in coastal regions are at risk of flooding.

3) Loss of Trees

Carbon Dioxide (CO_2) is a significant greenhouse gas and a substantial by-product of modern day living and a major contributor to global warming. Image taken from www.treesforlife.org.uk

One of the most essential solutions to global warming is to reduce CO_2 emissions, which to a certain extent is a natural occurrence. It is not possible to eradicate all CO_2 emissions, but trees help to counteract these emissions by absorbing CO_2 through photosynthesis, thus counteracting global warming. However, with the rate of deforestation increasing and tropical forests rapidly diminishing due to development and the increasing temperature of the climate threatening certain species, the problem looks set to escalate.

Through our personal lives we contribute to the increase of CO_2 in the atmosphere. In order to reduce CO_2 we need to minimise the use of fossil fuels and reduce, reuse, recycle. Use recycled paper and other recycled products and purchase goods that are recyclable.

4) Energy Conservation

A vast amount of CO_2 is produced when fossil fuels are used . Save energy by reducing consumption of electricity and petrol and thus limiting the amount of CO_2 produced. Steps to reduce energy use, which can also save you money, include: -

Image taken from www.burnley.gov.uk

- Insulate hot water tanks.
- Close curtains at dusk to trap heat.
- Invest in double-glazing.
- Turn off lights when leave a room.
- Avoid leaving appliances on standby.
- Look for cavities – 35% of heat is lost through walls.
- Always use full load in washing machine, tumble dryer and dishwasher.
- Turn thermostat down by 1°C – could reduce heating bills by 10%.
- Buy energy efficient light bulbs – last 12 times longer than ordinary bulbs.

For more tips visit www.saveenergy.co.uk and take a Home Energy Check.

5) Christmas

Millions of tonnes of rubbish are generated throughout Britain over the Christmas period, with the majority disposed of in landfill and the gases produced contributing to climate change. The use of Christmas lights uses more energy – remember to switch off at night and when you leave your house.

Christmas trees, wrapping paper, Christmas cards and packaging can all be recycled. Christmas trees can be composted or planted in the garden.

Image taken from http://www.bbc.co.uk Image taken from www.broadland.gov.uk

Staff can recycle cards at various points throughout Council offices. Please check the Internet for details of where to recycle Christmas tress. In addition cards can be taken to local recycling sites or alternatively The Woodland Trust has set up a card recycling scheme in conjunction with W H Smith and Tesco, which helps support woodland creation in the UK. Visit www.woodland-trust.org.uk/recycling for further details.

May I take this opportunity to wish you all a very Merry Christmas and Happy New Year

For further information on any of the subjects mentioned please contact Helen Speight, Local Agenda 21 Officer on x 6185 or alternatively write to Environmental Services, Council Offices, Weeley, Clacton-on-Sea, Essex CO16 9AJ.