

Rising to the climate challenge

A myth-busting toolkit for everyone



Wait a minute . . . you mean there's actually something we can do about this?

About us

This Climate Mythbuster is produced by SEAD (Scottish Education and Action for Development).

Our work is based on two main aims:

- To challenge the causes of poverty, social injustice and environmental degradation
- To help create positive social change through empowered, well-informed communities facing challenges with both a local and global perspective

Over the last 30 years the cornerstone of our work has been creating links for mutual solidarity, inspiration and co-operation between people facing common challenges in Scotland and around the world. This has resulted in many dynamic partnerships between communities in Scotland, South Africa, the Dominican Republic, Nicaragua and Ecuador.

To find out more about upcoming events or to become a member see www.sead.org.uk

sead

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Raised Voices

The testimonies used in this booklet were collected through a project called Raised Voices. You can see all the testimonies gathered at www.raisedvoices.net





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switch on to
climate
change

This booklet is produced as part of "Switch On to Climate Change" - a project to support people all over Scotland in developing their own responses to the challenge of climate change.

Demystifying the greenhouse effect

The most important points in understanding the greenhouse effect are:

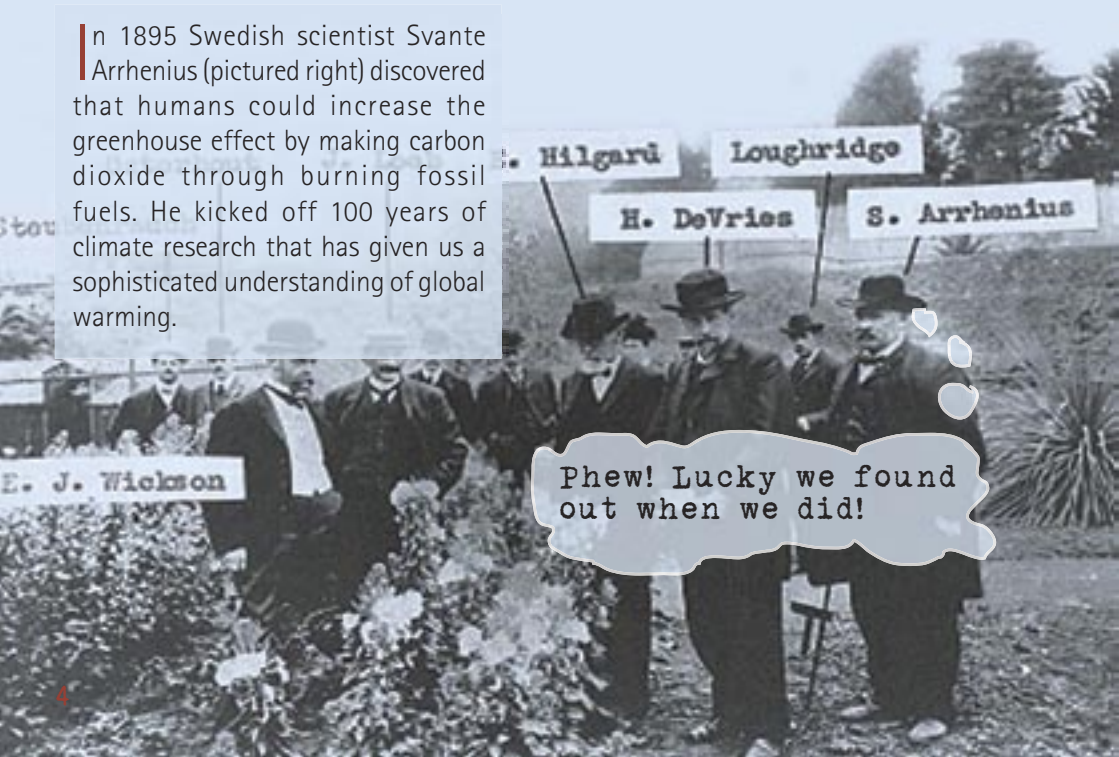
- Different gases have different capacities to retain heat
- When we change the gases in the atmosphere, for example by burning excessive amounts of fossil fuels, or through changes in land use, we alter the way the atmosphere holds in the heat from the sun

Gases in the atmosphere allow the sun's rays to pass through and warm the earth and then they affect how much of that heat is radiated back into space. Human activity since the industrial revolution has produced large amounts of greenhouse gases (gases which retain most heat), shifting the balance in the atmosphere so less and less heat can

escape. This is called the greenhouse effect. It upsets the natural process for regulating the temperature of the planet. In terms of human activity, the most important greenhouse gas is carbon dioxide (CO_2). Although methane and nitrous oxide are more powerful, they are found in lower concentrations.

Back in 1905 these men already knew that burning fossil fuels has an impact on the climate

In 1895 Swedish scientist Svante Arrhenius (pictured right) discovered that humans could increase the greenhouse effect by making carbon dioxide through burning fossil fuels. He kicked off 100 years of climate research that has given us a sophisticated understanding of global warming.



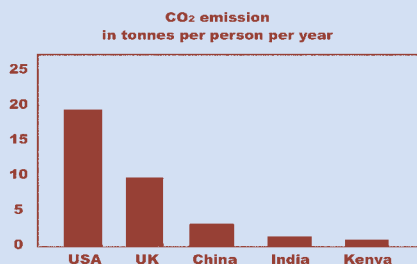


So what's changing?

The world is warming as a result of human activity. This means that the delicate balance of processes that affect our weather, from ocean currents to atmospheric systems is disrupted.

Although the global average temperature is increasing, the disruption of climate systems means that some areas will experience heat and drought, some will get much colder and the incidence of extreme weather events like flooding and storms will increase. We are already seeing some of the impacts of this.

If human activity continues the trend of increasing emissions of greenhouse gases we will face more chaotic and unpredictable weather patterns. This will have far-reaching effects on us, disrupting food production, health and security on many levels. Some of these effects are already happening, others can be avoided by taking action to minimise the amount of greenhouse gases emitted by human activity. However, this requires a concerted and co-ordinated effort on a local, national and international level.



This chart shows the relative quantities of CO₂ emissions per person in different countries. The industrialised wealthy countries have a historical responsibility for the dramatic increase in global emissions of greenhouse gases, and even today the average person in Scotland is responsible for around 10 times more emissions per year than someone in India.

Raised voices from around the world

"...reduce funding to fossil fuel industries"



Hi, my name is Siziwe Khanyile from South Africa. My opinion is that the World Bank should reduce funding to extractive industries and fossil fuel industries and focus on renewable energies to reduce the greenhouse gas emissions and reduce the impact of climate change.

From www.raisedvoices.net

Climate myth-busting

Partly because of the science involved, and partly because of a tendency to stick our heads in the sand, people tend to get distracted by various myths about climate change. This happens everywhere – from down the pub, to the Scottish Parliament. It is important that we can tell the difference between fact and fiction, so here are a few common myths about climate change:

**Myth 1 –
"What's happening now is nothing strange – there have always been changes in the climate"**

Yes, the climate has always changed – it's a delicate system affected by multiple factors – no-one denies that. But letting that distract us from the scientifically proven effects of human activity since industrialisation is a luxury we can't afford. What is happening now is a rapid change in weather patterns and global average temperature, unprecedented since Met Office records began. This change – too fast for many ecosystems to adapt to, and predicted to have very serious consequences within the next 50-100 years – is something which is within our capabilities to avoid.

**Myth 2 –
"Global warming means we'll get better weather in Scotland"**

While the overall warming is measured across global averages, local patterns will vary dramatically – we're talking about increasingly extreme weather events (which may include extreme cold), interspersed with periods of more normal weather. And scientists now believe that unbalancing the delicate climate system is 50% likely (over the next 100 years) to

result in the shut-down of the Gulf Stream. This could leave us with a climate similar to that of Labrador, Canada.

**Myth 3 –
"Uncertainty about the effects of climate change hampers policy making"**

Uncertainty is a non-argument. Governments act when it is in their interests to act. "The global war on terror had no cost-benefit analysis, no uncertainty analysis, no enquiry about the efficacy of the methods used to pursue the ends," – as we were reminded by the chair of one session at the Hadley Centre Scientific Meeting on Dangerous Climate Change.

**Myth 4 –
"We can't afford to reduce our emissions – it would destroy our economy"**

Gordon Brown has said that taking action to reduce emissions is affordable if we act sooner rather than later. The economist Sir Nicholas Stern said in his recent major report on climate change that acting now would cost 1% of the global gross domestic product (GDP), whereas leaving it later could shrink the global economy by 20%.



We also need to set any costs against the cost of not taking action. The financial cost of natural disasters caused by extreme weather events, the disruption and potential collapse of food supplies, spread of disease resulting from climate change, and new water shortages resulting from droughts will all hit the global economy hard.

Myth 5 – "This is a plot to overthrow capitalism and stop me enjoying my car"

It is nothing of the kind. Margaret Thatcher, John Major, the heads of British Petroleum and Shell Oil, the Confederation of British Industry, the Insurance industry all now acknowledge the threat and make strong statements of concern. Tony Blair called it the "most serious" challenge of the 21st Century. In fact the only government leader who has ever denied the problem is George W Bush whose political campaign was largely funded by oil companies.

Myth 6 – "It's the fault of the US"

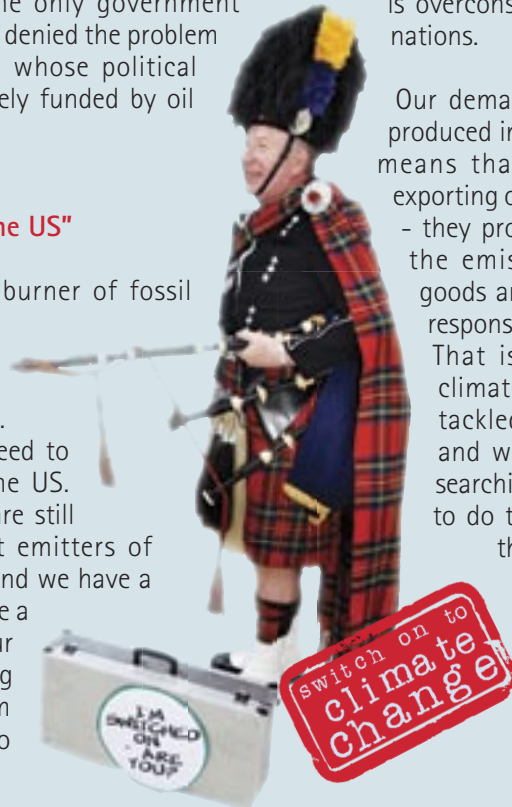
The US is a huge burner of fossil fuels, twice as much per person as in Britain and this is a serious problem. By all means we need to put pressure on the US. But we in Britain are still among the largest emitters of greenhouse gases and we have a responsibility to take a lead and sort out our own role in solving this global problem that we helped to create.

Myth 7 – It's the fault of the developing countries/ overpopulation

Emissions per person from developing countries are still far, far below ours (we emit ten times as much per person as someone in India, for example). What's more, the greenhouse gases currently in the atmosphere are largely the result of the rich world's emissions over the past 100 years, so we bear a historical responsibility for the problem we created.

Having said that, it's true that China and India also have rapidly increasing emissions and that within 25 years the emissions from the so-called developing world is likely to exceed those of the rich world. But one of the drivers for this is overconsumption by wealthy nations.

Our demand for cheap goods produced in countries like China means that we are in effect exporting our emissions to them – they produce the goods and the emissions, we buy the goods and pretend we aren't responsible for the emissions. That is why the issue of climate change has to be tackled on a global level, and why many people are searching for equitable ways to do this, recognising that the problem has been created largely by the wealthy northern countries. It is in the whole world's interests to solve this together.



Building a better world

"The end of our current social system, (that of the past few hundred years), is on the cards. It can either be a voluntary transformation, or we can burn all the oil and have such a transformation imposed by nature." So said a scientist at the Hadley Centre Scientific Meeting on Dangerous Climate Change in February 2005.

While this all sounds a bit scary, we have to think about what it really means. One of the reasons climate change is hard to face up to is that it requires us to assess the injustices and shortcomings of modern life. People spend hours every week sitting in a car, choking in traffic jams, to commute to jobs they don't enjoy, to earn the money to pay for that car, to buy unhealthy, over-packaged convenience food grabbed in the supermarket or buy the holiday they need to recover. We are working longer hours than ever, are more stressed than ever, families break up under

the strain of just keeping on top of the debts - and all to buy things that don't even make us happy.

So it's not just about stopping climate change, it's about a better world where quality of life means living sustainably and being more aware of how our lifestyle impacts the world. From the provision of good affordable public transport, to local services, good housing, and safe streets for our children, dealing with climate change means evolving to a better, safer, healthier and more just society.

Raised voices from around the world

"...the money spent on looking for new oil reserves is money that should be spent on promoting solutions to climate change"

My name is Atossa Soltani. I work for a US-based organisation that is working to defend Indigenous peoples rights and to protect the Amazon Basin. The Amazon Basin is vital to protect the Earth's climate. It is one of the planet's life support systems and it regulates the world climate. In fact we, through our fossil fuel consumption and our search for fossil fuels, are dismembering and destroying this vital ecosystem. So while everyone's talking about how to reduce carbon emissions, what is not being talked about is that the oil industry and the fossil fuel industry are spending upwards of 300 billion US dollars a year looking for new fossil fuel reserves. Meanwhile we can not afford to



burn the reserves we already have found. This is happening in far remote places on the Earth, with huge consequences on the people and fragile ecosystems. Meanwhile 300 billion dollars a year is money that should be going into promoting solutions to climate change. Also we should be looking at alternatives, efficiency, and how we are going to cope with our changing planet.

From www.raisedvoices.net

So what can we do?



The way to limit climate change is clear - we have to cut our greenhouse gas emissions and end our dependency on fossil fuels like oil, coal and gas.

Reductions come from three methods:

- reducing the demand for energy
- increasing efficiency when we do use energy
- replacing fossil fuels with renewable energy sources

We need to do all three of these together.

While you may be justified in blaming politicians and the oil companies for causing and perpetuating climate change, we all have an important role to play in reducing emissions.

We can take personal action on four levels:

In our own lives. By accepting the scale of the problem and our own involvement in it, setting goals for reducing our own emissions. After all, we can't ask other people to do something that we refuse to do.

By acting locally. First steps could be talking to your friends and people at work, spreading information encouraging them to make changes. There are many ways of getting more active on a local level - for some ideas have a look at the resources available through Switch On to Climate Change. They are listed on page 15 of this booklet, and you can find more information on our website.

By acting nationally. This can mean getting involved in campaigns to put pressure on companies, public bodies and the government to take action - and supporting them when they are doing the right thing.



By acting internationally. This may sound difficult but there are communities all over the world showing that it's possible for people to take the lead on promoting positive change by putting pressure on all the major players - from multinational corporations to governments. You can find inspirational examples of this kind of work, as well as national and local campaigns on our website at www.sead.org.uk.

What does it mean to reduce our energy demand?

In many ways, oil, coal and gas have been miracle fuels - so cheap, and so energy intensive that they have made all kinds of things possible which would have been unimaginable without them. But they have also created an enormously wasteful society.

We waste energy through overproducing and overconsuming products we don't need, mountains of packaging, excessive air travel, heating spaces inefficiently - the list is endless, and it's happening at every level of society. Governments waste energy, so do local authorities, and so do people going about their everyday lives. An enormous, and achievable, reduction in greenhouse gas emissions would happen if we just stopped wasting so much.

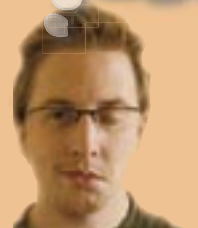
Three good reasons why community action is important

"Will we lose the next election if we take firm action on climate change?"



The politician

"Our business isn't in limiting climate change - it's in making profits for our shareholders"



Big business

...it's up to us to send a clear message to them



The media

"Sensational stories sell - but we're pretty sure climate action doesn't have much to do with us"

Fortunately, we don't have to start from scratch

Here are some inspirational ideas and examples of what others have done

School kids show how it's done

As part of a project called "The Bet" (part of Friends of the Earth Germany) German schoolchildren from 150 schools bet their government that they would be able to save more CO₂ in eight months than the government had promised to save in eight years. They won.

This kind of challenge could be a great way for Scottish schools to really get their teeth into climate change - it could even be rolled out into many different organisations for people of all ages.



People preparing for change

Transition Towns is a lively and growing network of towns, cities and villages where people have come together to make a co-ordinated plan to deal with the challenges of climate change and energy use/production.

In Scotland there are already many people getting active through this network.

To find out more, and to see where your nearest group is based, look at:

www.transitiontowns.org

Local food makes sense

One of the most enjoyable things you can do to cut emissions is to buy local food. It reduces 'food miles' and farmers markets often use less packaging than supermarkets do. There is a growing network of groups working to improve access to good local food. To find your nearest farmers market, look at:

www.scottishfarmersmarkets.co.uk



Reducing the impact of transport

Transport is the fastest growing contributor to global warming, and the second-largest source of greenhouse gas emissions in the UK after power generation. Moving people and goods around the country and all over the world is causing enormous pressure on the environment. One of the best things we can do to minimise our own carbon footprint is to reduce car use, and to seriously review our approach to taking flights - emissions from aircraft and ships entering and leaving the UK have more than doubled since 1990 and are set to double again within the next decade.



If government is to take emissions reductions targets seriously, transport is a key area for some strong policy decisions.

Here are some of the many groups who are campaigning for more sustainable transport policy in Scotland and the UK.

Making a personal transport plan -

www.sustrans.org.uk

Transport policy -

www.transformscotland.org.uk

www.foe-scotland.org.uk

Community action in Perthshire

Alyth Climate Action Town was set up so the community could collectively recognise its role in the global challenge of climate change and so that businesses, community groups and individuals living and working in Alyth could cooperate in making a commitment to adopt a more climate change friendly lifestyle.



www.alythclimateactiontown.co.uk



Highlighting Scotland's role in global emissions

Local campaigners from the World Development Movement Scotland (WDM) went to the Scottish Parliament to meet with MSPs to highlight the difference between CO₂ emissions in Scotland and in the countries where people are already suffering most from the impacts of climate change. For example, Scotland, with 5.1 million people, produces more CO₂ than Bangladesh, with 140 million people. Yet it is estimated that 55,000 people in Bangladesh have already died in the last decade from climate change-related causes.

WDM is just one of the groups working to show how consumption levels in the wealthy northern countries are impacting people in the South. Climate change is already hitting the poorest people hardest - with droughts and floods impacting food security and the spread of disease.

www.wdmScotland.org.uk

What does community action mean in other parts of the world?

Cofan people sue Chevron for \$12bn

A small indigenous community in the Ecuadorian Amazon are suing one of the world's biggest oil companies for \$12bn to repair the damage done to their lands. The Cofan leader Emergildo Criollo claims that when Texaco Oil, now part of Chevron, came to the village in 1972, they told the locals that rubbing crude on their arms would relieve aches and pains.

After 3 decades of oil exploration and extraction, the Cofan lands are ravaged by pollution, water is contaminated and there is a high incidence of ill health.

Communities around the world who live in land contaminated by the oil industry will be watching the process closely to see whether the Cofan claim is successful.

SEAD and Friends of the Earth Scotland hosted Fidel Aguinda of the Cofan community during his tour of Scottish groups in 2003. He is pictured here at Grangemouth.



A global network for climate justice

The Durban Group for Climate Justice is an international network of independent organisations, individuals and peoples' movements. They are committed to help build a global grassroots movement for climate justice.

The network particularly represents communities disproportionately impacted by climate change including small island states, whose very existence is threatened, as well as indigenous peoples, the poor and the marginalised, particularly women, children and the elderly around the world.

www.carbontradedeath.org/durban

Thai community wins fight against coal-fired power plant

For travellers on the road from Bangkok to Malaysia, the crossroads at Bo Nok – Baan Krut might seem only a collection of rice fields, fishing boats, tourist resorts, coconut trees, temples and shops. Yet this is a community that defeated corporate and state plans to build one of the biggest coal-fired power plants in Thailand on its beachfront.



Red herrings and non-solutions to the climate change problem

For the same reasons as there are many myths circulating about climate change, there also many false 'solutions' – from the frightening to the downright barmy. We need to beware of proposals for environmentally dangerous 'solutions', or plans to allow the continuation of business as usual.

Solving the problem of climate change will need a diverse range of approaches, starting with reducing energy demand, increasing energy efficiency, and developing our clean, green renewable sources of energy.

Of course we all have different ideas about what is a red herring and what is a real solution and it's often difficult to work out which is which from media stories. The best way of telling the difference between real solutions and red herrings is to ask yourself one question – "Is this going to cut greenhouse gas emissions at source?"

"We can all plant trees and it will be OK" Sounds fishy?

While no-one would argue against the benefits of well-planned tree-planting as part of sensible rural development, in terms of climate change it is a red herring. Trees only soak up CO₂ whilst growing, but when they die/decay or are burnt they release it. It is a short cycle – we need to remember that when we are burning fossil fuels we are releasing carbon that has been stored for millions of years.

As Cambridge University landscape historian Oliver Rackham said, "For its practical effect, telling people to plant trees [to avoid climate change] is like telling them to drink more water to keep down rising sea-levels."

What's more, there are major environmental and social problems in the global South associated with the seizure of land for exotic tree plantations. Most of these schemes for huge areas of tree planting are focused on poor countries where land is cheap – so we would in effect be expecting countries in the global South to carry the brunt of a scheme supposedly designed to mop up the pollution we had created in the North.

"Pay £5.20 and we'll offset your flight to Spain" Too good to be true?

Watch out for companies which claim to be able to "offset" your emissions, for example when you take a flight. These schemes are problematic for several reasons:

- There is a lot of controversy around how many of these schemes are genuinely delivering emissions reductions and many have been proven to be causing negative environmental and social impacts
- Offsetting is often used as a way of absolving ourselves of responsibility for our emissions. Offsetting creates an illusion of climate action, even when emissions are actually continuing to rise. As a result, the offsetting industry props up increasing consumption levels. Have a look at www.carbontradewatch.org for a lot of information about this.

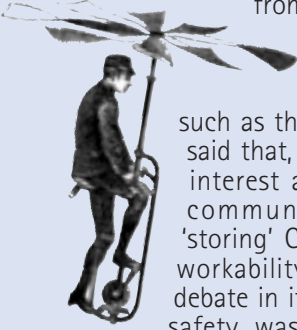
Madcap technofixes Beware of silliness..

There are lots of technofixes of varying degrees of plausibility popping up in media stories, for example setting up mirrors in space to reflect sunlight and seeding oceans with iron filings to encourage plankton! There is also a lot of research going on into the possibility of pumping



CO₂ underground to store it and (guess what?) get more oil out of depleting reserves.

Some of these projects are funded from sources which have a strong interest in encouraging 'business as usual', such as the oil industry. Having said that, there is a substantial interest among the scientific community in methods of 'storing' CO₂ underground. The workability of that is a whole debate in itself, raising issues of safety, waste management and sustainability.



Whether any of these technofixes can form part of the solution remains to be seen, and in the meantime they may even impede our progress in dealing with the problem by distracting us from the real issues. Our priority has got to be reducing our demand for energy, increasing the efficiency with which we use it, and building sustainable solutions to meet our energy needs.

The carbon trading market The emperor's new clothes?

Supporters of carbon trading (the process of buying and selling allowances for emitting greenhouse gases) say that it allows the market to self-regulate and restrict emissions.

However, so far the market has proved two things: the difficulty in allocating and pricing carbon credits; and the fact that the marketplace can create profits, but not necessarily reduce emissions. In 2005 European carbon prices collapsed after it emerged that 5 European countries had emitted less carbon than they had been allocated through the EU Emissions Trading Scheme.

Nuclear power Just when you thought it was over...

Although the Department for Trade and Industry in the UK has consistently invested 2-3 times more in nuclear energy than renewable sources, pound per pound, studies estimate that nuclear is 5-7 times less cost-effective than efficiency/renewables in reducing CO₂ emissions (Lovins 2001)

Raised voices from around the world

"...we can't just trade our way out of this - we need to work together to reduce our emissions"



Hi, my name's Vanessa Black and I live in eThekweni in South Africa. I just want to say we can't just try to trade our way out of this. We all have to take this a lot more seriously and start thinking about how our economies are structured, how our lives are structured. It's not just about

each individual trying to save energy alone. It's about us all working together to live in a completely different way, where we're not relying on goods that are sent all over the world. Where we're not trading all over for things we could be growing in our own gardens or our backyard. It's about the way we plan our settlements. So that we're working and living and communicating with people around us, not completely isolated and then trading with people on the other side of the planet.

From www.raisedvoices.net

If you'd like to get started, here's what we can offer you

SEAD's project "Switch On to Climate Change" helps individuals and community groups in Scotland to find their own way to tackle the problem of climate change. We offer all sorts of resources and can put you in touch with other groups working on the issue in Scotland and around the world.



Switch On to Climate Change – the pack!

Get a copy of our pack which includes details of all the workshops, information about useful films, news about other groups working in Scotland and around the world on climate change, plus a copy of this mythbuster and our newsletter.

Workshops and events

We run sessions, provide resources and ideas for action on all kinds of issues around climate change – taking a global perspective on everything from waste to food and energy. We can also help you get active on climate change, learning from the experiences of other people. If you're interested in having a facilitator visit your group, or would like help in running a workshop yourself, contact lorraine@sead.org.uk for details of the workshops and materials on offer.

More copies of the Climate Mythbuster

This booklet is designed to help people cut through the fog of confusion surrounding the issue. If you feel it could be useful to people you know order a pile of them for your friends, family or community group.

Training

Would you like to be trained to run climate workshops? We will be offering this kind of training throughout the year – contact us for details.

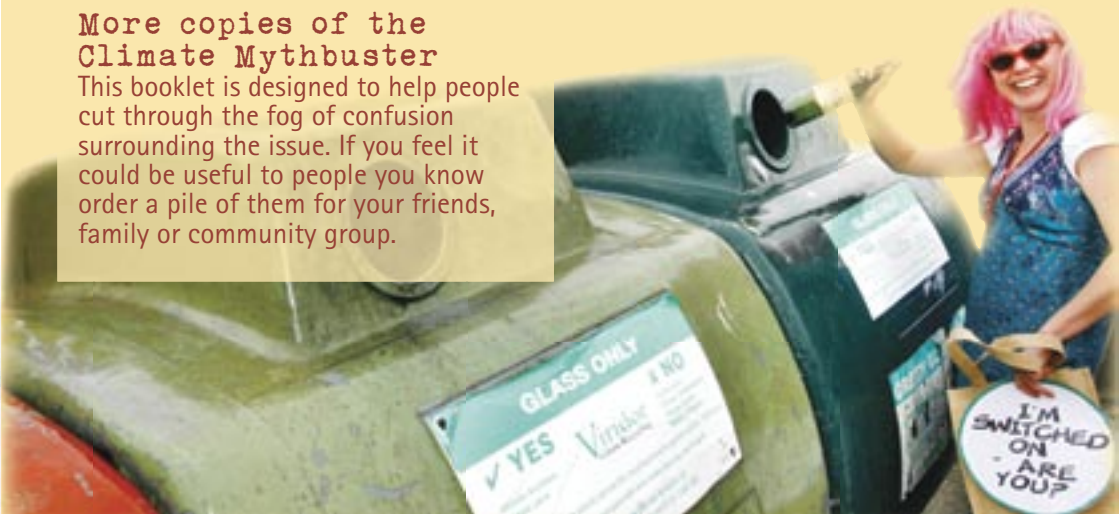
Give us a call

Contact Lorraine to find out what the project can give you. You can call her on 0131 555 5550, or email lorraine@sead.org.uk. When you order any of these resources it would be very helpful if you could send us a donation to help with postage.

Become a member

SEAD is a growing hub of activity. The best way to ensure that you are kept in touch with what's happening is to become a member using the form overleaf.

www.sead.org.uk



Become a member of SEAD if you'd like to support this work and be kept in the loop

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