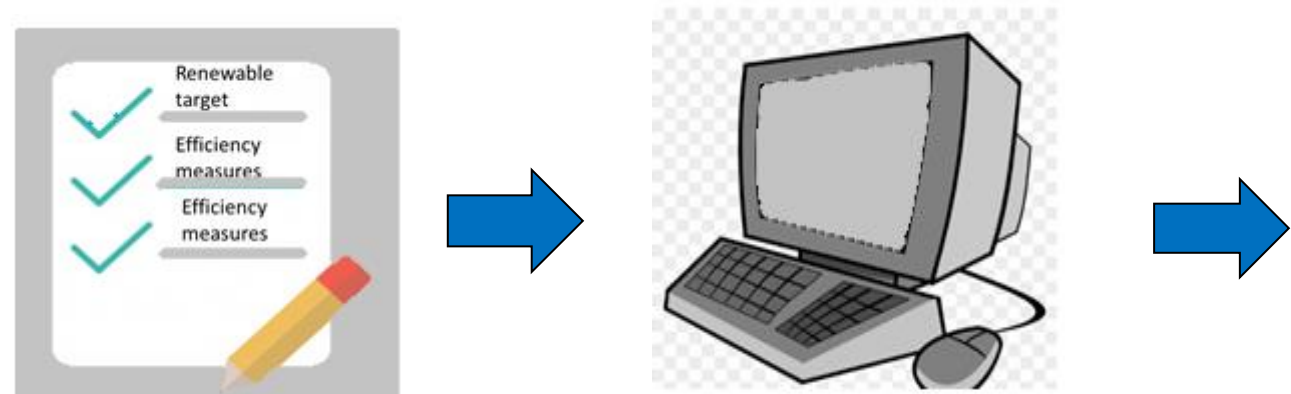


Current action is not enough, but good practice policies can provide a bridge to the future

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Global Stocktake: Current policies are not enough to meet Paris Objectives...

The global policy database keeps track of climate-relevant policies world-wide.



These can be used by climate models to assess impact at the national and global scale. These calculations show that:

- Nationally Determined Contributions are not sufficient to meet climate targets of the Paris Agreement
- Globally, current policies are not on track to meet the NDCs
- In fact, in all countries evaluated, current policies are not consistent with Paris goals

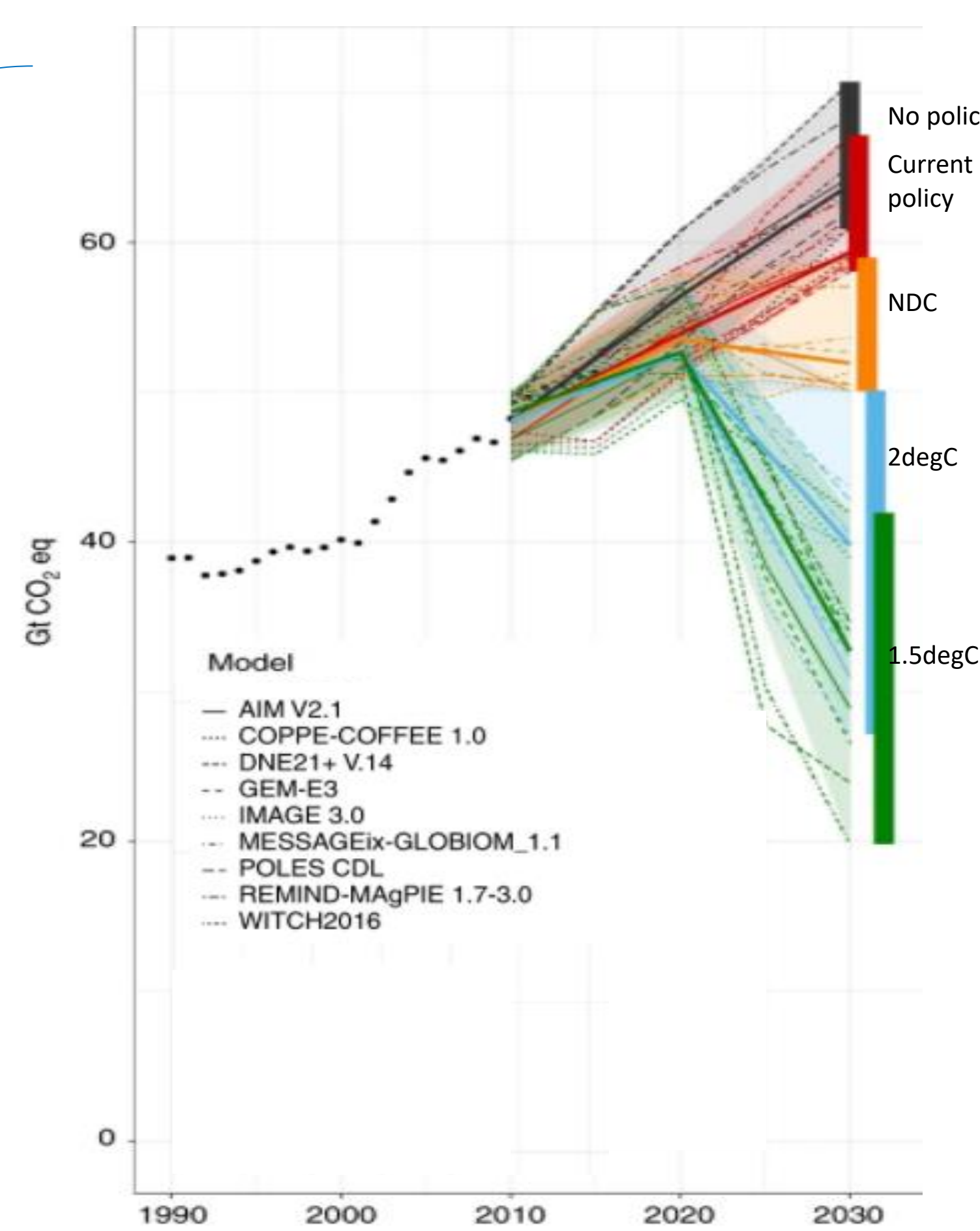
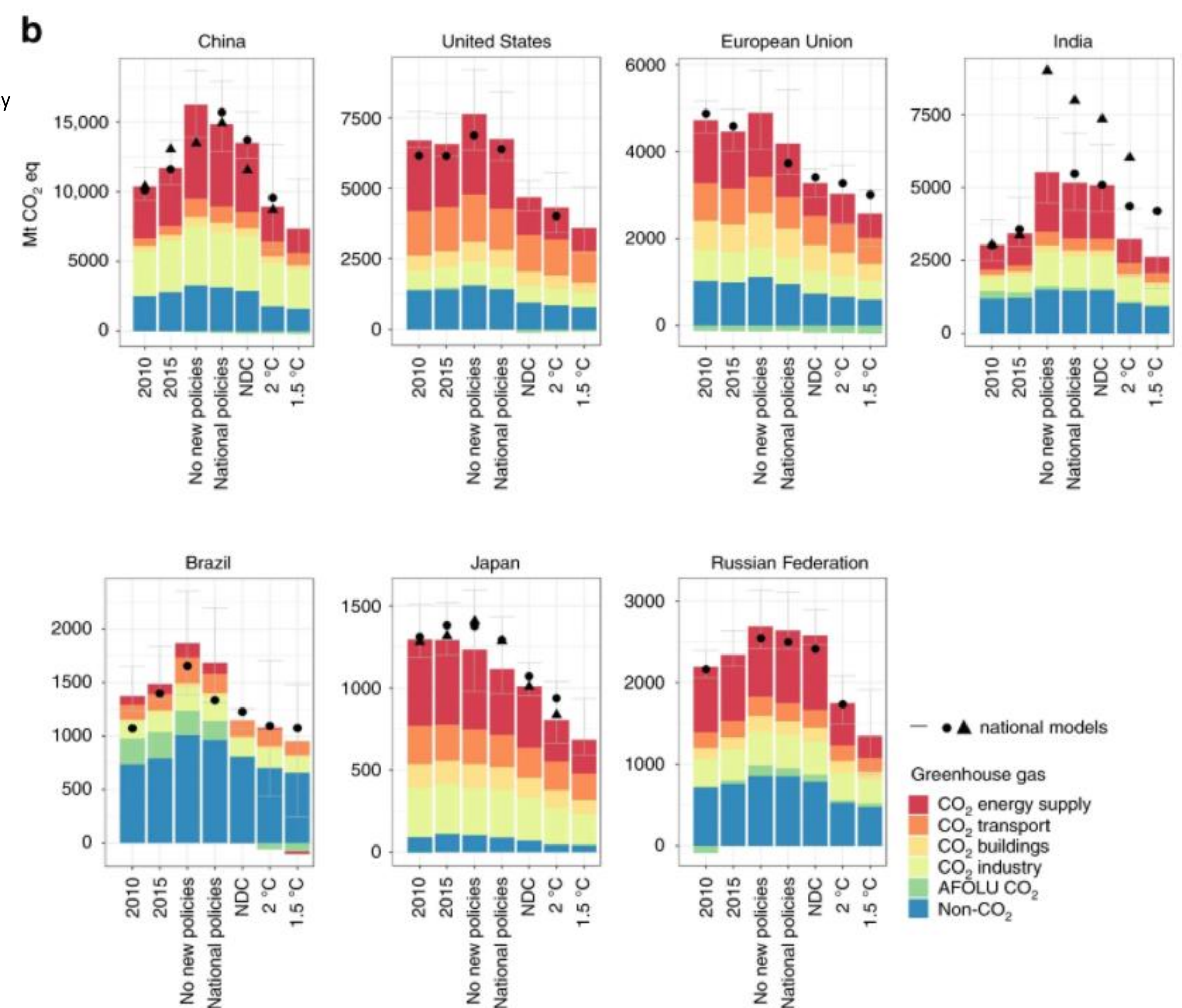


Fig. 1 a) Global greenhouse gas emissions (GtCO₂eq) between 2010 and 2030, for nine integrated assessment models. **b)** Average greenhouse gas emissions (MtCO₂eq) of all models by 2010, 2015 and 2030 for CO₂ emissions per sector (energy supply: red, transport: dark orange, buildings: light orange, industry: yellow, AFOLU (agriculture, forestry and other land-use): green) and total non-CO₂ emissions (blue).



... but good practice policies can provide a bridge to the future

In the last decade, several countries have started to implement climate policy. Some of these policies have been successful in reducing emissions (good practice policies). These can be an example for implementation in other countries. In the COMMIT project, we explored a set of specific measures – adapted to specific circumstances in developed and developing countries.

Sector	Measure
Agriculture	Treatment of manure from livestock; better use of fertilisers; reduction of CH ₄ from enteric fermentation
Industry	Some CCS; Best-available technology requirements; reduction of N ₂ O emissions
Transport	New passenger car average fuel efficiency; 25-50% requirement for non-fossil in vehicles sales in 2030; efficiency requirement for aviation
Buildings	Efficiency improvement of appliances; new efficient buildings; no new oil boilers; renovation of existing building
Electricity	Renewable electricity portfolio standards or feed-in tariffs; no newly installed unabated coal power from 2025-2030
Energy supply	Coal mine CH ₄ emissions recovery and no CH ₄ emissions from flaring
Waste	CH ₄ emissions reduction
Prices	Carbon pricing or emission trading
Land use	Afforestation (depending on country) and no net deforestation after 2020
Process emissions	F-gas emission reduction, relative to 2015

Analysis of these measures by multiple global and national models shows that a global roll-out of these good practice policies closes the emissions gap between current NDCs and a cost-optimal 2°C scenario by 71% by 2030 and more than fully by 2050. It does so particularly through exploiting the mitigation potential in the energy sector. As such, the *Bridge* scenario is projected to lead to a scale-up of renewable energy (reaching more than 50% of electricity supply by 2050), electrification of energy services, efficiency improvements in energy demand sectors, and enhanced afforestation and reforestation.

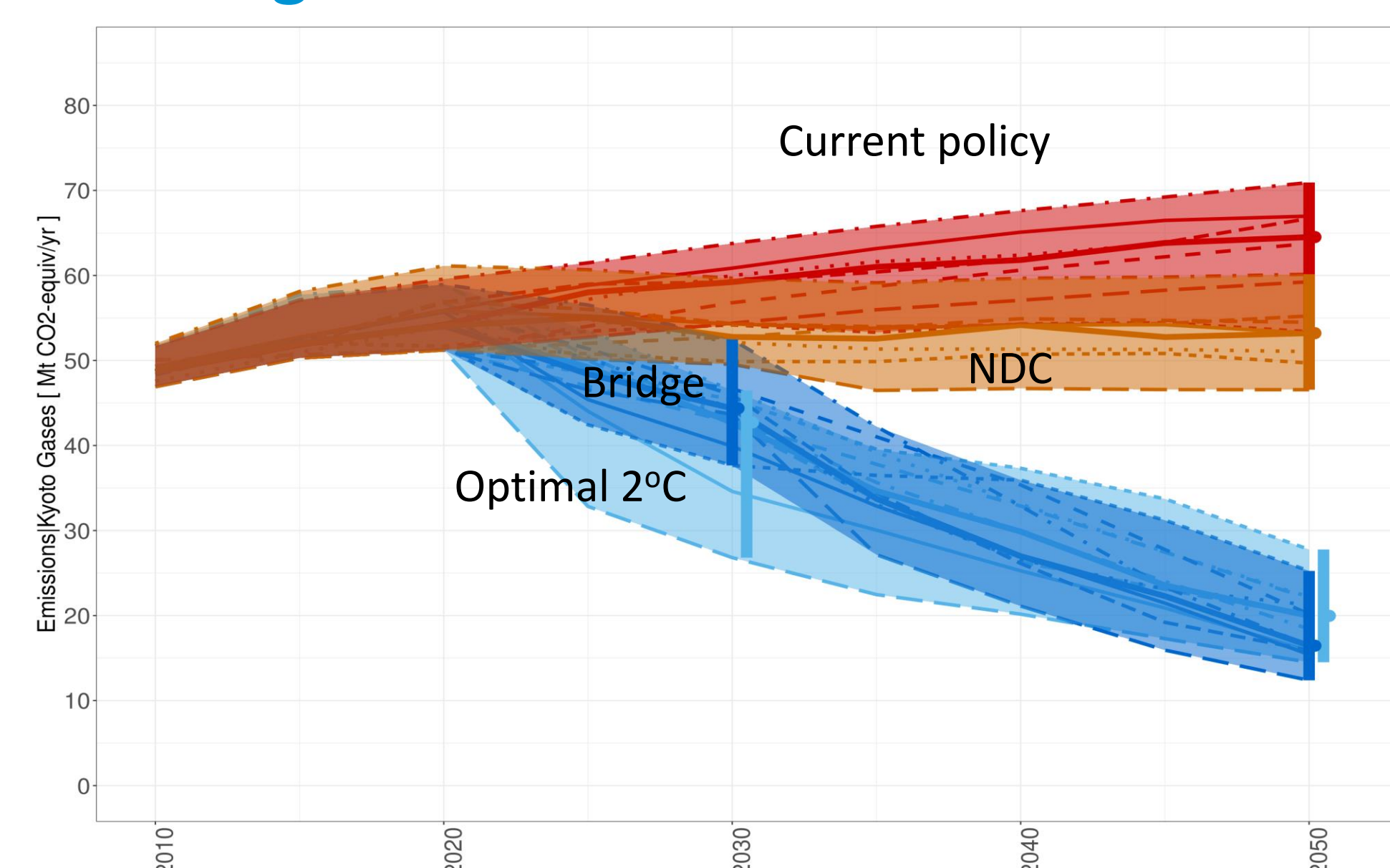


Fig. 2: Global greenhouse gas emissions (Mt CO₂eq/year) between 2010 and 2050, as projected by the global models. Vertical bars: model range in 2030 and 2050. Circles: model median in 2030 and 2050. Thick solid lines: median.

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

Fig. 3: Contribution of each sector to emission reductions between the NDC and Bridge scenario

The energy sector (through renewables) is the largest contributor to emissions reductions between the *NDC* and *Bridge* scenarios, the transport sector comes second (zero-carbon vehicles and efficiency improvements), and mitigation of non-CO₂ emissions often also plays a large role.

