Environmental Outlook to 2050: the consequences of inaction

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OECD Environmental Outlook to 2050

• Projects demographic and economic trends to 2050, and their impacts on the environment without more ambitious policies = the “Baseline” scenario

• The “Baseline” scenario is…
  – not an acceptable future
  – calls for urgent action now to avoid the costs and consequences of inaction

• Focus on: Climate Change, Biodiversity, Water, Health & Env

• Examines policy solutions to avoid the “Baseline” projections, and move towards Green Growth

• Global scale, time horizon to 2050

• Joint modelling with PBL’s IMAGE model
Scenarios for the future to 2100

Source: OECD (2012), OECD Environmental Outlook to 2050, Baseline projection using ENV-Linkages model
GHG emissions intensity and GDP

Source: OECD (2012), OECD Environmental Outlook to 2050, Baseline projection using ENV-Linkages model
Health: premature deaths from air pollution

Particulate Matter

Ground-level ozone

Unsafe Water Supply and Sanitation*

Indoor Air Pollution

Malaria

Deaths (millions of people)

2010

2030

2050

Source: OECD Environmental Outlook to 2005; output from IMAGE
Global water demand

Source: OECD Environmental Outlook Baseline; output from IMAGE
Biodiversity: Mean Species Abundance

Source: OECD Environmental Outlook Baseline; output from IMAGE
Environmental Outlook to 2050: What policies do we need?

• Make pollution more costly
• Value and price the natural assets and ecosystem services
• Remove environmentally harmful subsidies
• Devise effective regulations and standards
• Encourage green innovation
• Measure progress
• Mainstream green growth
The CIRCLE project

CIRCLE looks at costs of inaction and benefits of action: feedbacks from environmental challenges on economic growth

CIRCLE: Costs of Inaction and Resource scarcity: Consequences for Long-term Economic growth
Regional cost of selected climate impacts

Uncertainty ranges in 2060 due to uncertainty in ECS

Source: ENV-Linkages calculations
THANK YOU!

For more information:

www.oecd.org/environment/CIRCLE.htm
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Selected impacts of climate change

**Included in the modelling**
- Agriculture: yield changes for 8 crop sectors, and fisheries
- Coastal zones: capital and land losses due to sea level rise
- Health: diseases and labour productivity losses from heat stress
- Energy demand
- Tourism demand
- Capital damages from hurricanes

**Stand-alone analysis**
- Fatalities from heatwaves
- Urban damages from river floods
- Ecosystems: biodiversity (crude approximation)

**Still not quantified**
- Large-scale disruptive events, ...
No-damage baseline GDP projection

Source: ENV-Linkages calculations