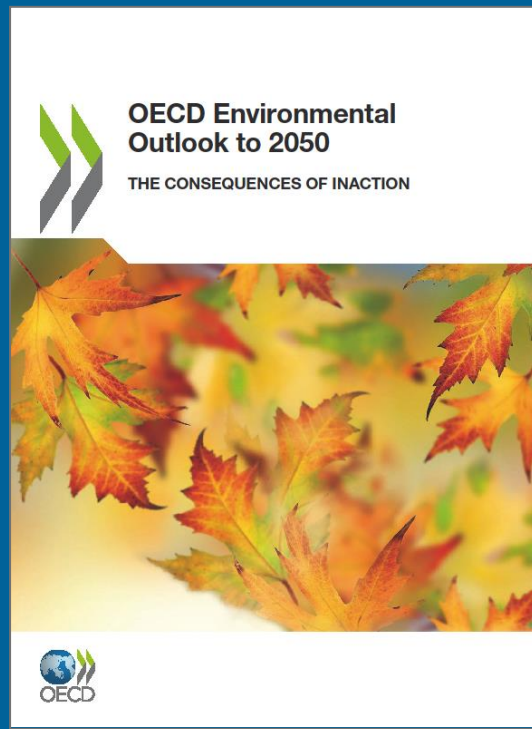




Environmental Outlook to 2050: the consequences of inaction



Rob Dellink, OECD Environment Directorate
Workshop Future trends in STI policy
Paris, 17 December 2015

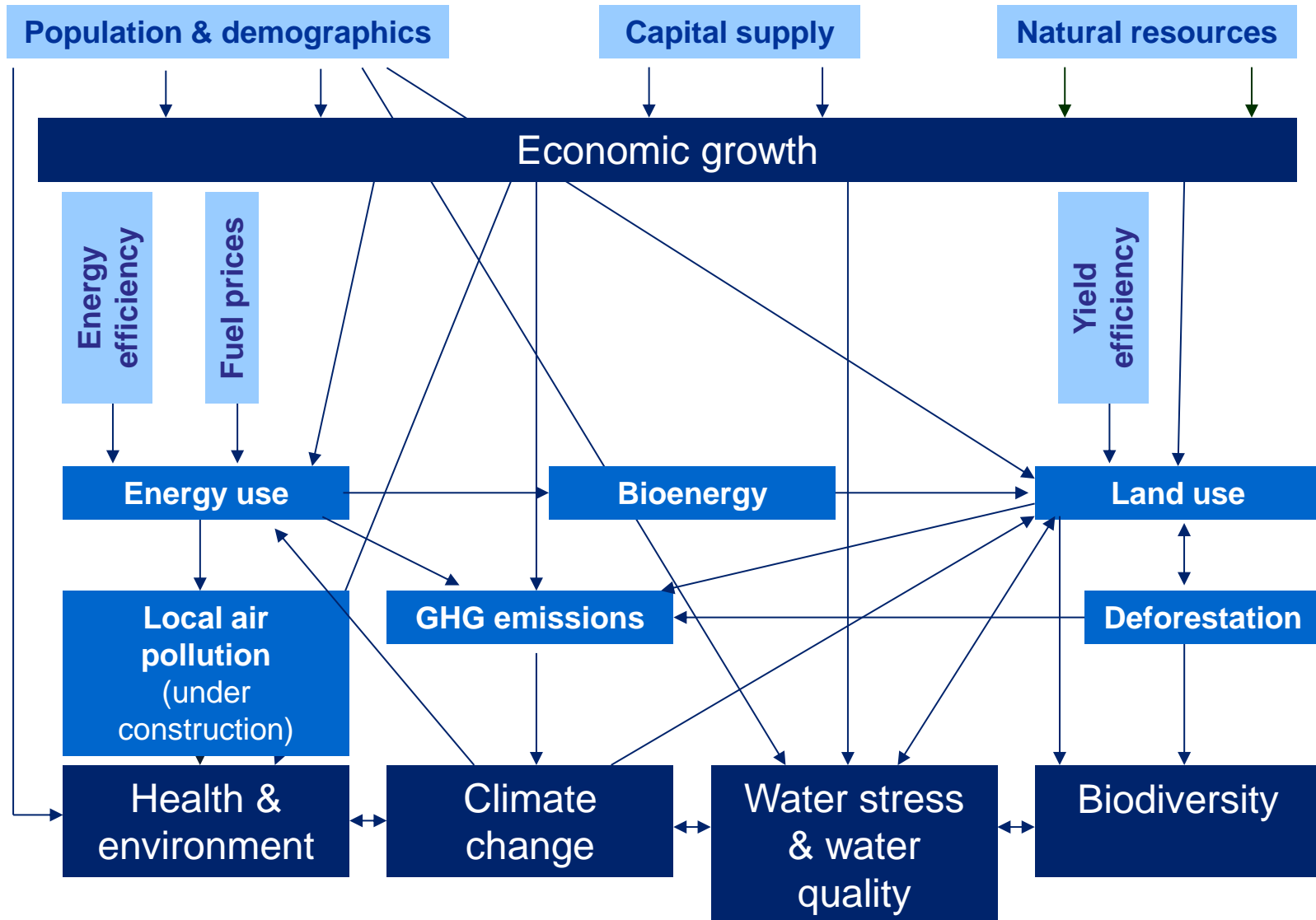


OECD Environmental Outlook to 2050

- 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

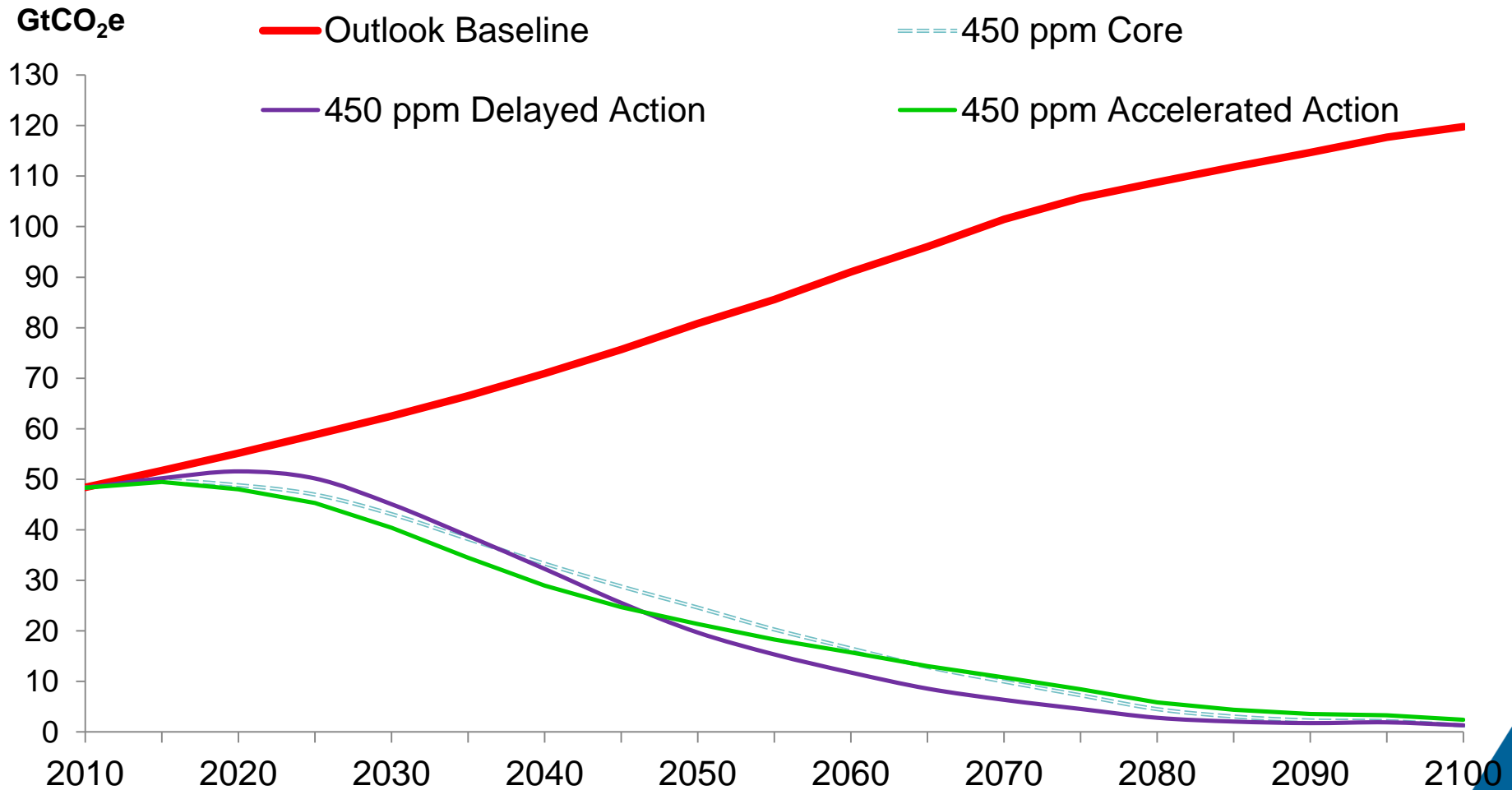


Linking Economy and Environment





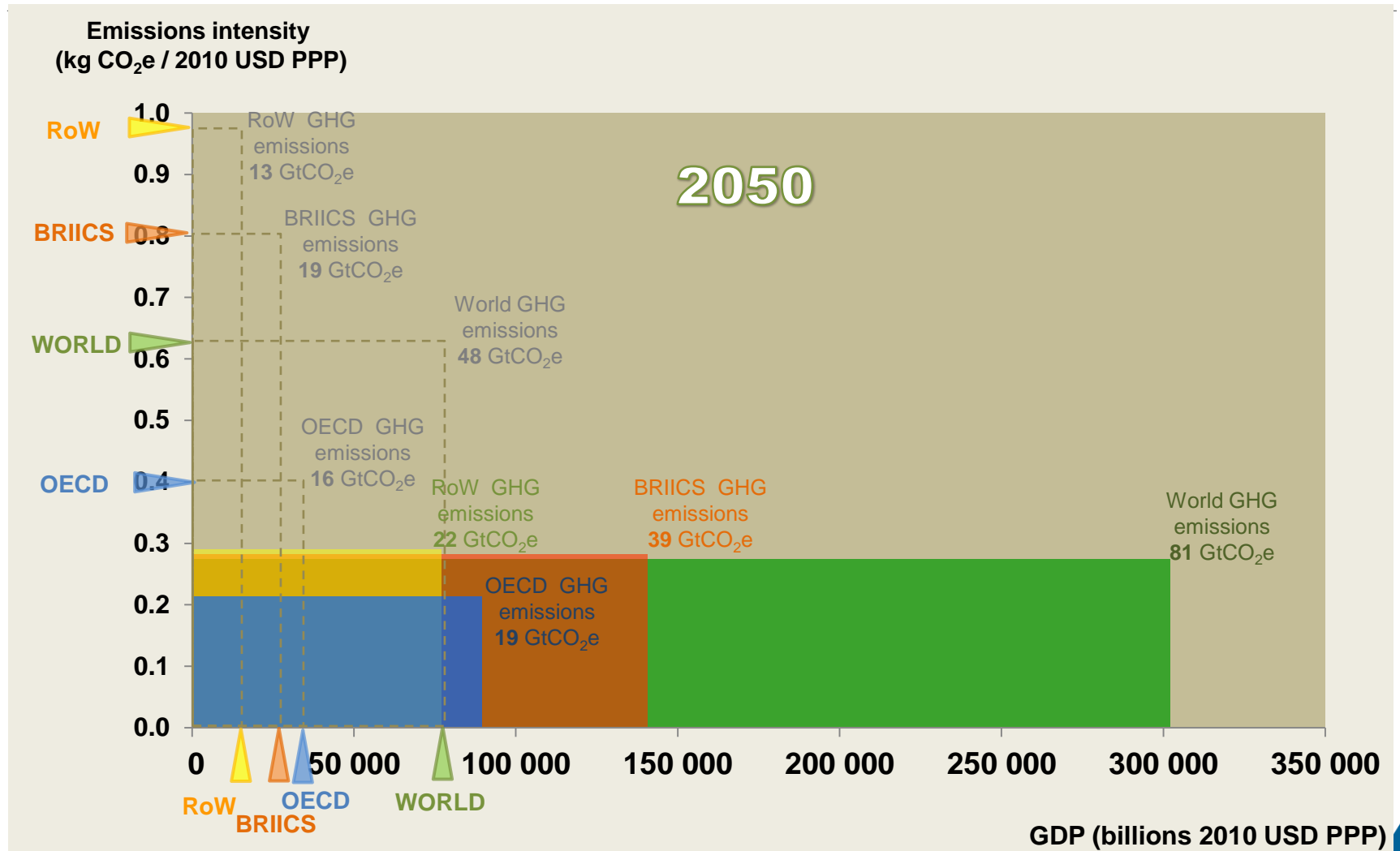
Scenarios for the future to 2100



Source: OECD (2012), *OECD Environmental Outlook to 2050*,
Baseline projection using ENV-Linkages model



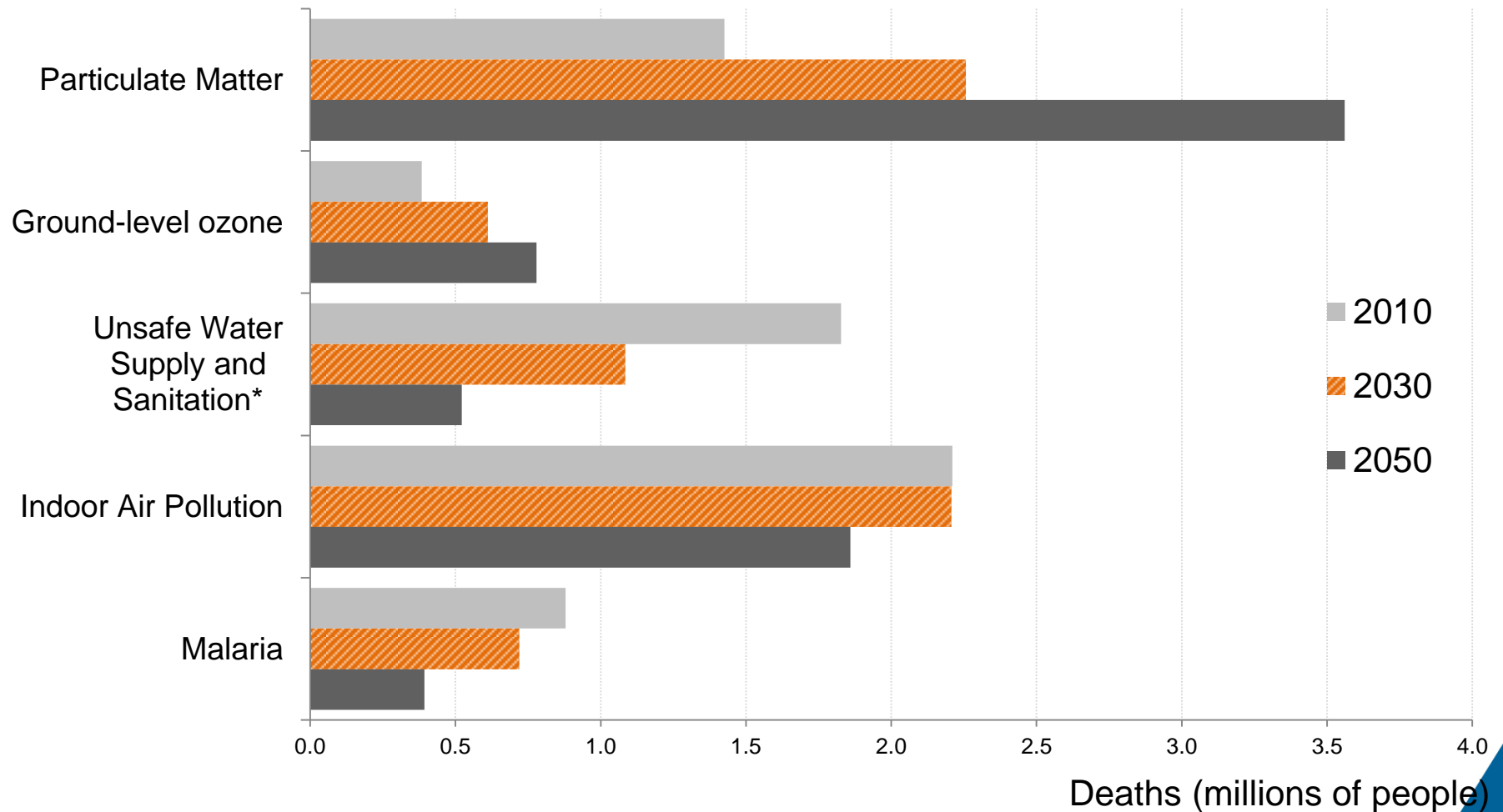
GHG emissions intensity and GDP



Source: OECD (2012), OECD Environmental Outlook to 2050,
Baseline projection using ENV-Linkages model

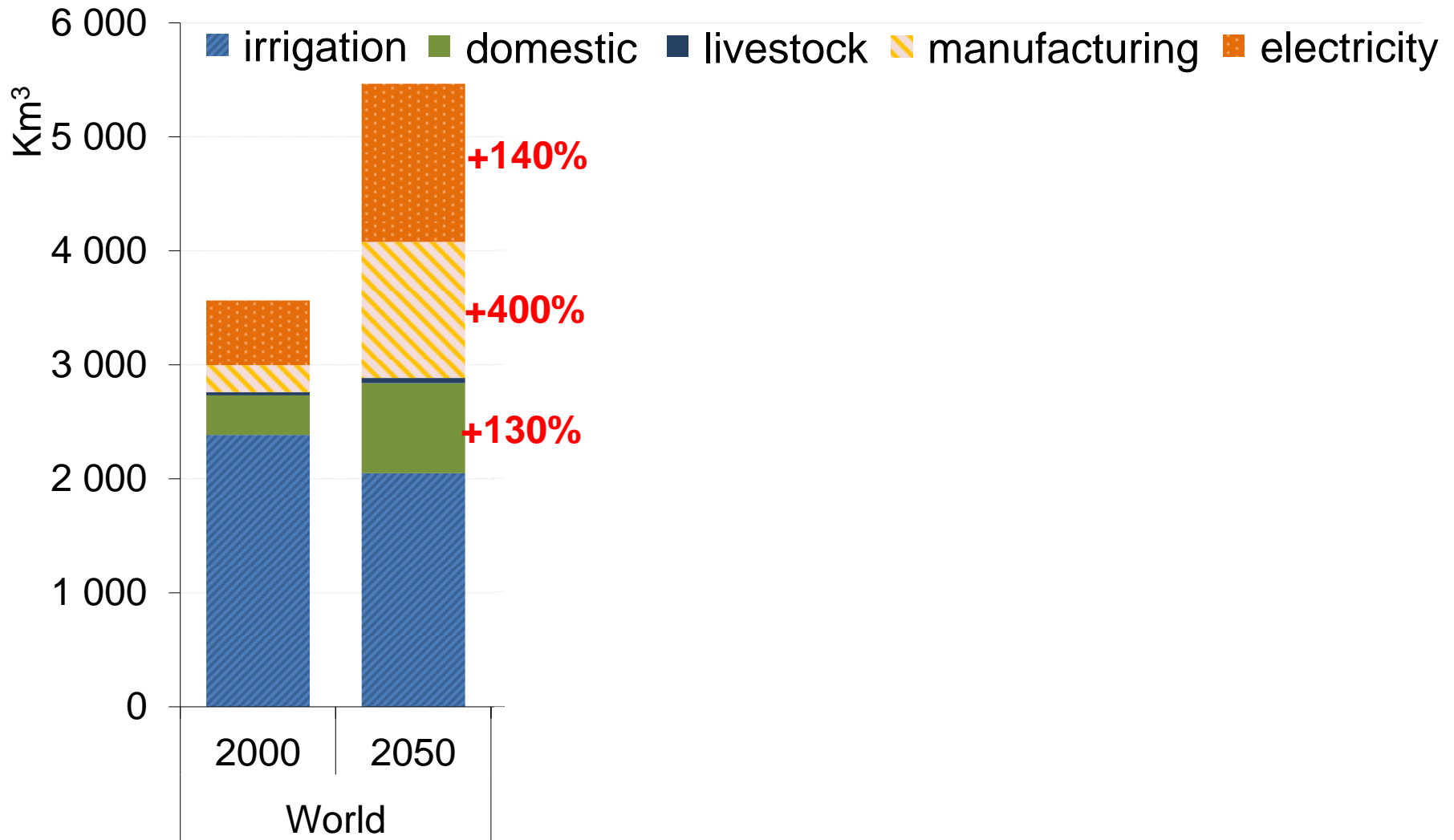


Health: premature deaths from air pollution



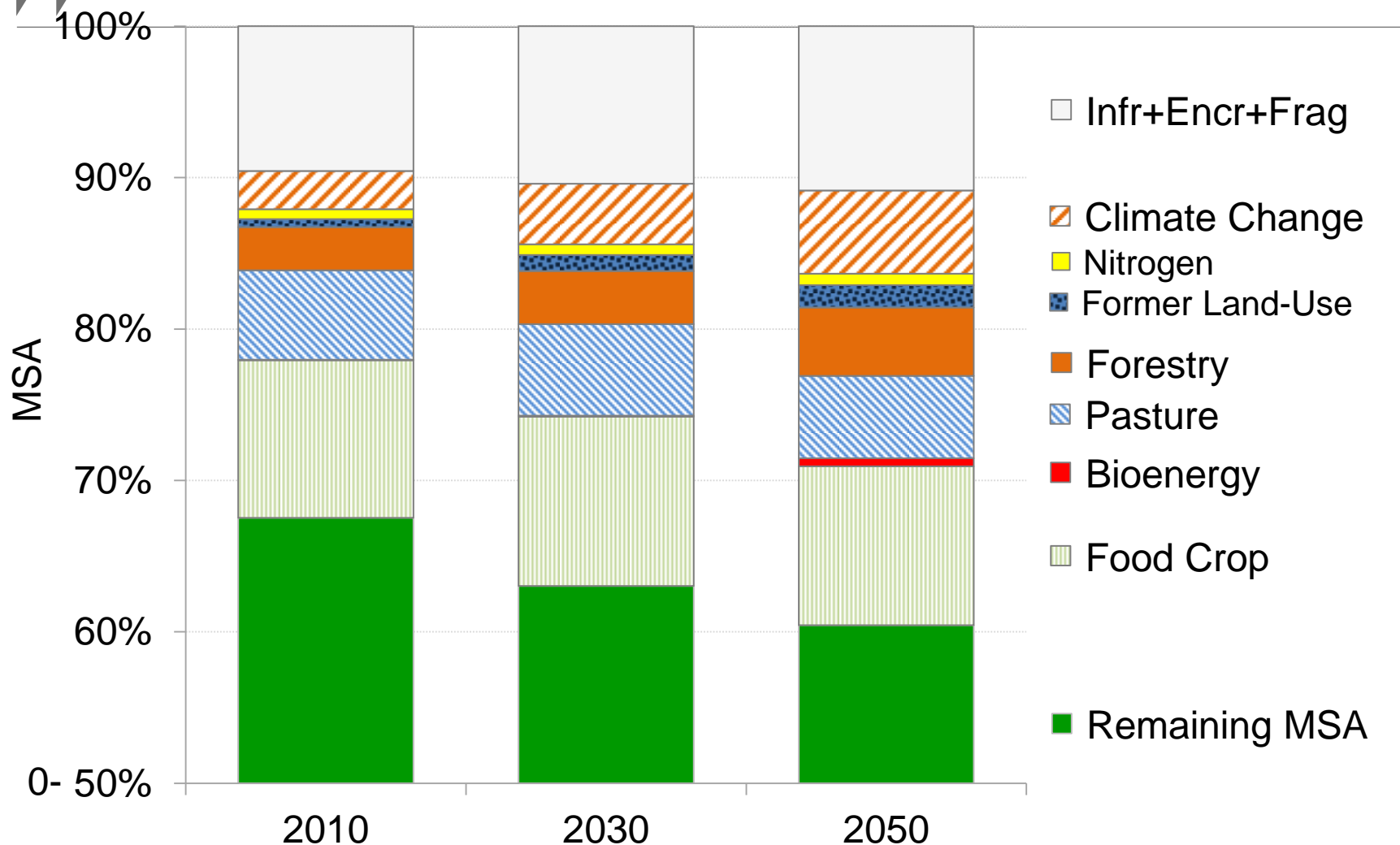


Global water demand





Biodiversity: Mean Species Abundance



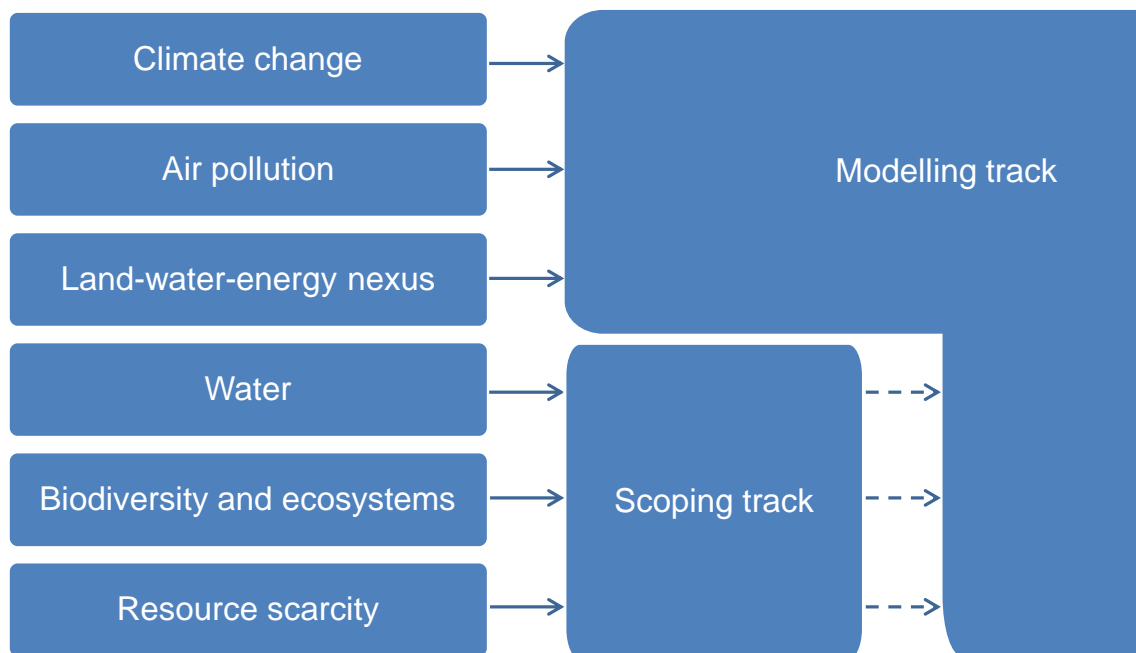


Environmental Outlook to 2050: What policies do we need?

- **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

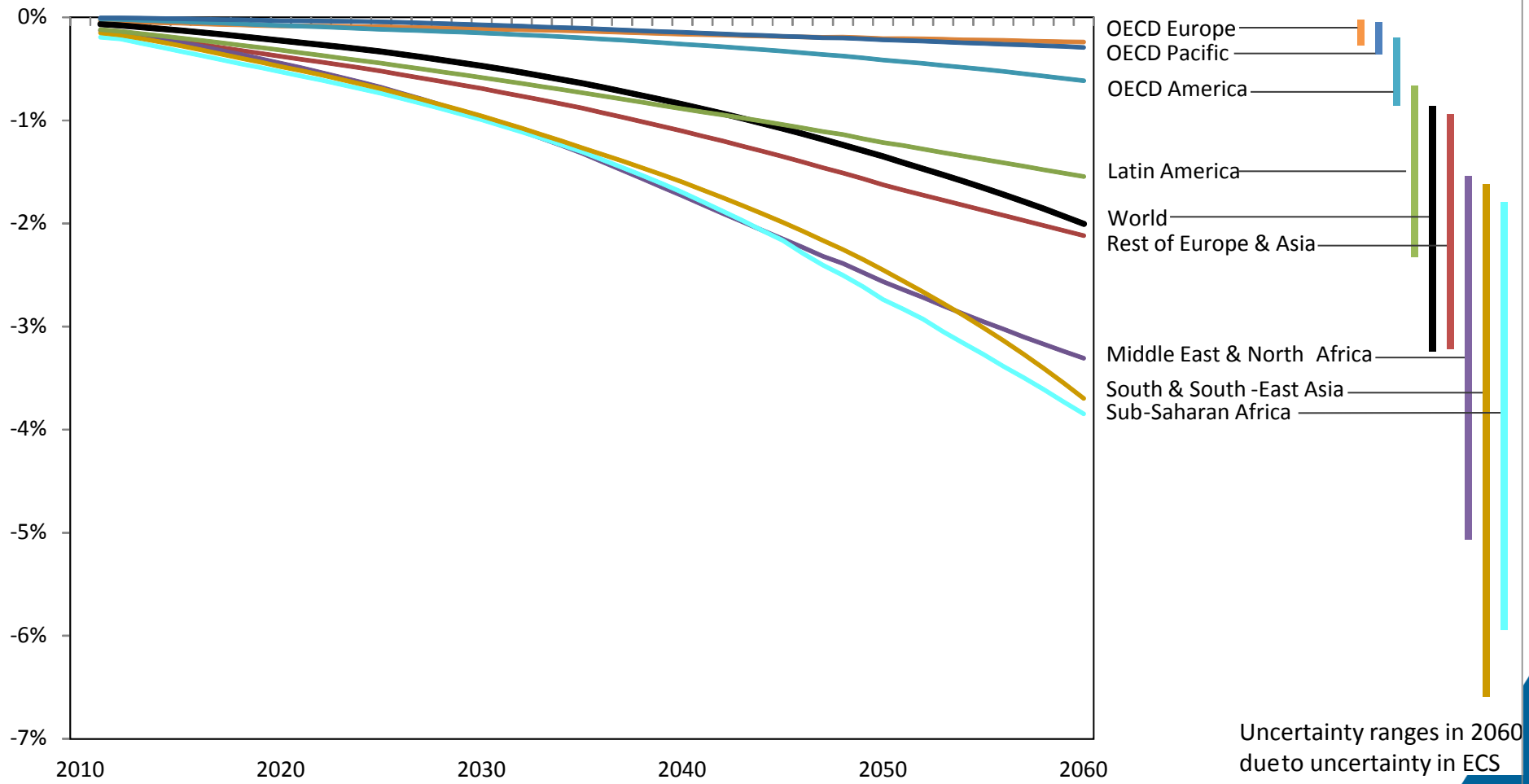
CIRCLE looks at **costs of inaction** and **benefits of action**:
feedbacks from environmental challenges on economic growth



CIRCLE: **C**osts of **I**naction and **R**esource scarcity: **C**onsequences for **L**ong-term **E**conomic growth



Regional cost of selected climate impacts



Source: ENV-Linkages calculations



THANK YOU!

For more information:

www.oecd.org/environment/CIRCLE.htm

www.oecd.org/environment/modelling

rob.dellink@oecd.org



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

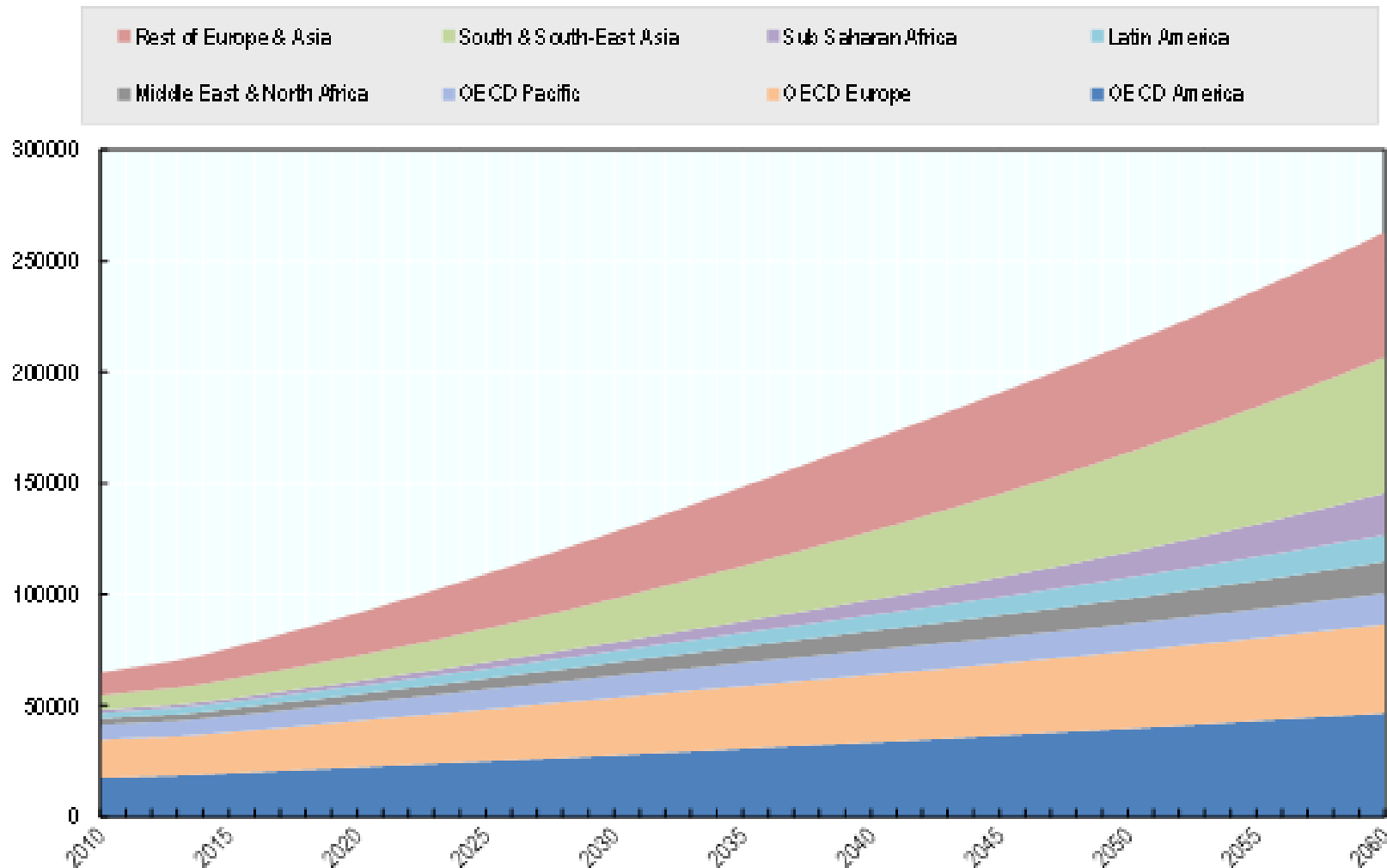
- Fatalities from heatwaves
- Urban damages from river floods
- Ecosystems: biodiversity (crude approximation)

Still not quantified

- Large-scale disruptive events, ...



No-damage baseline GDP projection



Source: ENV-Linkages calculations