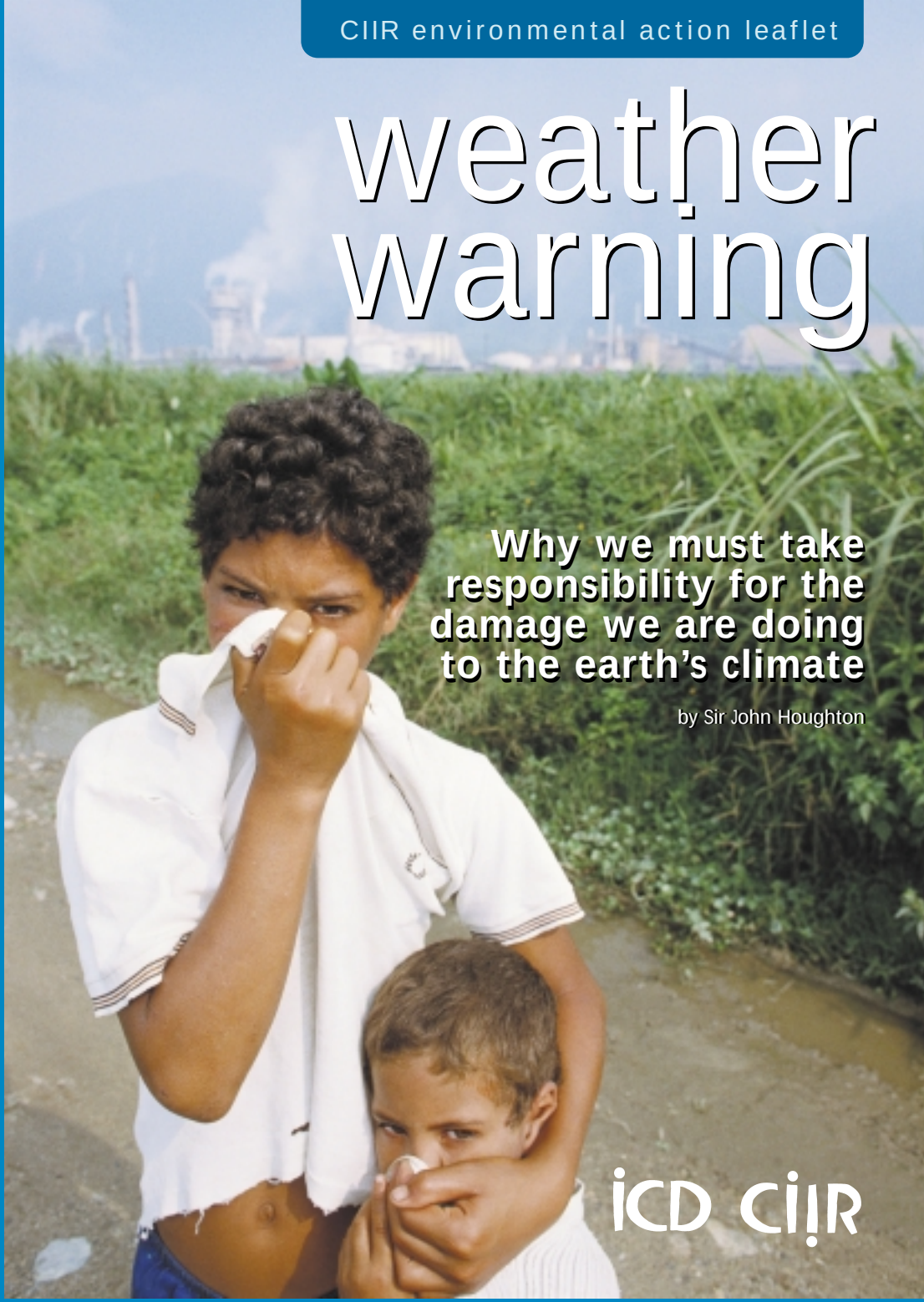
CIIR environmental action leaflet

weather warning

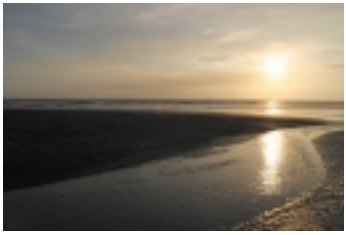


Why we must take responsibility for the damage we are doing to the earth's climate

by Sir John Houghton

ICD CIIR

Why should we care?



Nick Sireau/CIIR

Global warming is one of the most severe problems facing the world today. Human activities are causing the world's weather and climate to change. We need to tackle these issues now, before it is too late.

Rich countries are largely responsible for the pollution and environmental damage that is leading to climate change. Poor people and poor countries are least able to cope with the consequences, such as increasingly severe floods, droughts, and extreme climatic phenomena like hurricanes. People in developing countries are more likely to suffer deaths, misery and economic damage as a result.

The challenge to act is very clear. The words of Jesus spell out a clear message to those of us in the affluent, industrialised North: 'From everyone who has been given much, much will be demanded; and from the one who has been entrusted with much, much more will be asked.' (Luke 12:48)

Sir Crispin Tickell, former UK ambassador to the United Nations, has said: 'We know what to do, but lack the will to do it.' Now is the time to take seriously our God-given responsibility to care for the earth and for our fellow human beings.

What is global warming?

Luiz Augusto Guimaraes/CIIR

The science of global warming begins with the realisation that the concentration of carbon dioxide in the atmosphere has risen by more than 30 per cent since industrialisation began 200 years ago. This is mostly due to the burning of fossil fuels (coal, oil and gas), which currently emit about seven billion tons of carbon (as carbon dioxide) into the atmosphere each year.

Because carbon dioxide absorbs heat radiation (it is called a greenhouse gas) it acts as a blanket over the earth's surface, maintaining it at a far warmer level than it would otherwise be. In the last half of the 20th century this warming became increasingly apparent. During the 21st century the average surface temperature over the globe is expected to rise faster than at any time over the past 10,000 years.

Humans and ecosystems have, over thousands of years, adapted closely to the world's climate. Suddenly that climate is changing, at an unprecedented and rapid rate. All the signs are that this climate change will have serious and adverse impacts on ecosystems and on people.

What will climate change mean?

Luiz Augusto Guimaraes/CIIR

The main consequences of climate change caused by global warming will be changes in sea level, variations in rainfall, and temperature extremes. Some of these are already becoming apparent.

Sea level is likely to rise by about half a metre by 2100, mainly because of the expansion of ocean water as it warms. Such a rise will make large areas in Bangladesh, southern China, Egypt and many islands in the Indian and Pacific oceans uninhabitable, displacing tens of millions of people.

Another major impact will be on water supplies. Increased warmth at the surface will lead to increased evaporation, a higher average water-vapour content in the atmosphere, and more energy in the atmosphere's circulation (because of the increased latent heat released as water vapour condenses).

We have already observed an increase in average rainfall. More importantly, the hydrological cycle will become more intense. Heavy rainfall will tend to become heavier, while some semi-arid areas may receive less rainfall.

There will be more frequent and intense floods and droughts. The regions most likely to be adversely affected are developing countries in the sub-tropics where there is a lack of infrastructure and capacity to cope.

During the 21st century the average surface temperature over the globe is expected to rise faster than at any time over the past 10,000 years

In Central America and the Caribbean, people are still recovering from the heavy loss of life and extensive damage caused by devastating hurricanes in recent years. Yet as a result of global warming, hurricanes are likely to become even stronger and wetter in future.

Luiz Augusto Guimaraes/CIIR

Droughts and floods (such as those caused by hurricanes and intense rainstorms) cause more deaths, misery and economic damage than any other type of disasters. Any increase in their frequency or intensity could be the most damaging impact of global climate change.

There are also likely to be impacts on human health, such as more widespread vector-borne diseases like malaria, and increased heat stress. Heat waves will become more intense and more frequent. The heat wave over central Europe in the summer of 2003 was responsible for over 20,000 premature deaths. Projections show that, because of global warming, by the year 2050 such a summer is likely to be a common occurrence.

The health of ecosystems – on which the world relies for its continuing health, and on which many people rely for their livelihoods – is also at risk. Ecosystems such as forests and corals that are not able to adapt rapidly enough to match the rate of climate change could be irreversibly damaged.

Adding the effect of these impacts together on some of the world's poorer countries has led to estimates of the number of environmental refugees that will result – perhaps 150 million or more by 2050.

What is the world's response?

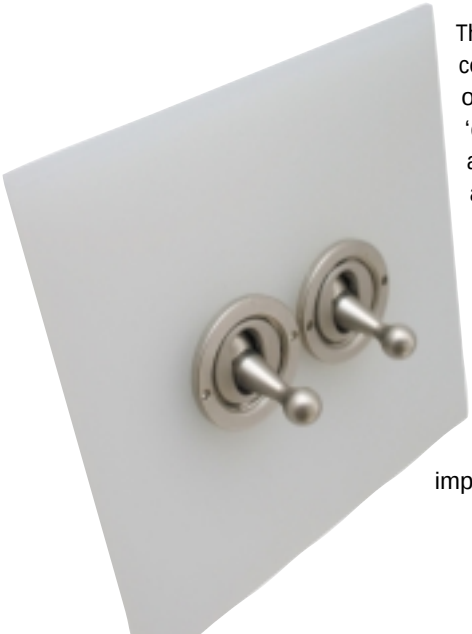
Luiz Augusto Guimaraes/CIIR

The world's community of scientists, through the United Nations Inter-governmental Panel on Climate Change, has produced thorough and authoritative reports on the science of climate change and the likely impacts (www.ipcc.ch).

In the light of the scientific information, more than 160 governments (including all the world's major countries) agreed the Framework Convention on Climate Change (FCCC) at the Earth Summit in Rio de Janeiro in 1992. The FCCC spells out the need for action by all countries, but especially by industrialised nations that have benefited so greatly from cheap fossil-fuel energy.

Four widely accepted principles underlie the international agreements needed to meet the threat of climate change. These are:

- the precautionary principle (the need to take prudent action in the face of potentially serious risk)
- the principle of sustainable development (development which meets today's needs without compromising the ability of future generations to meet their own needs)
- the 'polluter pays' principle (the country, organisation or person that causes pollution should pay to put right the damage that it causes)
- the principle of equity – both intergenerational and international (each person in the world has the same right to use an equal amount of global environmental space or of the earth's resources).



The Global Commons Institute – an independent group concerned with the protection of the common heritage of all humanity – has proposed a system known as 'contraction and convergence' which succeeds in addressing requirements from all four principles. It allocates emissions to nations on an equal per capita basis while also allowing for emissions trading (for example, so long as global targets are met, a country whose emissions are below its quota can 'sell' the balance to a country whose emissions exceed its quota).

So a framework for responding to climate change is in place. All that remains is finding the will to implement it.

The Kyoto Protocol – and beyond

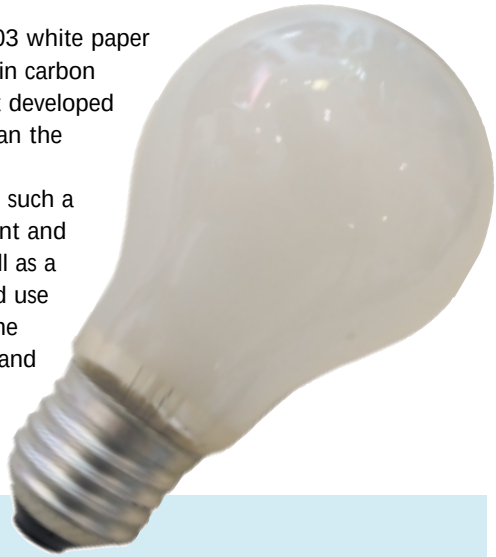
Mikkel Ostergaard/Panos

A start with binding commitments on the emissions of carbon dioxide was made in 1997 through the Kyoto Protocol, which requires developed nations to reduce their emissions of greenhouse gases by 2010 by an average of five per cent compared to their levels in 1990. This first step would demonstrate commitment by the developed world to beginning to tackle climate change.

To come into force, the protocol needs to be ratified by nations representing 55 per cent of 1990 carbon dioxide emissions. Some nations – significantly including the United States – have refused to ratify the Kyoto Protocol. However, by late 2004 enough nations had ratified the protocol to meet the target figure, and the protocol comes into force in February 2005.

The Kyoto Protocol is only a first step. Necessary post-Kyoto action will be more demanding. To stabilise the concentration of carbon dioxide in the atmosphere and hence to slow and eventually halt climate change, reduction of global emissions to well below 1990 levels has to occur over the next 50 years.

The British government has accepted (in its 2003 white paper on energy) a target of a 60 per cent reduction in carbon dioxide emissions by 2050. This recognises that developed countries need to reduce emissions by more than the average, so that developing countries have the opportunity to build their industries. To achieve such a demanding target will require rapid development and deployment of appropriate technology – as well as a drive to greater efficiency in the generation and use of energy. There needs to be rapid growth in the generation of energy from renewable sources, and in ways to prevent carbon dioxide from conventional energy generation from entering the atmosphere.



This leaflet is adapted from an article first published in *The Tablet* on 3 April 2004 (www.thetablet.co.uk).

Sir John Houghton is the former director general and chief executive of the UK Meteorological Office. He chaired the Royal Commission on Environmental Pollution from 1992-98.

What can you do?

Write to your government

In 2005 the UK Prime Minister will occupy a particularly powerful position in international politics. In January 2005, the UK took over the presidency of the G8 (a group of eight countries with the most powerful economies in the developed world), and later in the year the UK will host the G8 Summit. In July 2005 the UK will assume the presidency of the European Union.

Write to your MP and ask him/her to urge the government to follow through on its pledges to take a lead on climate change and to put pressure on the G8 and EU countries to act now (find details of local MPs at www.locata.co.uk/commons).

Do your bit

There are many small steps that we can all take in our own lives to reduce our impact on the environment. Here are a few pointers to get you started:

- use energy more efficiently in your home – turn off lights and electrical appliances when they are not in use; make sure your house is adequately insulated; turn down your central heating thermostat
- switch your energy supplier to one that sells electricity from renewable sources and consider installing solar panels
- use your car less often – walk, cycle or use public transport
- when you purchase new domestic appliances or a new car, make sure that they are among the most energy efficient available
- recycle glass, paper, aluminium and anything else you can – in general, manufacturing products from recycled materials uses less energy than making them from raw materials
- join Operation Noah (the community climate change campaign organised by Christian Ecology Link on behalf of Churches Together in Britain and Ireland) – www.christian-ecology.org.uk/noah/

Catholic Institute for International Relations (CIIR)
Unit 3, Canonbury Yard, 190a New North Road, London N1 7BJ
tel: 020 7354 0883 email: environment@ciir.org website: www.ciir.org
Charity reg no 294329 Company reg no 2002500
In some countries CIIR is known as International Cooperation for Development (ICD)

Design: Twenty-Five Educational. Printed on 100% chlorine-free recycled paper by APG (APG holds ISO14001 accreditation for international environmental standards).
Produced with the financial assistance of the European Commission. The views expressed herein are those of CIIR and can therefore in no way be taken to reflect the official opinion of the European Commission.

Ted Spiegel/CORBIS