



Module 5 The ethics of climate change

IS CLIMATE CHANGE AN ETHICAL ISSUE?

Ethics is the study of how we decide what is right and wrong, or what is morally good and what is morally bad.

A great deal of attention has been devoted to the science and economics of climate change. But climate change is as much an ethical issue as a scientific or economic one. Various parties to the debate – governments, industry representatives, environmentalists – often claim that certain proposals are ‘fair’ or ‘unfair’. In doing so they are making moral statements. But it is not always clear, even to those making the statements, what the moral basis is of their claims.

The following aspects of the debate of global warming have a strong ethical dimension:

- Who should take responsibility for global warming?
- Who will be most affected by climate change?
- Which countries should do more to reduce their greenhouse gas emissions?
- Do rich countries have an obligation to help poor countries deal with the effects of climate change?

In this unit we will explore the ethical principles that help us answer these questions. Ethical questions are often also questions of rights. The United Nations Universal Declaration of Human Rights says:

Everyone has a right to life, liberty, and security of person.

If global warming leads to crop failures, loss of safe drinking water and civil strife then these rights will be jeopardised.

With rights go duties, so the current generation has a duty to protect the Earth, its life forms and its resources for future generations. This idea is expressed in the idea of **intergenerational equity**, or fairness between generations.

The principle of intergenerational equity states that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

In short, each generation should leave the environment no worse off, so that the ability of future generations to provide for themselves is not damaged by depletion of resources or pollution of the land,



Extreme high tide on Tuvalu floods across road, February © 2005 Gary Braasch

water and atmosphere. In particular, loss of species is irreversible.

What are the main ethical issues associated with global warming?

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ETHICAL ISSUE NO.1 WHO IS RESPONSIBLE FOR THE DAMAGE CAUSED BY CLIMATE CHANGE?

Climate change, including global warming, sea-level rise and changes in weather patterns, is mainly due to the cumulative emissions over time leading to increased **concentrations** of greenhouse gases in the Earth's atmosphere. Each year, more greenhouse pollution is pumped into the atmosphere. Only some of it is soaked up by vegetation and the oceans, so the concentration in the atmosphere rises.

Industrialised countries – comprising Western Europe, Japan, the United States of America, Canada, Australia and New Zealand – are responsible for around 75 per cent of the increase in greenhouse gases since pre-industrial times – see **Figure 1**. Burning large quantities of fossil fuels has powered their economic growth over the last 200 years, so in this sense greenhouse pollution has been inseparable from growing rich.

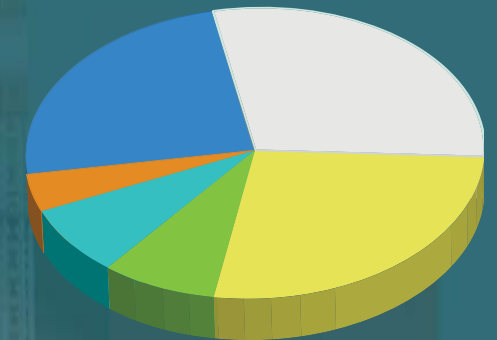
The **polluter pays principle** is widely accepted as a guide to who should take responsibility for environmental damage.

The polluter pays principle says that the person or company responsible for causing the pollution, or environmental damage, should be responsible for cleaning it up.

So if a factory pollutes a river with toxic waste and causes health problems for people living nearby, it is only fair that those who own the factory should meet the cost of reducing or cleaning up the pollution. This is the theme of the film Erin Brockovich starring Julia Roberts. The movie is based on the life of a legal clerk in California who mounted a famous legal action against a big company which was contaminating the drinking water of local residents.

Figure 1 Shares of cumulative CO₂ emissions over 1850-2002

- US
- EU-25
- Russia
- China
- Japan
- Developing countries



Source: World Resources Institute.

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The polluter pays principle also applies in the case of climate change.

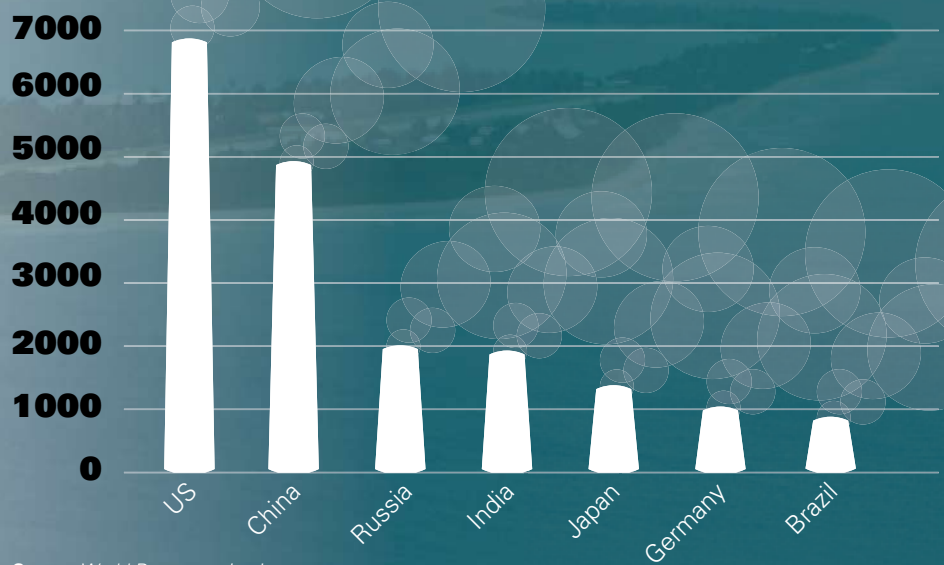
However, the situation is changing. Some large developing countries – especially China, India and Brazil – have been growing rapidly in recent years and their greenhouse gas emissions have been growing too – see Figure 2. It is expected that the annual emissions from developing countries will soon exceed those of industrialised countries and China will soon leap-frog the United States as the world’s largest annual emitter.

However, it will be some decades before these developing countries are responsible for half of the increased concentrations of greenhouse gases in the atmosphere.

The amount of greenhouse pollution that each person is responsible for is another important figure with ethical implications. China’s total emissions are ten times bigger than Australia’s, but the average Australian is responsible for nearly ten times more greenhouse pollution than the average Chinese (and is ten times wealthier).

In fact, Australians have the highest level of greenhouse pollution per person of all industrialised countries. Each person in China is responsible for around three tonnes of greenhouse gas emissions each year, and each person in India for around one tonne. Each Australian is responsible for around 27 tonnes.

Figure 2 Seven biggest annual greenhouse gas emitters, 2000 (measured in millions of tonnes of CO₂-equivalent)



Source: World Resources Institute.

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ETHICAL ISSUE NO.2 WHO WILL SUFFER MOST FROM THE EFFECTS OF CLIMATE CHANGE?

Rich countries like Australia have been the main beneficiaries of increased greenhouse gases in the atmosphere because they have been able to industrialise by burning fossil fuels. However, poor countries will experience more of the damage from global warming.

For example:

- In Africa by 2020, between 75 million and 250 million people are projected to be exposed to increased water stress due to climate change;
- In many parts of Africa, climate change is expected to severely reduce agricultural production. This will worsen food shortages and malnutrition. According to the United Nations, in some countries, yields from rain-fed agriculture could be reduced by up to 50 per cent by 2020;
- It is projected that crop yields could increase by up to 20 per cent in East and South-East Asia while they could decrease by up to 30 per cent in Central and South Asia by 2050. Overall, the risk of hunger is projected to remain very high in several developing countries; and
- Illness and deaths due to diarrhoeal disease associated with floods and droughts are expected to rise in much of Asia as a result of global warming.

In addition to the polluter pays principle, another widely accepted fairness principle is that of **ability to pay**.

The ability to pay principle says that nations or organisations that are wealthier should be required to do more than those that are poorer.

The ethical principle is similar to the idea of progressive taxation under which those who earn high incomes pay a higher rate of tax than those on low incomes. This is because an extra dollar of income means a lot more to a poor person.

Who will be more affected by climate change in Australia?

Within Australia some groups of people will be more affected by climate change than others. For example:

- In some regions, such as central Australia, the temperature will increase by more than the average;
- Wealthier people will be in a better position to 'weather-proof' their homes than poorer people, including installing double-glazing and air-conditioning; and
- Farmers may be more affected if climate change makes farming less viable economically, in areas such as the Murray Darling Basin.

Individual action versus collective action

Some people argue that we can solve climate change if everyone 'does the right thing'. They say that governments are too slow to act and if we all pull together we can sharply reduce Australia's emissions.

Others argue that only collective action, through our governments, will work. They say that 'privatising' responsibility for climate change shifts the blame from governments and businesses onto the shoulders of individual consumers. Greenhouse pollution is then attributed to our own individual failure to 'do the right thing'.

While there are some things that individuals can act on, others are beyond the capacity of individuals alone. When it comes to the food we eat or the clothes we wear, we can think about the greenhouse impact by finding out or demanding the information from the suppliers. For example, meat and fish have a very high greenhouse impact in Australia.

Yet when it comes to changing large systems over which we have no control, such as Australia's energy systems, the most effective form of action is likely to be collective action. For example, to vote for a council, state or national government that agrees to make the necessary changes and then to hold them accountable.

Fact: After several years of promoting 'green power' (renewable electricity) only 7 per cent of Australian households have opted to pay more for electricity generated from renewable energy.

United Nations' Principles

In 1992 the United Nations' Rio Declaration and the **United Nations Framework Convention on Climate Change** established the ethical principles for climate change.

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ETHICAL ISSUE NO.3 WHAT ABOUT THE ANIMALS?

Everything we have said so far concerns the impacts of climate change on humans. If the well-being of humans is all we care about then our ethical position is called **anthropocentric** or human-centred.

But climate change will affect animals too.

The United Nations expects that approximately 20-30 per cent of plant and animal species are likely to be at increased risk of extinction if increases in global average temperature exceed 1.5-2.5°C.

In **Australia**, animals such as the mountain pygmy possum and the green turtle are expected to be at greater risk of extinction. In some areas koalas will struggle to survive as eucalypts die off. Many species that depend on the Great Barrier Reef will also not survive.

If animals and plants have value in themselves, and not just because they promote human well-being, then they deserve to be protected too. So the extinction of species is an ethical issue.

Often we are not sure about the effects of our actions. We therefore have to make decisions in the face of uncertainty. In some cases, if we get it wrong we can change what we are doing and set things right. For example, if a factory pollutes a river we may be able to clean up the contamination before it is too late. In other cases, if we get it wrong the effects may be irreversible. For example, some types of contamination may kill an entire species of fish and so the effect is that the type of fish is gone for ever.

The extinction of a species is irreversible; once it's gone, it's gone forever. In these cases, we may apply what is known as the precautionary principle, which says that when we are uncertain about the likely outcomes we should adopt a cautious approach and not take the risk.

It can also mean that if there is a risk that an action could lead to the extinction of a species, then those who want to take the action should have to prove that it is safe.



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A motivation for the precautionary principle

If we live as if it matters, and it doesn't matter, then it doesn't matter. If we live as if it doesn't matter, and it matters, then it matters.

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STUDENT ACTIVITIES

Comprehension Questions

- Who do you believe is responsible for global warming? Explain your opinion.
- Write in your own words what the precautionary principle is.

Analysis Questions

- Is climate change a moral issue? Explain your answer with reference to one of the three ethical issues associated with climate change.
- Assess whether you believe it is a moral issue if some animals become extinct because of climate change.

Exercise 1

- Watch the movie Erin Brockovich (it is rated M). What moral issues does it raise? Do you think there are similar issues associated with climate change?

Exercise 2

- Small island states – such as Tuvalu and Kiribati (pronounced 'Kirri-barse') – are sometimes seen as the conscience of the world because they are likely to be most affected by rising sea-levels. Some may disappear completely.
- Consider the **moral claims** of the Alliance of Small Island States (AOSIS), which includes Tuvalu and Kiribati, for the world to take strong action.
- Do you think countries like Australia have a moral obligation to accept migrants from small island states displaced by rising seas?

Notes for Teachers

- Split the class into three groups and ask each group to use the internet to answer one of the following questions.
 - ▶ What proportion of Australians have solar hot water heaters on their roofs?
 - ▶ What proportion of Australians drive fuel-efficient cars?
 - ▶ How many have bought less fuel-efficient four-wheel drives in the last ten years?

Once all of the groups have finished their research, the students share their answers and consider the implications for the debate about individual action versus collective action. Is individual action working?