



Environmental Outlook to 2050: Climate Change Chapter

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Environmental state and pressures



The Outlook Baseline

Three scenarios for the same objective:

- The 450ppm core scenario, based on least cost timing of action
- A « delayed action » scenario based on Copenhagen pledges
- An « accelerated action » scenario, implying reduced reliance on new technologies



OFCD

There are other pathways: 450 Core

- The 450ppm core scenario, based on least cost timing of action
- A « delayed action » scenario based on Copenhagen pledges
- An « accelerated action » scenario, implying reduced reliance on new technologies





There are other pathways: 450 Accelerated Action

- The 450ppm core scenario, based on least cost timing of action
- A « delayed action » scenario based on Copenhagen pledges
- An « accelerated action » scenario, implying reduced reliance on new technologies





There are other pathways: 450 Delayed Action

- The 450ppm core scenario, based on least cost timing of action
- A « delayed action » scenario based on Copenhagen pledges
- An « accelerated action » scenario, implying reduced reliance on new technologies





There are other pathways: 550 Core

- The 450ppm core scenario, based on least cost timing of action
- A « delayed action » scenario based on Copenhagen pledges
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The cost of action is still affordable...for now

The average GDP growth rate would slow by 0.2 percentage point between 2010 and 2050, from 3.5% to 3.3% in a context of quadrupling of world GDP. Benefits of action are not included in GDP projection



projection;

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Act now - because delay is costly

Delaying action would increase the global cost of mitigation by nearly 50% by 2050, and could make it unaffordable

Real income in 2050 (% deviation from baseline)

Economic impact of technology choices in 2050

Leaving out any single technology – such as nuclear or carbon capture and storage (CCS) – will make the carbon and macroeconomic costs of the transition higher

Source: Outlook Baseline projection using ENV Linkages model

Why make CO2 cheaper if you're trying to make it scarcer?

Income gains from unilateral fossil fuel subsidy removal (% change in HH income vs BAU)

Source: OECD and IEA analysis see website: www.oecd.org/iea-oecd-ffss

Energy RD&D

Except in 2009 for the green stimulus, public RD&D on energy as share of total R&D budgets has declined in real terms over the last 35 years (IEA).

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Total: 22.9 billion USD

bilateral commitments, USD billion, constant 2009 prices

Mitigation-related aid, 2006-10,

bilateral commitments, USD billion, constant 2009 prices

Climate change mitigation:principal objective

Climate change mitigation:upper bound estimate (principal+significant objective)

Mitigation-related Aid, 2010

Adaptation-related Aid, 2010

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