

The Economics of Climate Change

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Fact Sheet

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Climate Change

Sacrifices needed

Global climate change is an economic issue, because any policy response pursued will involve sacrifices. To reduce greenhouse gas emissions in adapting to the impacts of climate change, countries and people will need to pay these efforts by diverting resources from other activities. If climate change impacts are still felt despite these efforts, then we will suffer the consequences of environmental damage. The economics of global climate change is primarily about balancing these sacrifices.

A balanced policy response must seek to reduce both greenhouse gas concentrations and the damage they cause. The cost of a climate change policy is estimated by calculating the improvement or decline in human well being. One way to estimate this change is to find the added income need to make society well of with such as policy.

Initial costs

Economists generally agree that the cost per tonne in reducing greenhouse gas emissions would be small. However, after the cheapest solutions for reducing emissions have been exhausted, the per tonne cost would rise steeply as more reductions are made via more expensive solutions. Most economists agree and believe that the total cost of reducing greenhouse gas emissions will be high - more than 1% GDP per annum.

Benefits of a climate change policy are estimated by calculating how much the policy reduces environmental damage. How much of an economy would be seriously affected by climate change? For most industrialised countries, it is 1 - 3% of GDP.

Economic instruments

Once policy makers determine their objectives, economists can offer insights into how to draft the most cost effective policies. Economists prefer economic instruments to direct regulations, such as:

- imposing a tax on CO₂ emissions;
- setting a quantitative limit on the global emissions of greenhouse gases; and,
- allowing emissions to be traded like ordinary goods for transactions.

To significantly reduce atmospheric concentrations of greenhouse gases, it will need international coordination and agreements. When one country reduces its emissions, all countries benefit. However, the country reducing emissions will incur substantial costs and will receive only a fraction of the total benefit achieved by its actions. The incentive to reduce emissions is small. The Montreal Protocol for phasing out CFCs is the best known example of this international co-ordination.

It will be difficult to share the costs and benefits of policies that would effectively address climate change.

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