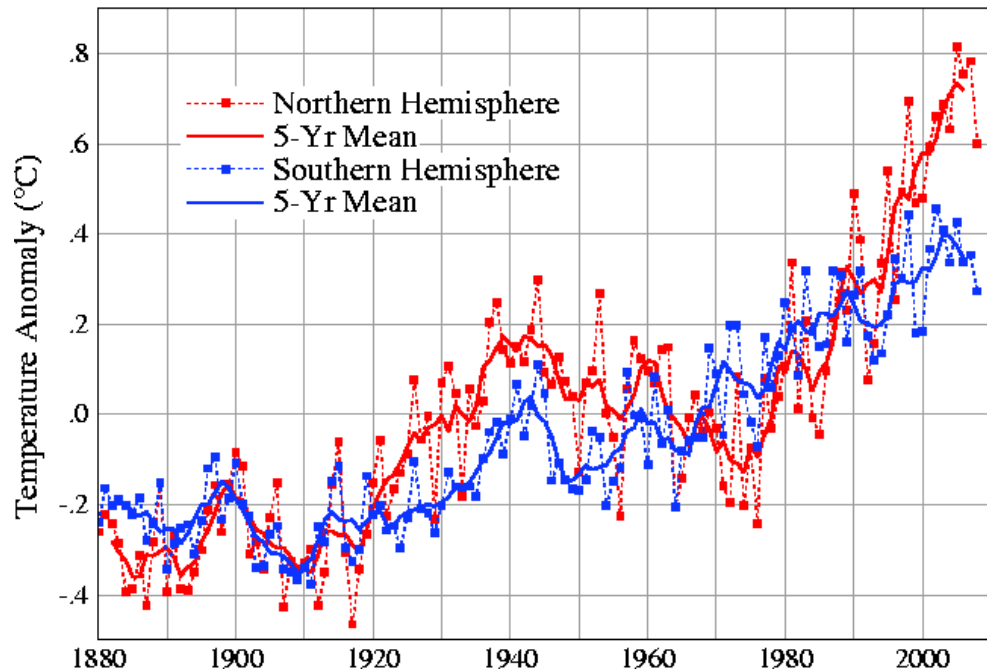


Climate Change – update 2009

We do have a problem.

Temperatures across the world continue to rise (see graph below) and whilst there are still doubters and sceptics most feel the evidence is now overwhelming and the case proved. We do have global warming we do have a climate change in place.

Hemispheric Temperature Change



And the graph - who provided this information?



NASA, that's who – and it's not just NASA in the States, The Royal Society here in the UK says...

"Our scientific understanding of climate change is sufficiently sound to make us highly confident that greenhouse gas emissions are causing global warming"

"Science moves forward by challenge and debate and this will continue. However, none of the current criticisms of climate science, nor the alternative explanations of global warming are well enough founded to make not taking any action the wise choice. The science clearly points to the need for nations to take urgent steps to cut greenhouse gas emissions into the atmosphere, as much and as fast as possible, to reduce the more severe aspects of climate change. We must also prepare for the impacts of climate change, some of which are already inevitable".



EU Action

The EU is leading by example – determined to become a high energy-efficient, low carbon economy. It has recently set very challenging targets known as the 'triple-20' targets; these targets are for a 20% reduction in energy consumption, that 20% of energy to come from renewable energy sources and a 20% reduction below 1990 levels of CO₂ emissions, all by 2020.

The EU is also committed to increasing the CO₂ emissions target to 30% if other developed countries commit to comparable reductions and advanced developing countries also contribute adequately to the global effort according to their respective capabilities.

The EU believes this sends a powerful message to Washington, Beijing, Delhi and the others, who must commit to reducing emissions if the earth's rise in temperature is to be kept to no more than a "safe" 2 degrees centigrade.

Other actions include:

A significant revision of the world's first and biggest carbon trading system - Europe's [emissions trading](#) scheme (ETS), so that from 2013 industries start paying to pollute, via the auctioning of permits that permit the emission of a set amount of carbon dioxide and other greenhouse gases into the atmosphere. This system covers Europe's power

plants and processing industries. Polluters are penalised and have to pay for their pollution, clean companies benefit.

The establishment of centrally-funded pilot projects for carbon capture and storage - ie, technology that aims to collect CO₂ from power plants and contain it.

"Effort-sharing" - agreeing what the 27 countries of the EU have to do at national level to cut pollution, particularly from sectors not covered by carbon trading, such as construction, transport and agriculture.

More information is available at the following websites:

- www.climatechange.eu.com
- ec.europa.eu/environment/climat/campaign/index_en.htm

There are other points and related issues ...

There will not be a single answer – the solution will rely on a number of approaches, a key one being a reduction in the amount of energy we use. This will need to be coupled with cleaner fuel, renewable energy, carbon storage (where Carbon Dioxide is in some way 'captured' and stored) and almost certainly some changes to our lifestyles.

The developed world already consumes far too much energy in terms of what the world can support, and the emerging (growing) economies are not particularly 'green' thereby increasing the level of CO₂ production. The need for a reduction in this 'pollution' is therefore a global problem.

As well as addressing the cause, we will need to take time to prepare for the impact of the changes that are already underway.

We need to understand the size of the problem. It is estimated that the average person 'causes', or is responsible (directly or indirectly) for around ten tons of CO₂ per year. To reach equilibrium that figure needs to be nearer to 1 ton!

Food. As the world population grows, particularly as the emerging nations become more prosperous, the level of food required (another global commodity) rises. This has already increased food prices. Plans to produce fuel from crops (bio-fuels) therefore need to tread a careful balance between the need for renewable energy and the need to feed the world.

The degree to which technology can help is currently the subject of debate. The idea that we can continue as we are and technology will somehow address the issue and provide a total 'clean-up' is seen by most as completely wishful thinking.

Some more facts ...

- The Arctic ice-floe has decreased 40% in average thickness from 3.12m (1960) to 1.8m (1990). Source: Programme International Géosphère Biosphère (PIGB) – Programme mondial de recherches sur le climat (PMRC) 2001.
- CO₂ emissions due to human activities are responsible for more than 60% of the increase in the greenhouse effect. Source: OECD 1999.
- 20% of the world's population, living in the richest countries, consumes 60% of commercial energy. Source: Worldwatch Institute.

- Average temperature has increased by 0.6°C in the last century; it could increase by 2° to 6°C over the next 100 years. Source: UN – IPCC 2001

So what can the citizen do?

Governments are reacting, some say too slowly but Climate Change is high on the global agenda. Nevertheless there are things that the average citizen can do.

- ✓ Clearly we can all try to reduce the amount of CO₂ we produce. We can use less energy (turning down your home thermostat by 1 degree Centigrade (Celsius) can save 10% on your fuel bill!) we can drive less and travel more efficiently.
- ✓ We can buy locally – transporting food is a significant contributor to CO₂ emissions.
- ✓ If, however, there is one thing that we can do as citizens it is to demand action from our elected representatives. Those who are involved in planning, those who need to take strong action on Climate Change / Global Warming, those who need to factor this issue into many decisions and certainly into any significant projects.
- ✓ Speak up if you see waste, or inappropriate plans that fail to consider Climate Change.

Help preserve the planet for your Children and their Children.

Make sure that we have a positive legacy, and that the planet wasn't damaged on our watch!

Coventry TechnoCentre
Coventry University Technology Park
Puma Way
Coventry
CV1 2TT

Europe Direct-Coventry and Warwickshire
Phone: +44 (0)24 7623 6377
Fax: +44 (0)24 7623 6024
E-mail: europedirect@cad.coventry.ac.uk

The advice in this guide is provided in good faith, and is believed to be accurate at the time of initial publication.

Individuals are advised to carry out their own research, and seek legal advice where appropriate.

Information provided by, or on behalf of, Europe Direct may not be considered as legally binding.