Key Findings on Climate Policies, Technologies and Finance

IPCC Fifth Assessment Report
Synthesis Report

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Limiting Temperature Increase to below 2˚C

Measures exist to achieve the substantial emissions reductions required to limit likely warming to 2˚ C

A combination of adaptation and substantial, sustained reductions in greenhouse gas emissions can limit climate change risks

Implementing reductions in greenhouse gas emissions poses substantial technological, economic, social, and institutional challenges

But delaying mitigation will substantially increase the challenges associated with limiting warming to 2˚ C

AR5 WGI SPM, AR5 WGII SPM,AR5 WGIII SPM

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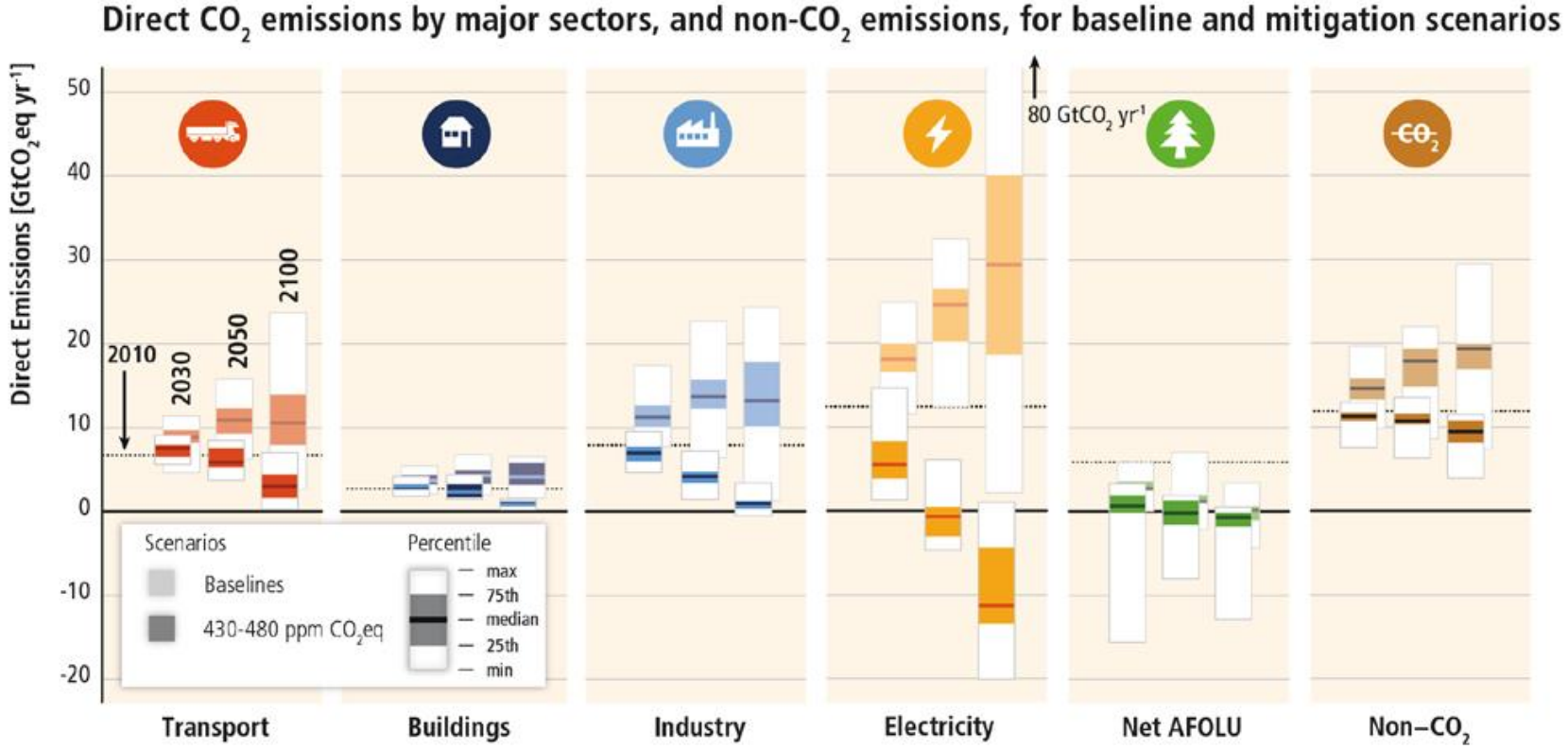
Well-designed systemic and cross-sectoral mitigation strategies are more cost-effective in cutting emissions than a focus on individual technologies and sectors



CO_2 emissions by sector and total non-CO2 GHGs (Kyoto gases) across sectors in baseline (faded bars) and mitigation scenarios (solid colour bars) that reach about 450 ppm CO2-eq concentrations in 2100 (Fig SYR SPM.14)

Adaptation and mitigation are complementary strategies

Substantial emissions reductions over the next few decades can:

- reduce climate risks in the 21st century and beyond,
- increase prospects for effective adaptation,
- reduce the costs and challenges of mitigation in the longer term, and
- contribute to climate-resilient pathways for sustainable development.

Many adaptation and mitigation options can help address climate change, but no single option is sufficient by itself

Adaptation and mitigation responses are underpinned by common enabling factors. These include:

- ➜ effective institutions and governance,
- ➜ innovation and investments in environmentally sound technologies and infrastructure,
- ➜ sustainable livelihoods, and
- ➜ behavioral and lifestyle choices.

Sustainable development and equity provide a basis for assessing climate policies

- Limiting the effects of climate change is necessary to achieve sustainable development and equity, including poverty eradication.
- Countries' past and future contributions to the accumulation of GHGs in the atmosphere are different.
- Countries also face varying challenges and circumstances and have different capacities to address mitigation and adaptation.

Mitigation and adaptation raise issues of equity, justice, and fairness

- Many of those most vulnerable to CC have contributed and contribute little to GHG emissions.
- Delaying mitigation shifts burdens from the present to the future.
- Insufficient adaptation responses to emerging impacts are already eroding the basis for sustainable development.
- The evidence suggests that outcomes seen as equitable can lead to more effective cooperation.

Climate change - A collective action problem at the global scale

- Cooperative responses, including international cooperation, are therefore required to effectively mitigate GHG emissions and address other climate change issues.

- The effectiveness of adaptation can be enhanced through complementary actions across levels, including international cooperation.

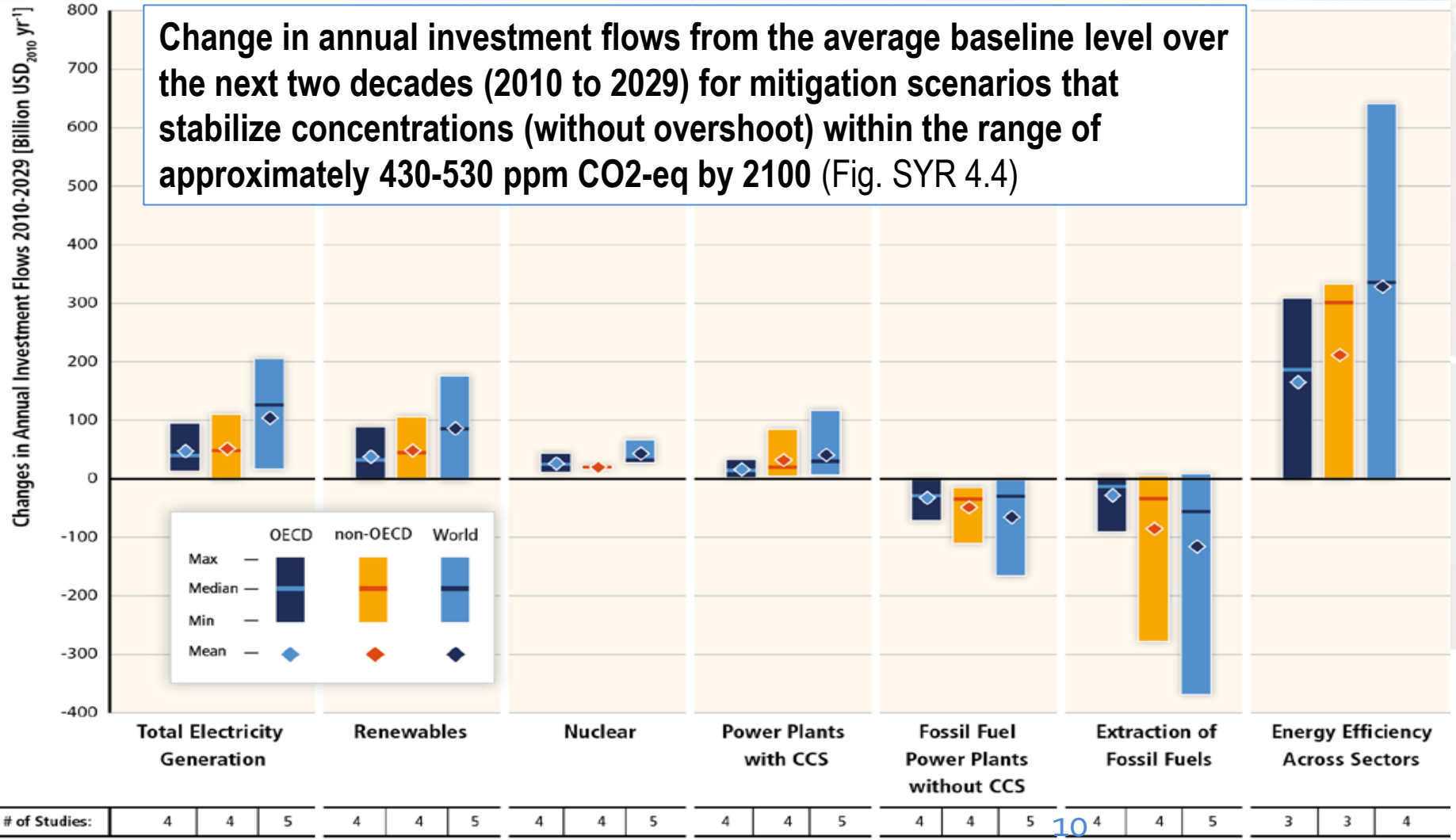
POLICIES, TECHNOLOGY AND FINANCE

- Effective adaptation and mitigation responses will depend on policies and measures across multiple scales: international, regional, national and sub-national.

- Policies across all scales supporting technology development, diffusion and transfer, as well as finance for responses to climate change, can complement and enhance the effectiveness of policies that directly promote adaptation and mitigation

Substantial reductions in emissions would require large changes in investment patterns

Change in annual investment flows from the average baseline level over the next two decades (2010 to 2029) for mitigation scenarios that stabilize concentrations (without overshoot) within the range of approximately 430-530 ppm CO2-eq by 2100 (Fig. SYR 4.4)



Responses to climate change and sustainable development

- Comprehensive strategies in response to CC that are consistent with sustainable development take into account the co-benefits, adverse side-effects and risks that may arise from both adaptation and mitigation options.
- There are many opportunities to link mitigation, adaptation and the pursuit of other societal objectives through integrated responses *(high confidence).*
- Successful implementation relies on relevant tools, suitable governance structures and enhanced capacity to respond *(medium confidence).*

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