

CLIMATE CHANGE



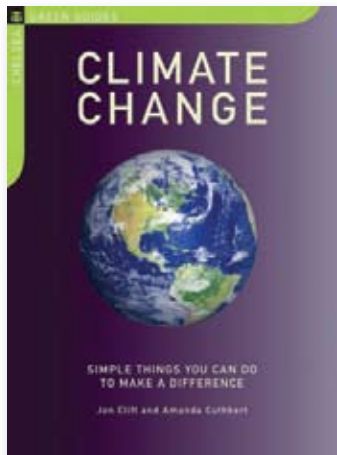
SIMPLE THINGS YOU CAN DO
TO MAKE A DIFFERENCE

Jon Clift & Amanda Cuthbert

CLIMATE CHANGE

Simple Things You Can Do
to Make a Difference

Jon Cliff and Amanda Cuthbert



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to make a difference

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JON CLIFT & AMANDA CUTHBERT

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Introduction



INTRODUCTION

What is climate change?

“Climate change” is the changing of the world’s climate as a result of what we, the humans on this planet, are doing.

It’s a massive problem, and in many people’s eyes the single biggest problem ever to face humankind; because if we carry on behaving as we’re doing now, we face large rises in global temperatures and also in sea levels, which will have disastrous consequences.

There’s plenty we can all do to slow it down. Yes, it is a massive challenge, and a topic that’s surrounded by loads of gloom and doom, but fortunately we still have time.

This is not one of those scare stories that pop up now and again in the papers — this is real. So much so that ever since 1988 the United Nations has had a team of about 3,000 scientists from all over the world monitoring what is happening, researching what to do about it, and advising the world’s governments.

“Climate change” and “global warming” both refer to the same thing, although “climate change” is a better description because the warming up of the earth changes our whole climate, including how much it rains, the strength of the wind,

when and how much it snows, and the frequency and strength of storms.

What causes it?

The main cause of climate change is carbon dioxide, a gas that is produced whenever we burn fossil fuels like oil (in the form of gasoline or diesel), natural gas, or coal. We use these fuels to give us the energy that we need every day. Power plants burn fuel to make electricity for our homes. We burn fossil fuels to move our cars, buses, trains, and planes, to warm our houses, to manufacture our goods — the list is virtually endless.

When fossil fuels are burned, carbon dioxide (CO₂) goes into the atmosphere where, as we burn more and more fossil fuels to feed our ever-increasing demand for energy, the amount of CO₂ gas increases. CO₂ has always been in the atmosphere, trapping just enough heat for life on earth. Now the excess of CO₂ has upset this delicate balance, and not enough heat can escape back into space.

Consequently the temperature of our world is slowly but surely rising, and will continue to do so unless we do something about it.

According to the Energy Information Agency (EIA), our homes produce 21% of the total of U.S. CO₂ emissions, behind the transportation (33%) and industrial (28%) sectors and ahead of the commercial (18%) sector.

What proof is there?

We have all been experiencing more extremes of weather recently. Ever since the world's scientists realized that the world was warming, they have been monitoring what has been going on, and the proof is now staring us in the face:

- The average surface temperature of the earth, together with air and sea temperatures, is rising. We can see this because glaciers are retreating, and in some cases disappearing altogether.
- The ice caps at the North and South Poles are melting.
- Snow and ice, which for millennia has covered large areas of frozen land, is now rapidly melting.
- Eleven of the last twelve years have been the warmest years ever since records were kept.
- Storms and floods are increasing in intensity and ferocity, with disastrous consequences. Weather patterns are much less predictable than they used to be.
- Flowers are blooming earlier, and some migratory birds have stopped flying toward the tropics in the wintertime.

How will climate change affect me?

The world's scientists predict that, unless we dramatically reduce our CO₂ emissions, the temperature of the earth will spiral out of control. This is not going to happen overnight,

but things could change far more rapidly than many people expect. The pleasant notion that our winters will just become milder and our summers a little warmer is, unfortunately, not what is in the cards.

Summer temperatures will continue to rise, becoming life-threatening at times. Seriously heavy rainfall and consequently extensive flooding is also expected. Flooding and storm damage will also become more frequent in coastal communities, as sea levels rise and storms increase in ferocity.

In the longer term, as the ice sheets continue to melt, we could face large sea-level rises. The ice sheets melting on Greenland alone will probably raise sea levels anywhere from 19 to 23 feet, with obvious huge repercussions for many cities and areas by or near the coast.

Water supplies will be under duress, with water shortages becoming acute in some parts of the world. This lack of water to both drink and grow crops will, combined with the flooding, create food shortages and force people to move. Large-scale migration is expected, placing huge social and political pressure on the host countries.

With the ice melting and the sea warming, sea levels are rising at a rate of about 3 millimeters (0.1 inch) a year.

What can I do about it?

Now for the good news — there's lots you can do

Most of the world's climate scientists believe we have time to prevent climate change spiraling out of control if we act now. Within the next ten years we all need to dramatically reduce our CO₂ emissions in order to minimize the impact of climate change. It won't be easy — we will need to change our lifestyles — but it is very achievable. Little things that we can do every day can produce large results.

Our electricity consumption has gone up 70% since 1970.

If we all turned off our TVs and other gadgets that are kept on standby, for example, we could shut down seventeen power plants in the U.S., with huge reductions in CO₂ emissions.

We are all using more and more energy: keeping our houses so hot that we walk around in short sleeves in the winter, driving the car just around the corner to get the Sunday paper, popping on a plane for a long weekend abroad in the sun, buying grapes in January that have been flown in from Chile — the list is endless. We need to be more efficient in the way we use energy.

Simple actions can considerably reduce our energy consumption and our energy bills, and help reduce climate change: the less energy we use, the less CO₂ is released, which benefits us all. Once we are aware of what's happening, most of the things we need to do are just common sense.

We don't have to shiver in unheated houses with no modern appliances, or sell our cars and go back to horses and carts; we just have to reduce our carbon footprint.

Climate change terms

Carbon footprint

Your carbon footprint is the measure of the amount of carbon dioxide your activities add to the atmosphere. Surprisingly, many items — from apples to cars — can have a carbon footprint too, especially if they have been flown thousands of miles or if energy has been used in their production. Your purchasing choices can make a big difference to your overall carbon footprint.

Carbon offsetting

Can't I simply pay for somebody to plant a few trees to cancel my CO₂ emissions? While in theory this may seem like a good idea, this process, known as "carbon offsetting," is unfortunately not the way out of the problem.

The theory of carbon offsetting is based on the concept of allowing CO₂ to be emitted now, and then reducing it at a later date. Carbon offsetting generally involves paying a company either to invest in renewable energy projects that may reduce CO₂ emissions in the future, or to plant trees that will possibly take CO₂ out of the atmosphere at some future date. But the problem of excess CO₂ is here today: we can't afford to wait, and need to work in the present.

The setting up of these "offsetting" projects creates the perception that we can carry on polluting at the rates we currently do.

Home heating



HOME HEATING

What does heating my home have to do with climate change?

- When coal, gas, or oil are burned to warm your house, carbon dioxide (CO₂) is emitted into the atmosphere; this is the main cause of climate change.
- Coal, gas, or oil are burned in power plants to produce the electricity used to warm your home.

Less energy used for heating = less CO₂

What can I do about it?

We spend up to one-half of our household energy bills on keeping our homes warm in winter.

NOW...

- **Take charge of your heating** — how about turning down the thermostat by 2°F — this can reduce your energy consumption by 10%.
- **Turn radiators off or down** in rooms you only use occasionally.

- **Turn down the thermostat** when you are going away; 40°F will prevent pipes from bursting in cold weather.
- **Set the timer for your heating system** to come on about 30 minutes before you get up or come home in the evening, and to go off about half an hour before you leave in the morning or go to bed.

WARNING — If you are elderly or infirm, try to keep your room temperatures at 65°F at least, and your living room and bathroom at about 70°F.

- **Put on more clothes** rather than turning up the heat.
- **Draw curtains over windows at night:** they provide insulation and help to keep the heat in the room. Avoid covering radiators with curtains — they will funnel the heat out through the glass of the windows.

LATER . . .

- **Buy weatherstripping** for your doors and windows. It won't cost much and will make a big difference. You may not want to do this in your bathroom or kitchen if you have problems with condensation. Make sure you still have sufficient ventilation.

WARNING — Don't block up air vents or grilles in walls if you have an open gas fire, a boiler with an open flue, or a solid-fuel fire or heater. These need sufficient ventilation to burn properly, as otherwise highly poisonous carbon monoxide gas is released.