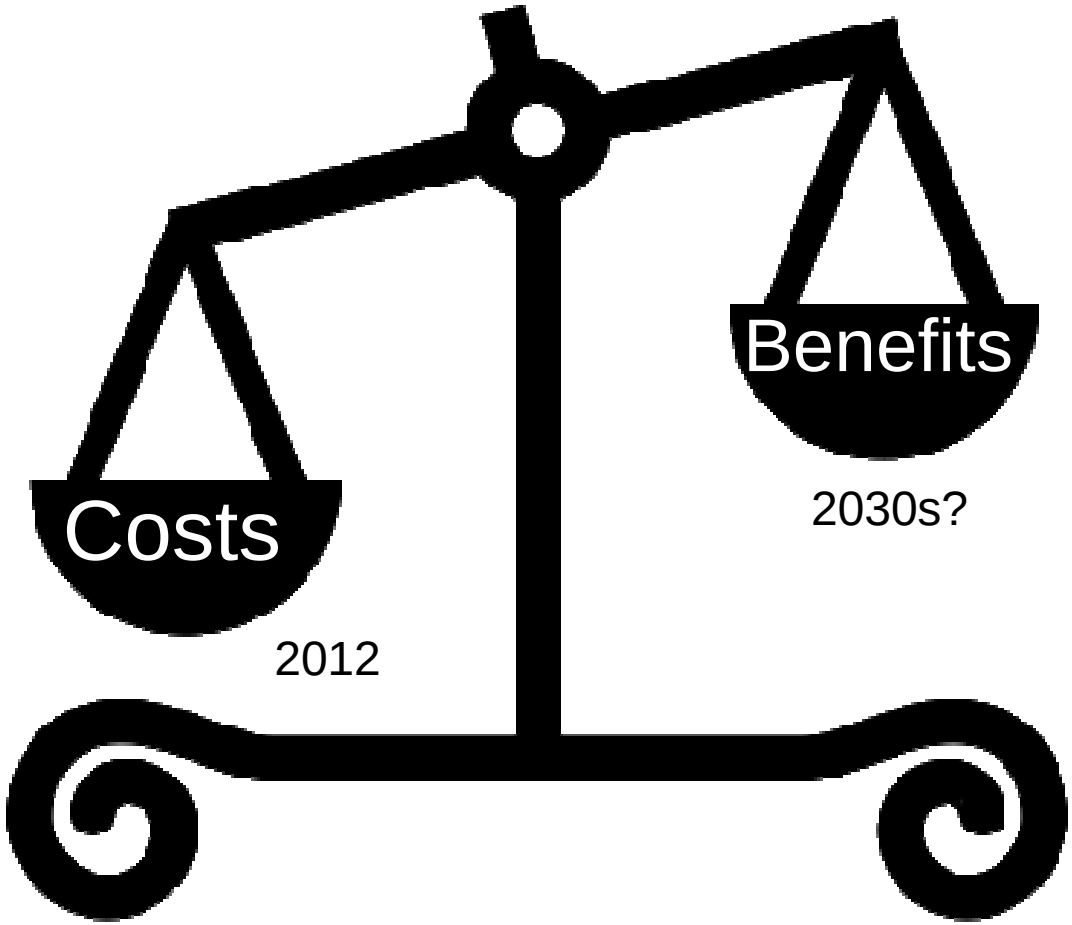
Saturday October 6th 2012

Lessons from the future: unblocking the science-policy interface

Prof. Jacqueline McGlade
Executive Director, EEA

European Environment Agency

The problem for environmental action



- Taking preventive action now impacts existing constituencies in specific, quantifiable ways

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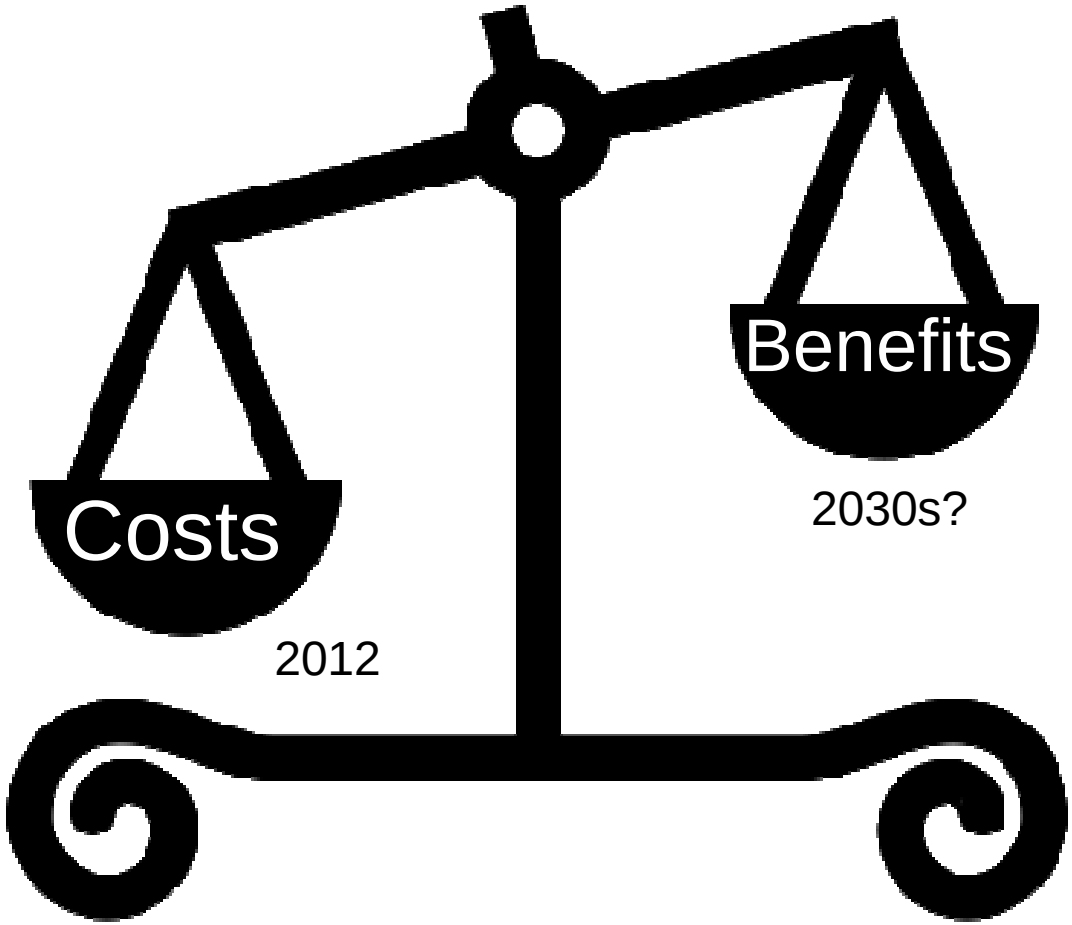

- Taking preventive action now impacts existing constituencies in specific, quantifiable ways
- Those who will benefit from this action are less well-known and typically benefit in a more diffuse way as benefits are shared by a larger group

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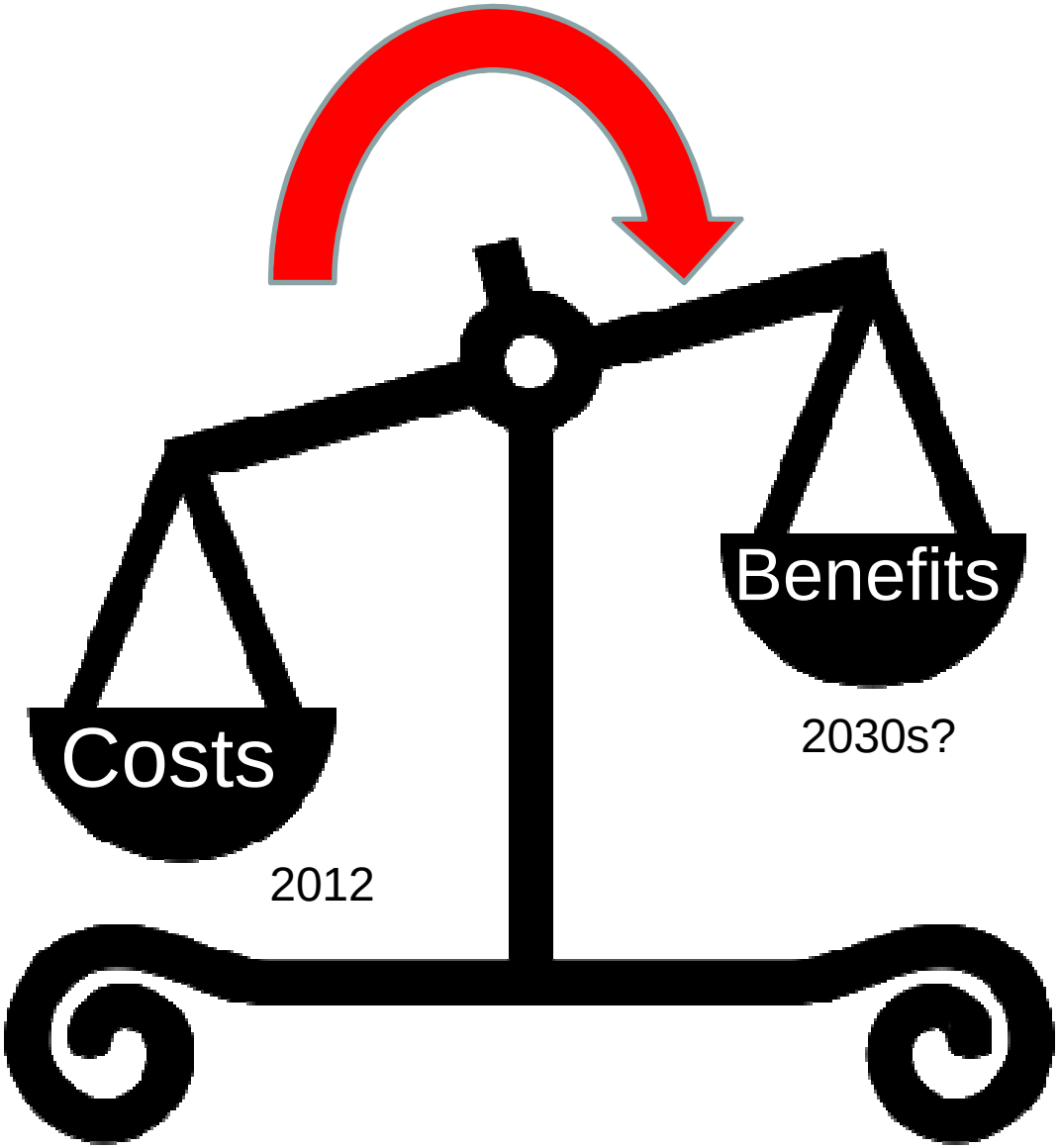
But the scales can be tipped back…



- Successful public policy has managed to overcome this problem

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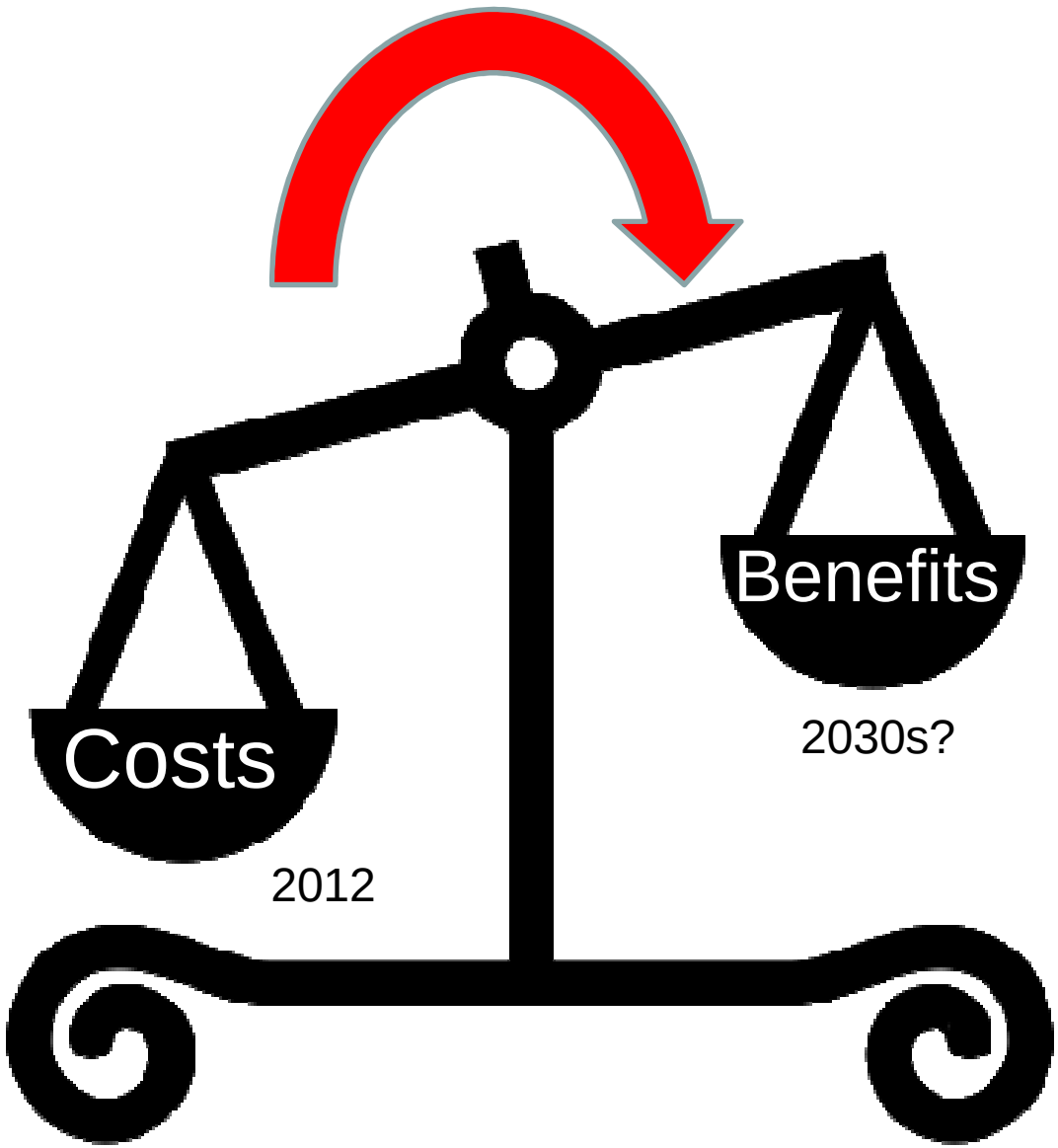
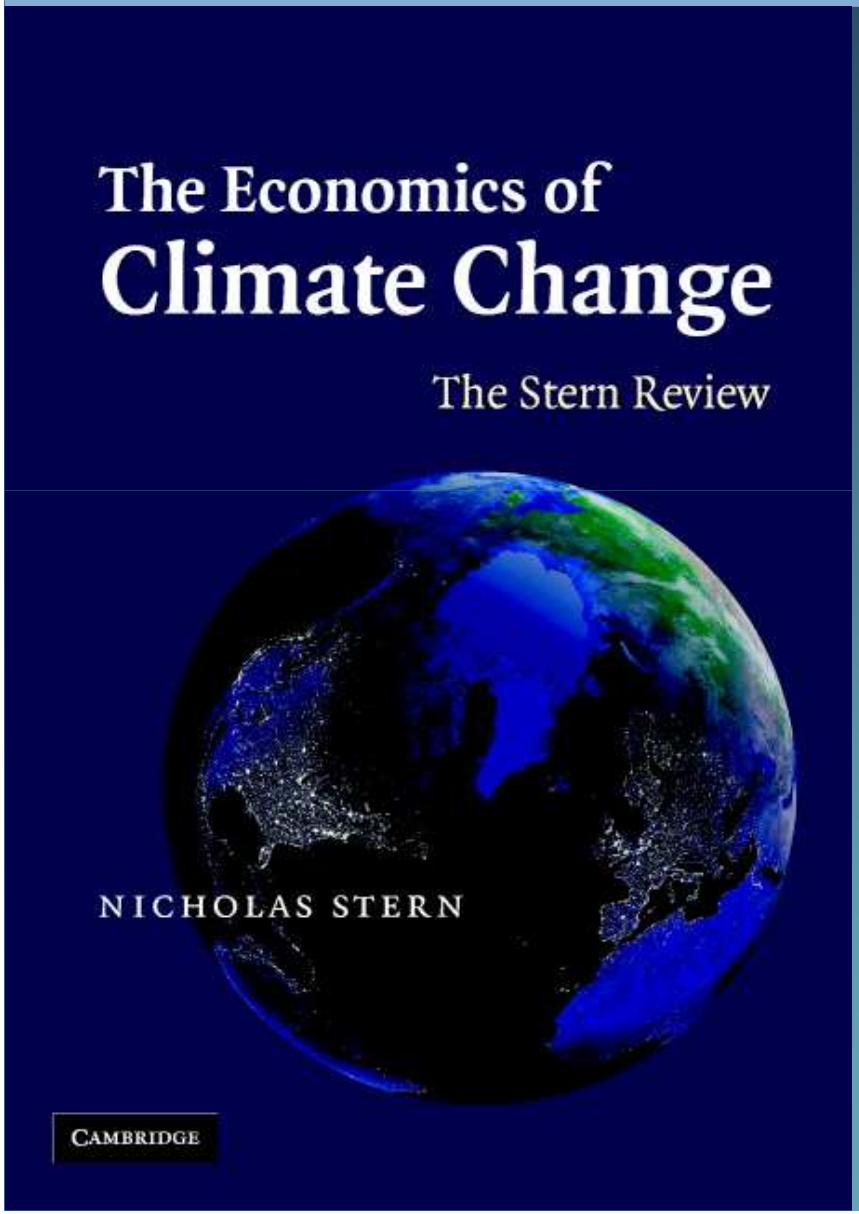


- Successful public policy has managed to overcome this problem
- Science and economics can make the future costs of inaction more clear

The 2007 Stern Review of Climate Change



- The Stern review made clear the future costs of *inaction* to show that preventive early action would be cheaper than dealing with the effects of climate change.
- Dealing with the costs of climate change could be between 5% and 20% of GDP, but preventive action would only cost 3% of GDP.

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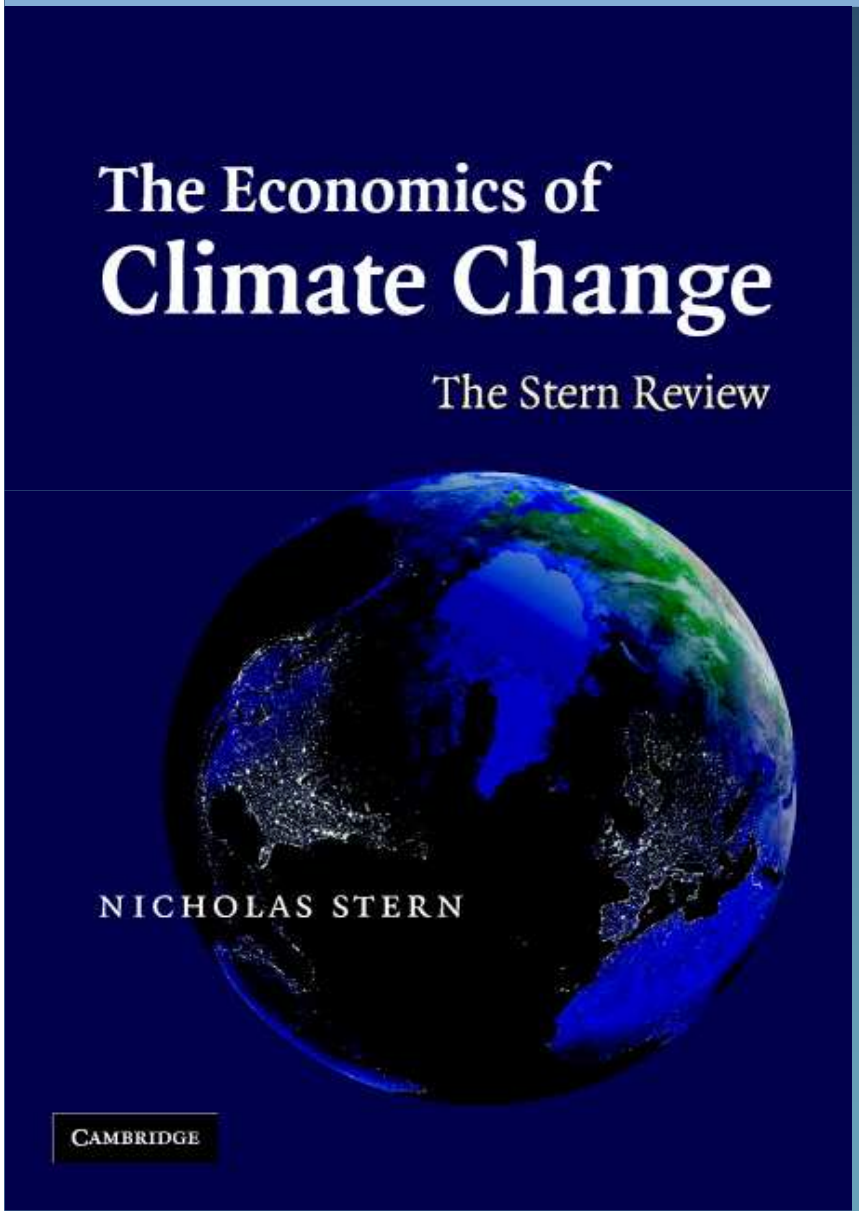

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- Dealing with the costs of climate change could be between 5% and 20% of GDP, but preventive action would only cost 3% of GDP
- The Stern review prompted changes in EU and UK climate change policy

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The phase-out of leaded petrol

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- IQ loss could be translated to lower earnings over a lifetime and therefore to a social cost

‘Discounting’ for the time value of money

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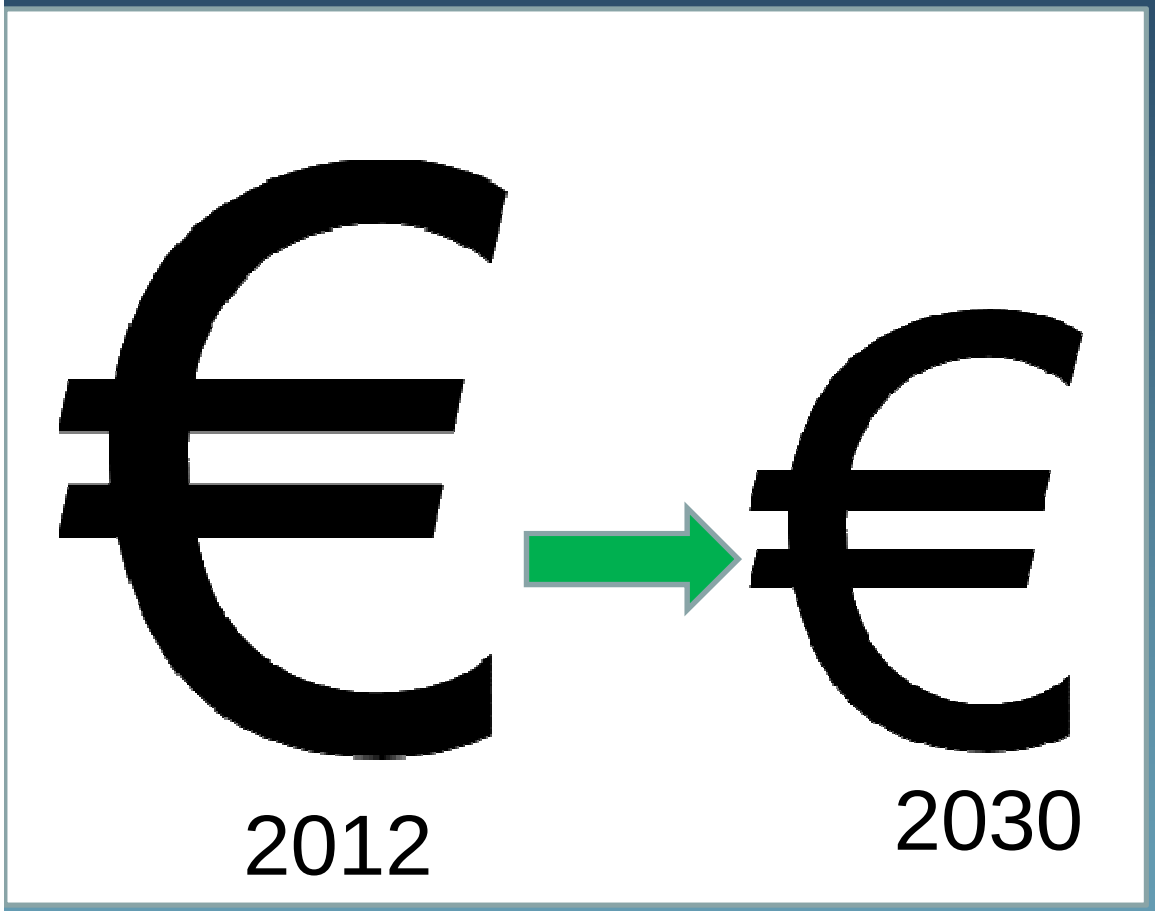
Discounting presents a problem



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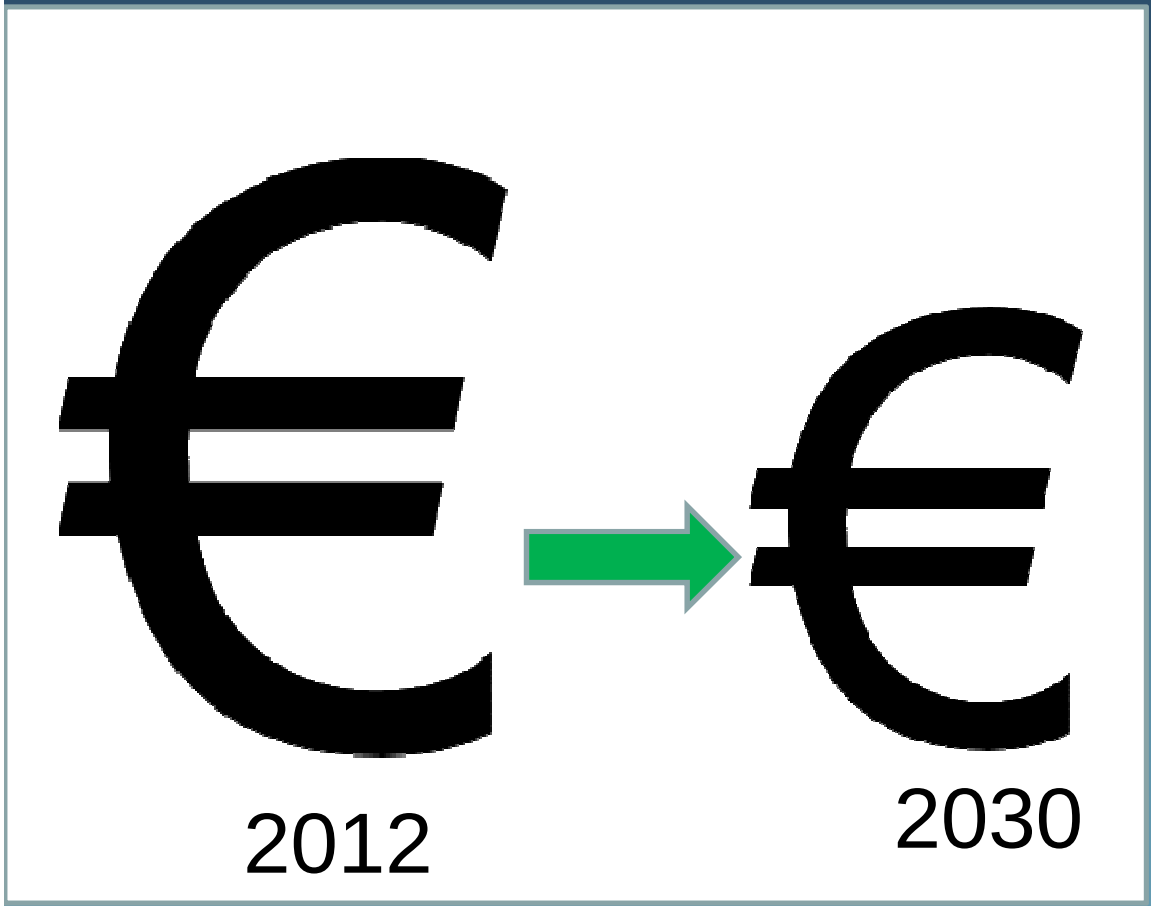

- Future costs of inaction (and therefore future benefits from action) are not equivalent to current costs of preventive action
- We can make these two costs comparable by means of a ‘discount rate’, but establishing a discount rate is highly complex and is likely to remain an ongoing problem in environmental policy

Accounting for the ‘time value of harm’…

How could we measure the value of a one-year decline in life expectancy for this boy?

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Accounting for the ‘time value of harm’…

How could we measure the value of a one year decline in life expectancy for this boy?

Would it be the same as a one year reduction in life expectancy for his grandfather?

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..and the time value of time itself…

Problems include:

- How to value human lives?
- How to value years in human lives
- How to value periods of greater and lesser health at different stages of life

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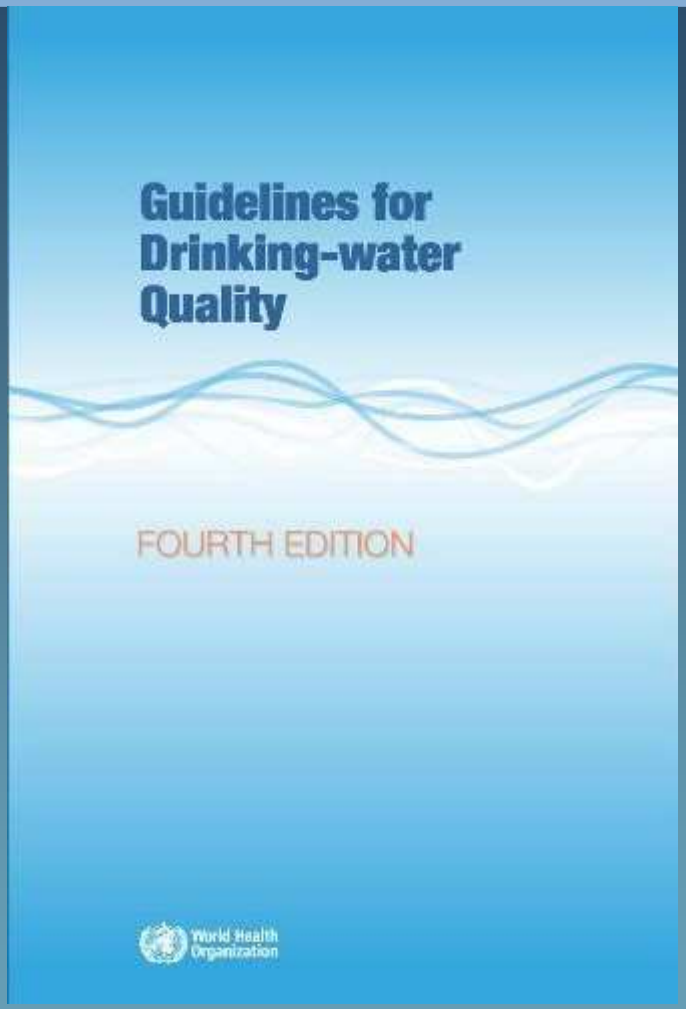
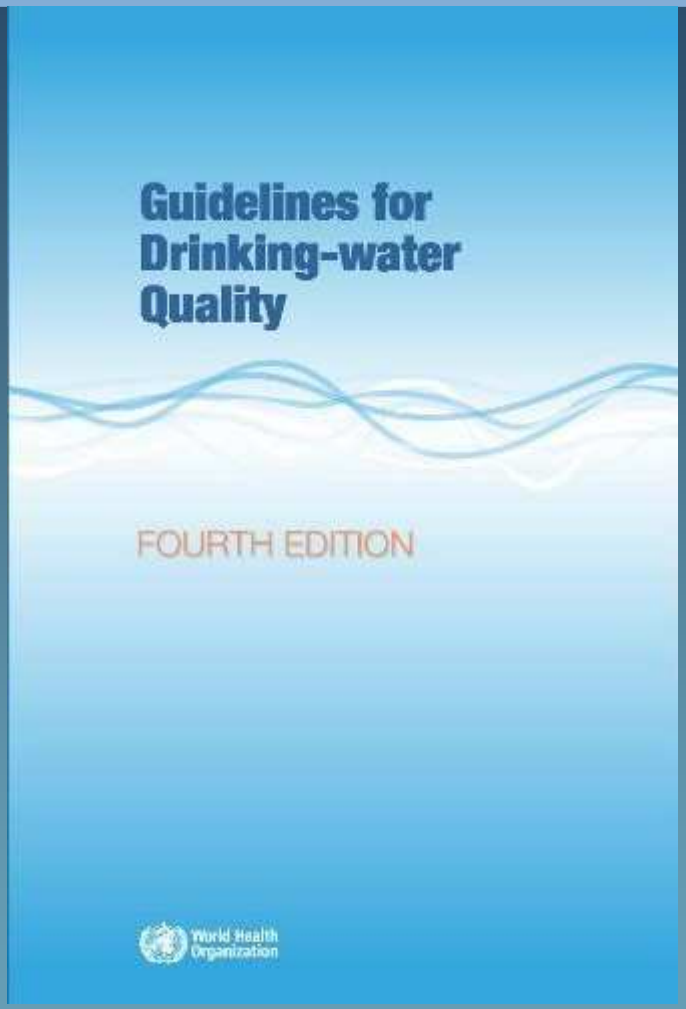
These calculations may make it easier to assess policy decisions, but they are highly complex, and will always be the subject of dispute

Nitrates and scientific uncertainty



- WHO believes the link between cancer and nitrates in drinking water is only a possibility

Nitrates and scientific uncertainty



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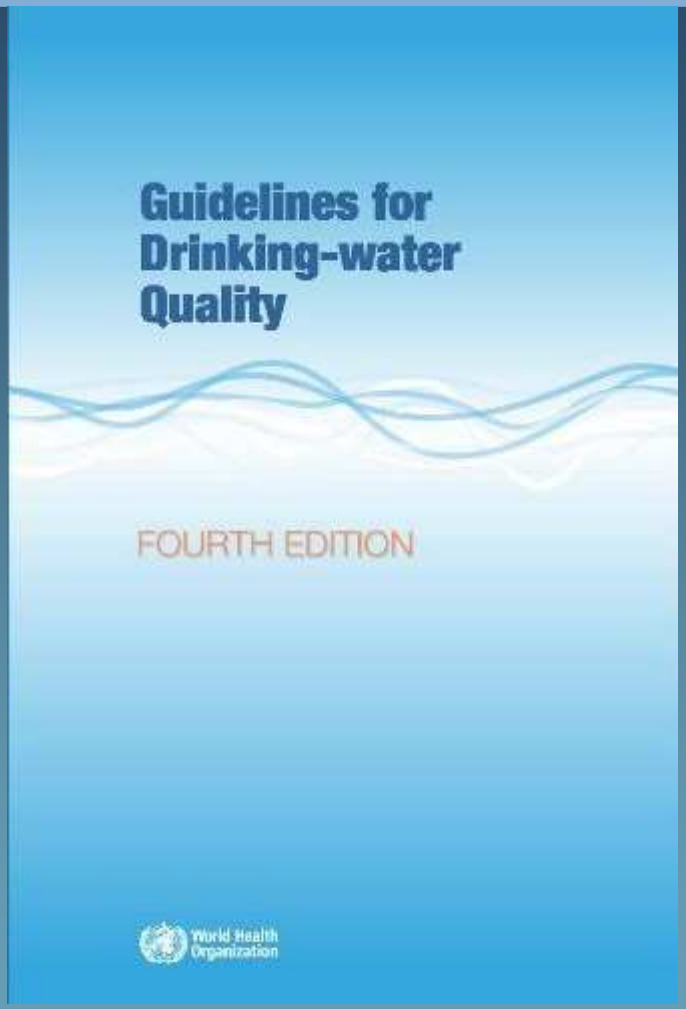

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- Where science is uncertain, it is not possible to provide an accurate assessment of the costs of inaction
- This means there is a role for a risk-based approach, and for 'cross-referencing' of different policy goals. For example, in the case of nitrates, decreasing a health risk will also decrease water eutrophication.

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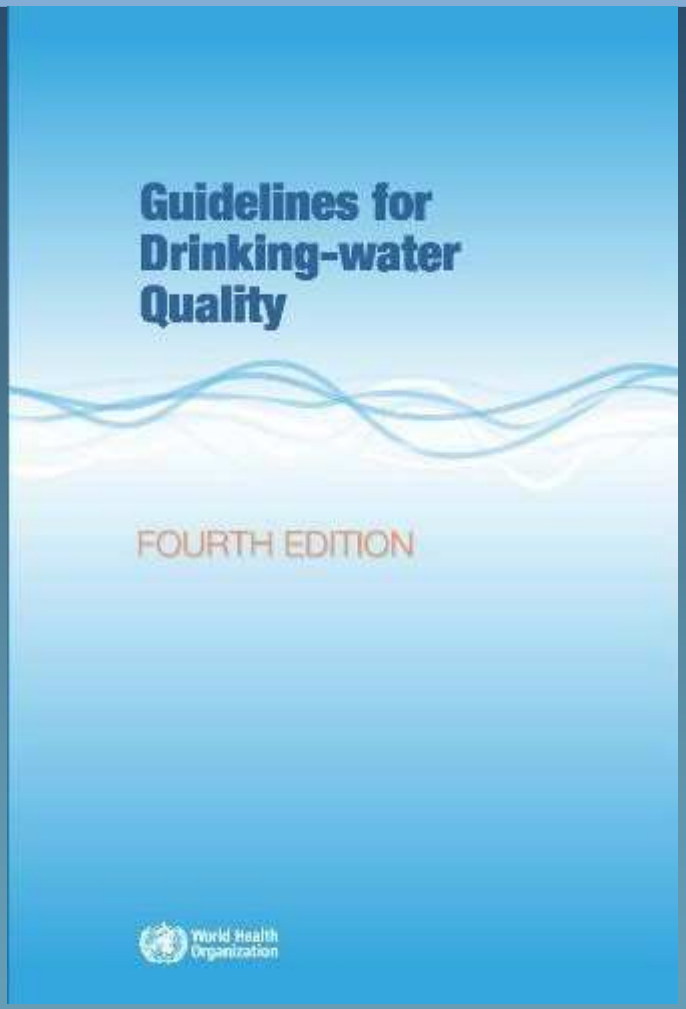

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- This means there is a role for a risk-based approach, and for 'cross-referencing' of different policy goals. For example, in the case of nitrates, decreasing a health risk will also decrease water eutrophication.
- The precautionary principle is more important than ever

Thank you!

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