

Insights from IAM studies: COVID-19 implications, net-zero scenarios, and bridging the gap

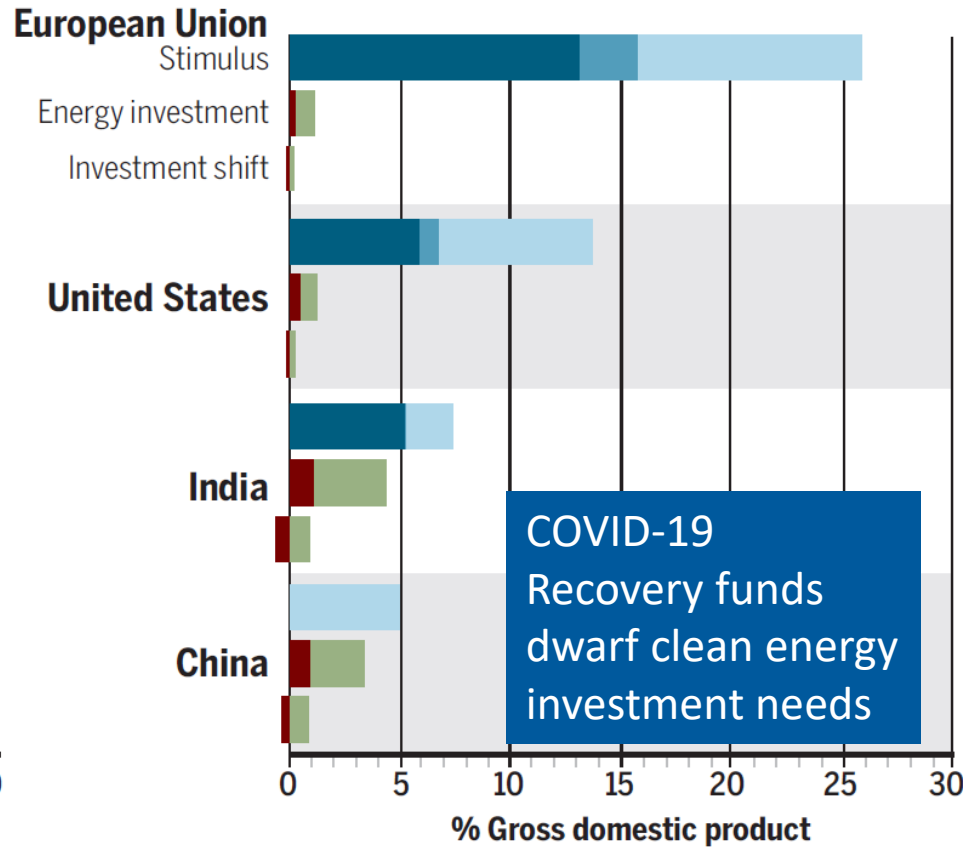
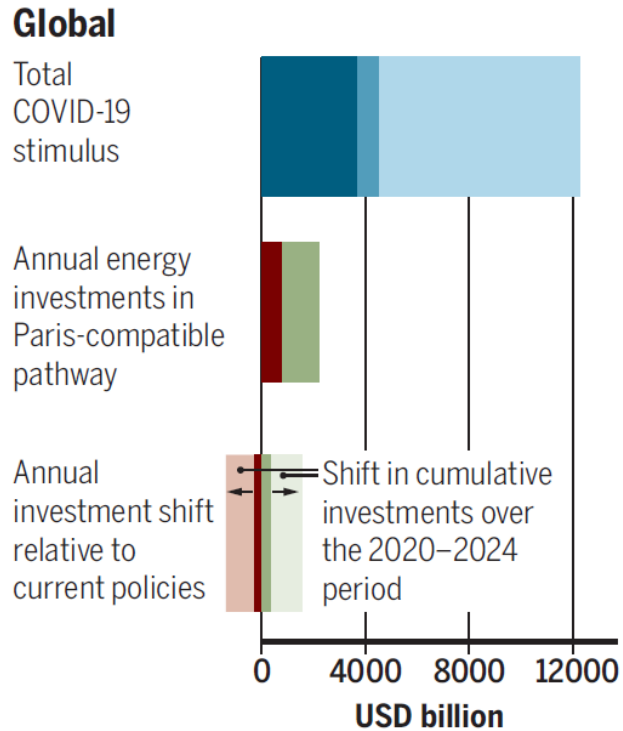
Bas van Ruijven

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COVID-19 impacts on emission scenarios

Coronavirus disease 2019 (COVID-19) stimulus: ● Liquidity support ● Health sector ● General spending
 Energy investments: ● Fossil fuels ● Low carbon



COVID-19 Recovery funds dwarf clean energy investment needs

NAVIGATE
Next generation of advanced integrated assessment modelling to support climate policy making

ENGAGE
Feasibility of Energy Pathways

The impact of COVID-19 and the greenness of recovery packages on climate change mitigation scenarios

Authors: Bas van Ruijven (IIASA), Charlie Wilson (UEA), Valentina Bosetti (CMCC), Johannes Emmerling (PIK), Silvia Pianta, Massimo Tavoni (EPF-CMCC), Panagiotis Fragkos (E3M), Jean-François Mercure (University of Exeter), Ioannis Dafinakis, Michel den Elzen, Heleen van Soest (PBL), Frederic Hans, Takeshi Kuramochi, Niklas Höhne (NewClimate Institute), the ENGAGE and NAVIGATE consortia

Projected impacts of COVID-19 and the greenness of recovery packages on...

- the economy**: The COVID-19 pandemic is having profound impacts on the economy, leading to a sharp decline in global GDP and demand. Preliminary estimates suggest that global economic activity is contracting towards missing climate targets for the post-COVID era.
- demand and lifestyles**: COVID-19 has major direct implications on people's lifestyles (reduced travel, reduced consumption) and on the structure of the economy (recovery on lifestyles and energy). It is crucial to identify policy options for recovery that are consistent with meeting climate targets.
- emission pathways**: Calculations indicate that, in the longer term, the general downturn of the economy and the associated global emission reduction of the pre-COVID policy packages and New Outlook scenarios, a rebound to some level, with lower decarbonation rates, however, would result in lower emission reductions (5%) by 2050 or potentially even an increase in emissions (1%). The greenness of recovery packages is thus a decisive factor. Assuming green recovery scenarios with 46-6% decarbonation between 2021-2023 based on full implementation of GSA (2020) Sustainable Recovery Plan would reduce GHG emissions much more drastically. Those projections would be more in line with the aim of keeping the 1.5°C and 2°C targets in reach.

Economy

Demand and lifestyles

Emissions

Recovery packages and behavior can help reduce emissions

inequality

climate change mitigation efforts

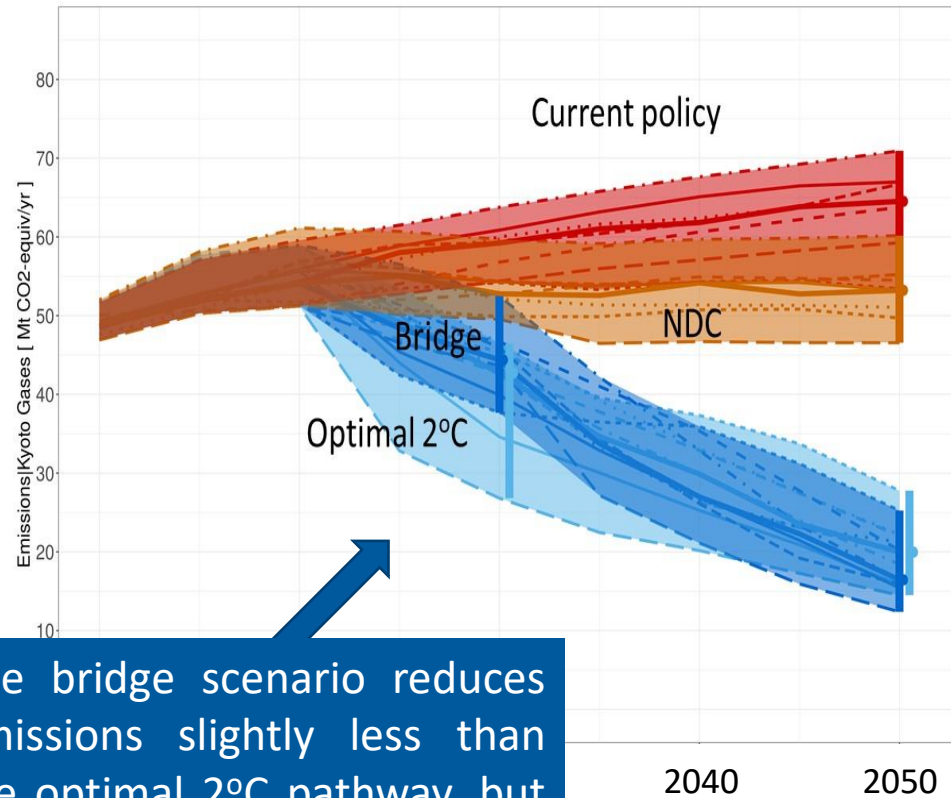
Mitigation efforts

Inequality

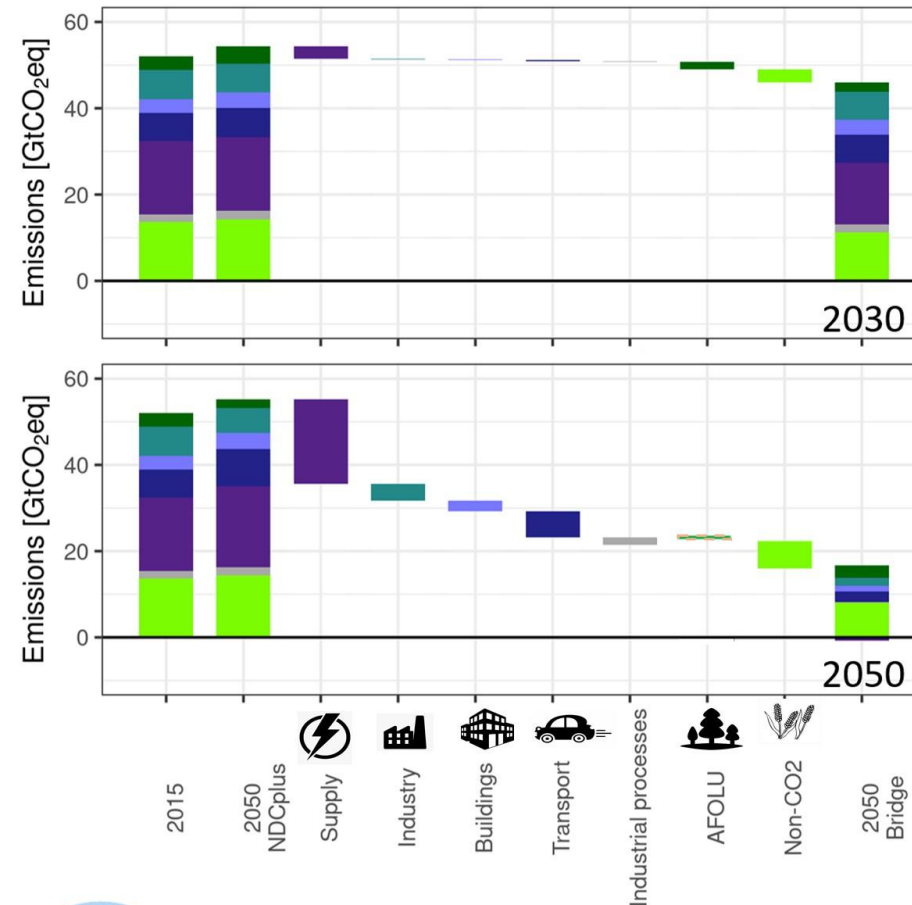
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Visit Poster: The impact of COVID-19 and the greenness of recovery packages on climate change mitigation scenarios

Bridging the emissions gap with good-practice policies



The bridge scenario reduces emissions slightly less than the optimal 2°C pathway, but it is based on concrete and tested policies.



The energy sector contributes the most to emissions reductions, then the transportation sector and non-CO₂ emissions.



Visit poster: Good-practice policies can help bridge the emissions gap towards a low-carbon future

Resources



- Integrated Assessment Modeling Consortium (IAMC)
⇒ www.iamconsortium.org



- IAMC 1.5°C scenario explorer hosted by IIASA:
⇒ <https://data.ene.iiasa.ac.at/iamc-1.5c-explorer>



- Climate change scenario primer (SENSES project):
⇒ <https://climatescenario.org/primer/>



- COMMIT project: <https://themasites.pbl.nl/commit>



- ENGAGE project: www.engage-climate.org



- NAVIGATE project: www.navigate-h2020.eu