COMMIT

Climate

p**O**licy assessment and

Mitigation

Modelling to

Integrate national and global

Transition pathways

Partners

Project leaders: Detlef van Vuuren and Heleen van Soest,
Organization: PBL Netherlands Environmental Assessment Agency
URL: https://themasites.pbl.nl/commit/

Funding: European Commission's Directorate-General for Climate Action (DG CLIMA)

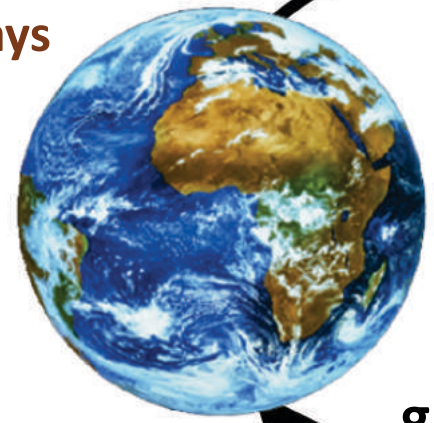
Modelling meets policy

Paris Agreement
Art. 2. Holding the increase in the global average temperature to **well below 2 °C** above pre-industrial levels and to pursue efforts to limit the temperature increase to **1.5 °C** above pre-industrial levels,

Global stocktake
Countries need to formulate **NDCs and long-term strategies** (and accompanying policies). The **Talanoa Dialogue and global stocktake** process aim to compare these national policies to the overall goal

Global transformation pathways

GLOBAL

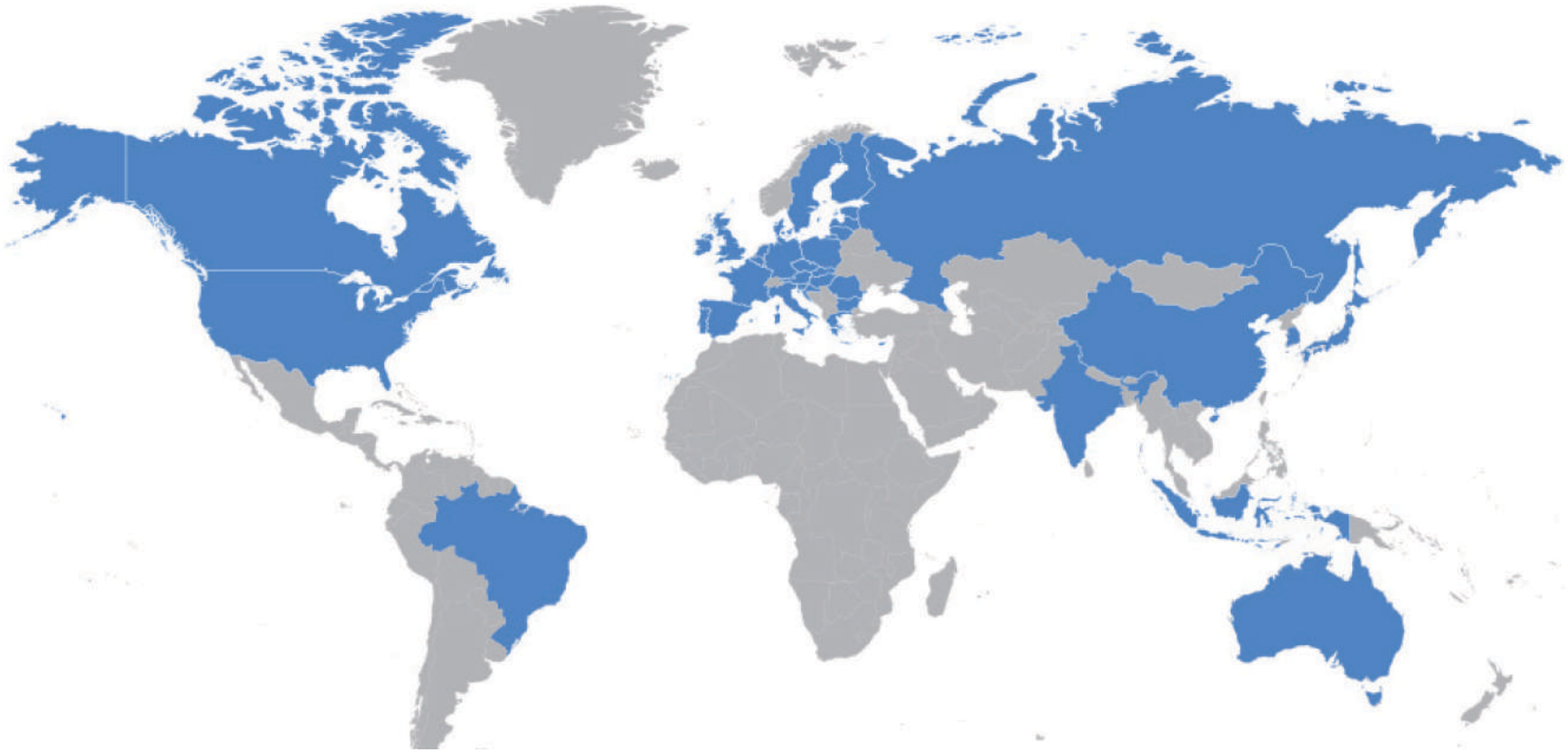


LOCAL NATIONAL

global stocktake

National low-carbon development pathways

- Global stock-taking process requires sufficient analytical capacity to ensure fair evaluation of country policies
- Requires good understanding of different outcomes and assumptions between the analytical teams that provide input into the negotiations



- Global stock-taking process requires sufficient analytical capacity to ensure fair evaluation of country policies
- Requires good understanding of different outcomes and assumptions between the analytical teams that provide input into the negotiations

Global transformation pathways

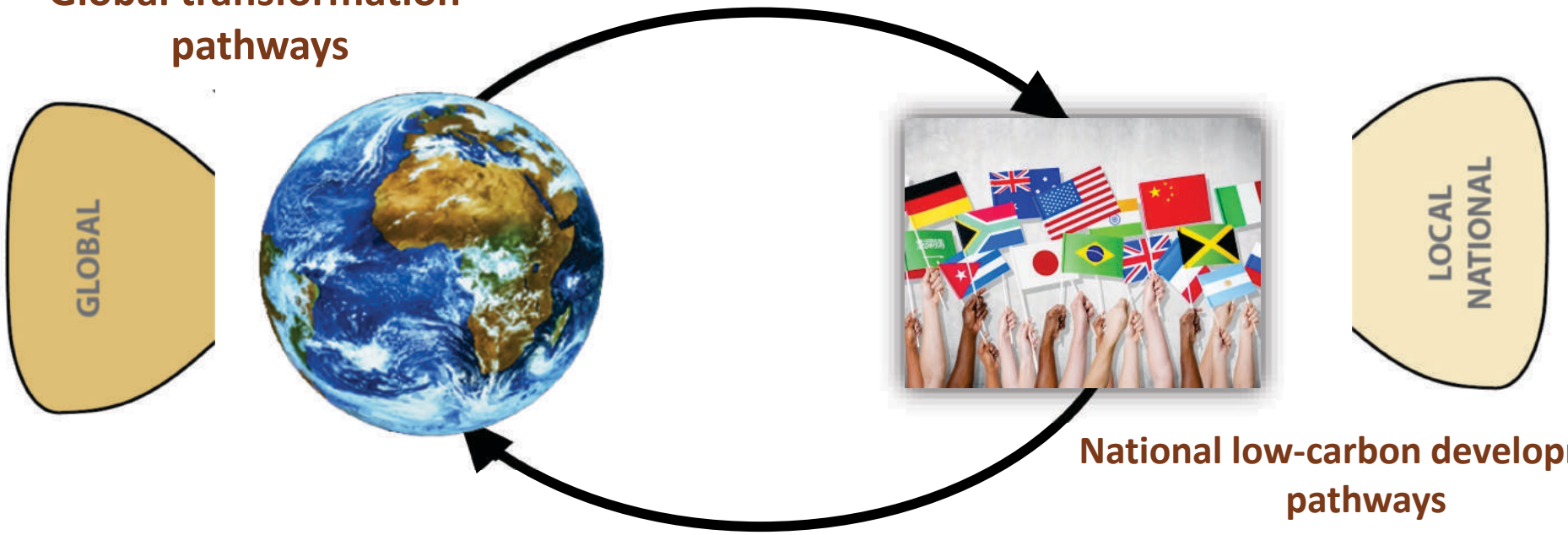
National low-carbon development pathways

Policy brief on Talanoa Dialogue Platform: https://unfccc.int/documents/184187

National fact sheets and policy brief:

https://themasites.pbl.nl/commit/products

Global transformation pathways



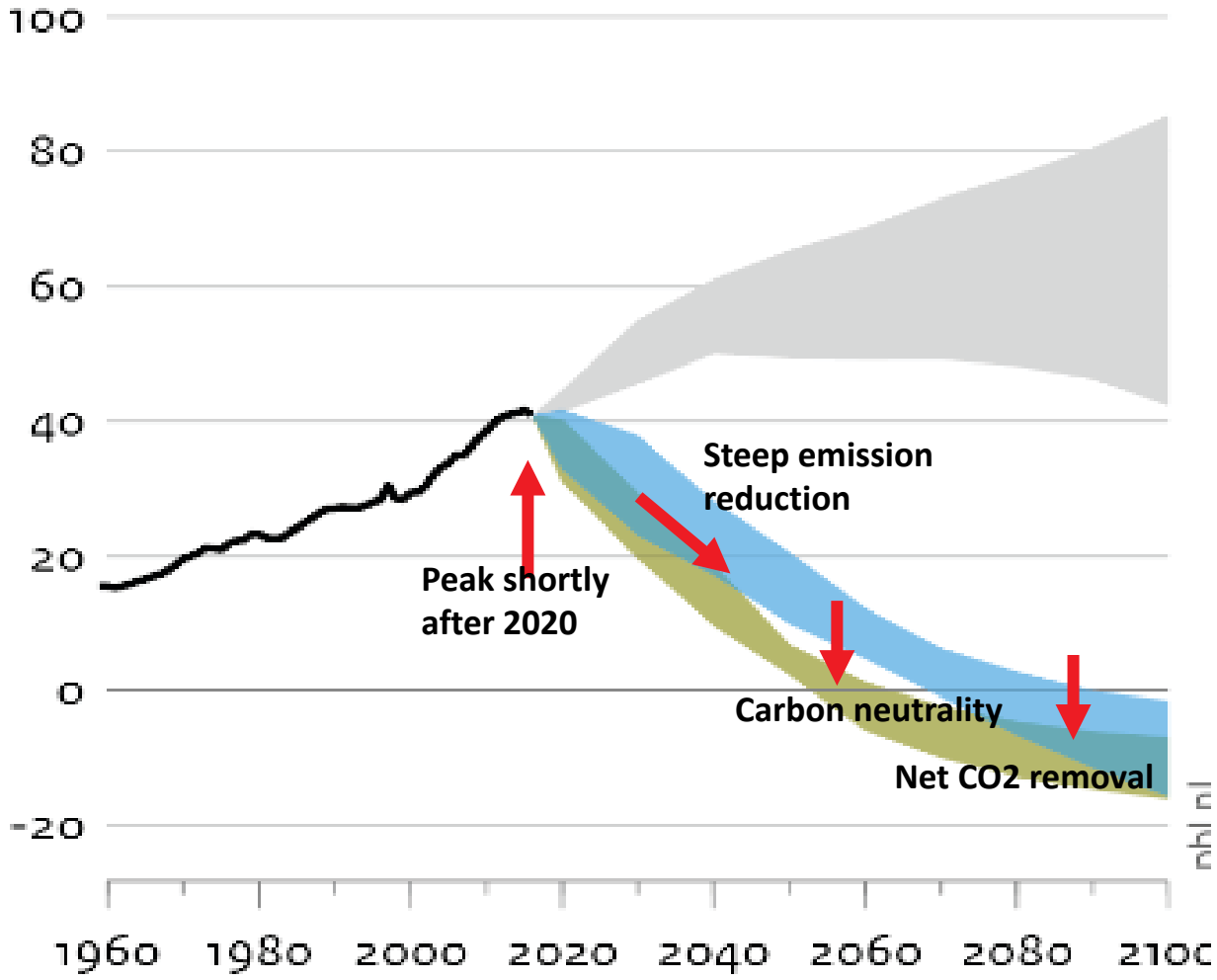
National low-carbon development pathways

Where do we want to go?

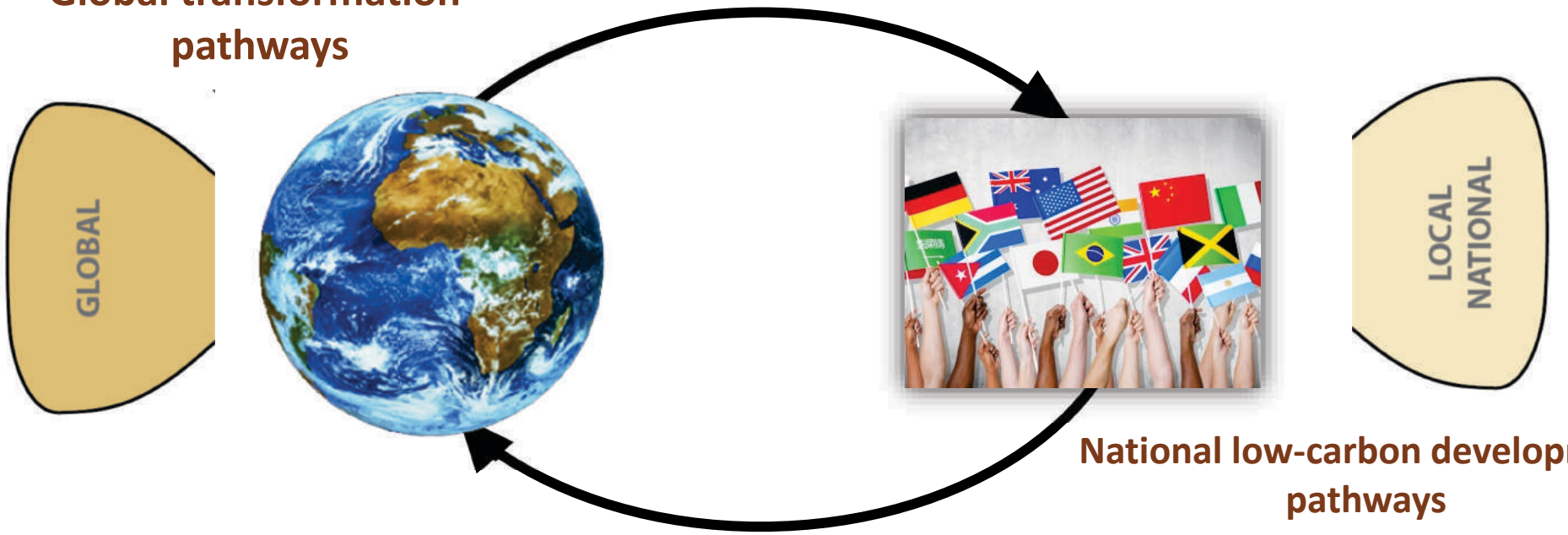
Where are we?

How do we get there?

Where do we want to go?



Global transformation pathways



National low-carbon development pathways

Where do we want to go?

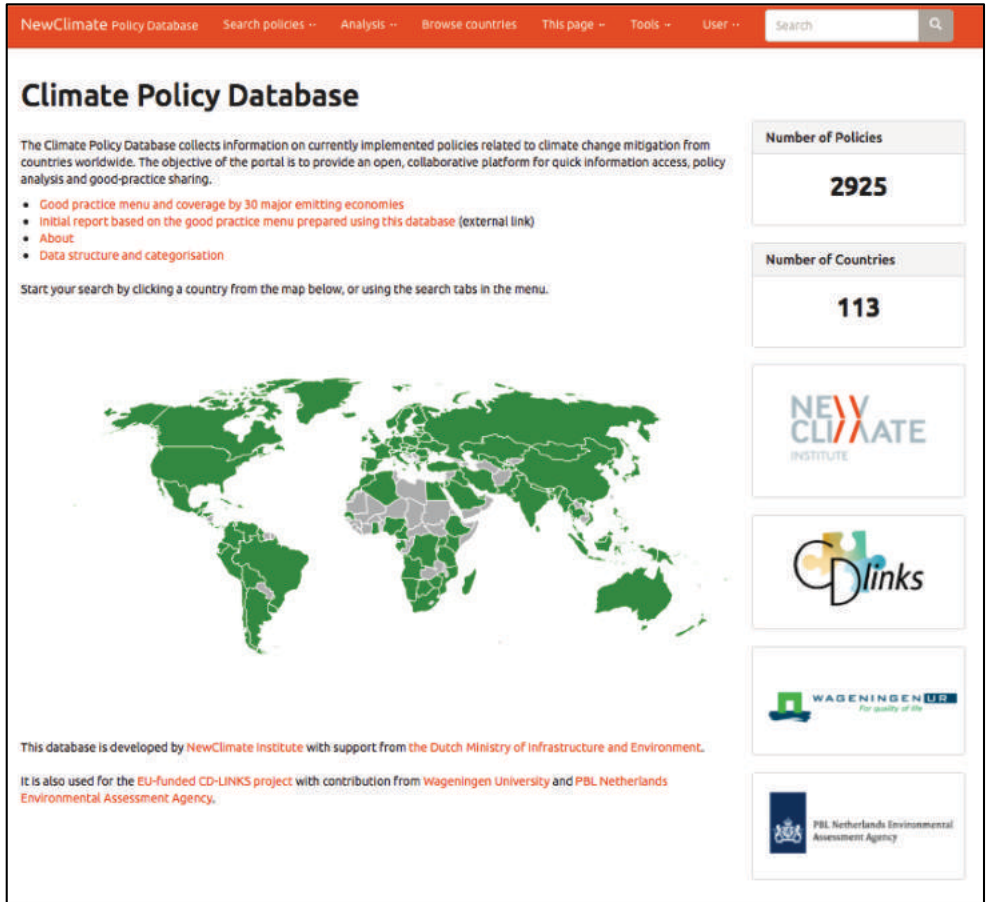
Where are we?

How do we get there?

Where are we?

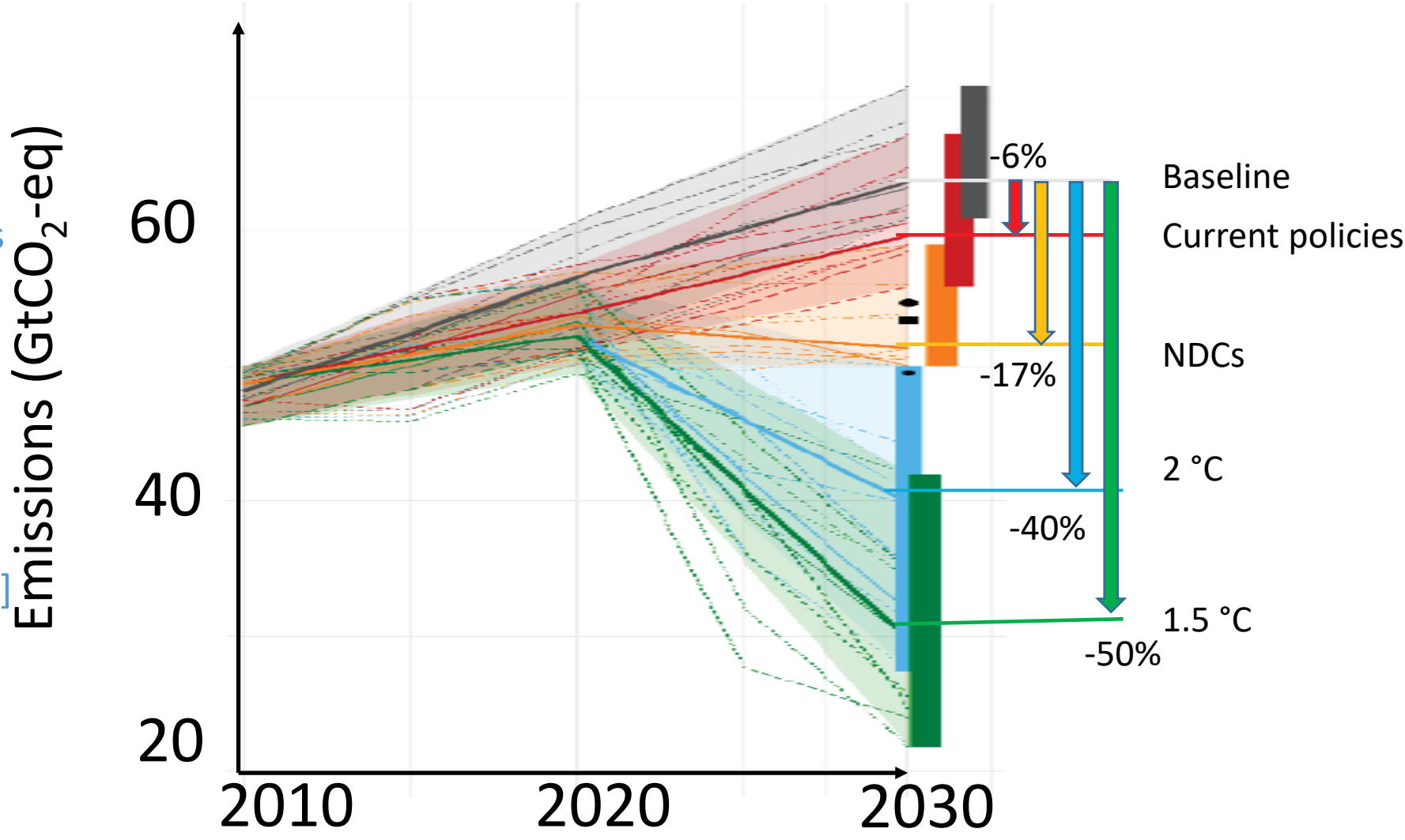
Climate Policy Database

- **www.climatepolicydatabase.org**
- **Aim:** open, collaborative platform to gather all climate-related policies, with full geographical and sectoral coverage.
- **Platform:** Semantic Media Wiki, an open-source, database driven extension of MediaWiki
- Niklas Höhne:
  niklas.hoehne@wur.nl
  n.hoehne@newclimate.org



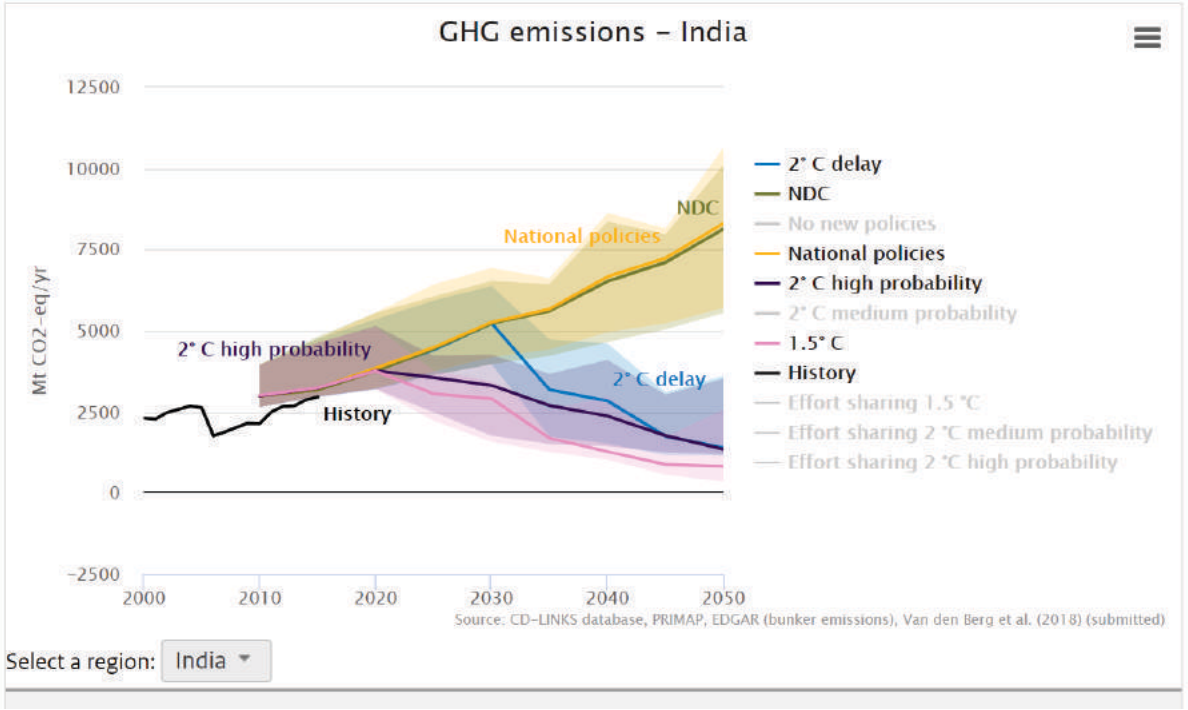
Where are we?

- Current policies reduce GHGs by 3.5 $GtCO_2$-eq [2.0 to 5.5]
- Policies fall short of NDCs: 11.2 [7.0-7.0] $GtCO_2$eq.
- Gap with :
  - 2°C : 23.7 [9.0-37.4] $GtCO_2$eq.
  - 1.5°C : 30.3 [17.1 to 43.0] $GtCO_2$eq.



Where are we?

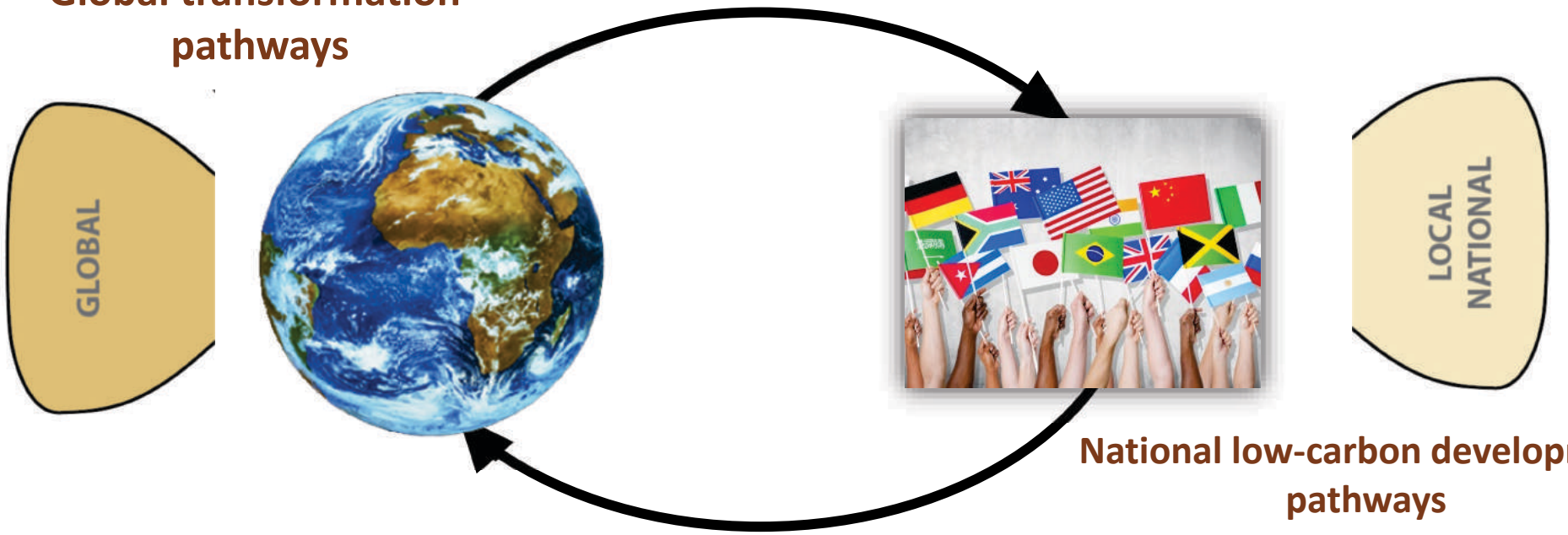
EMISSIONS | BUDGET | DECARBONISATION | POLICY | INOVATION | INVESTMENT | SCENARIOS



New interactive tool to analyse stocktake at scale of world and 7 countries

https://themasites.pbl.nl/global-stocktake-indicators/

Global transformation pathways



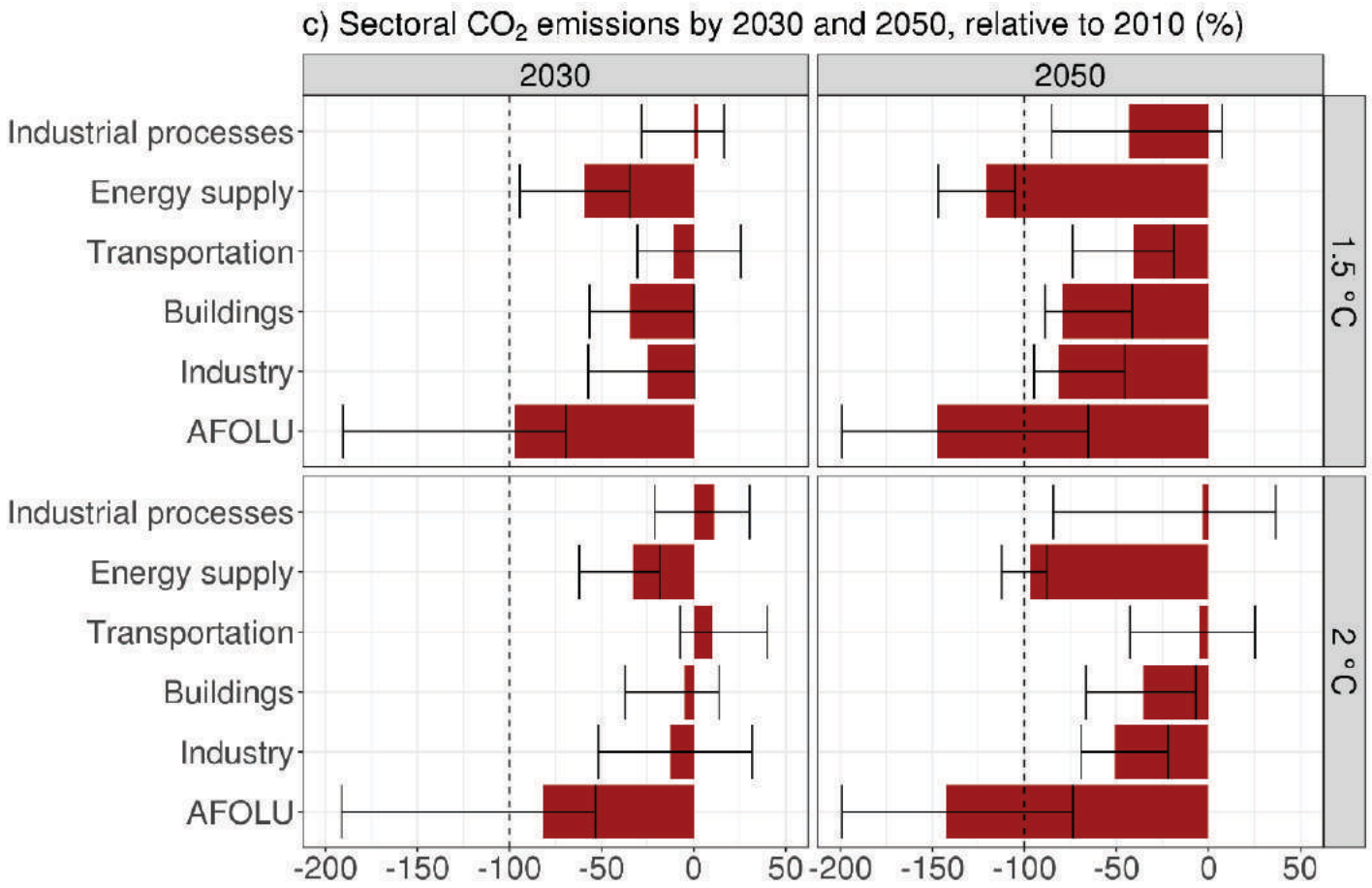
National low-carbon development pathways

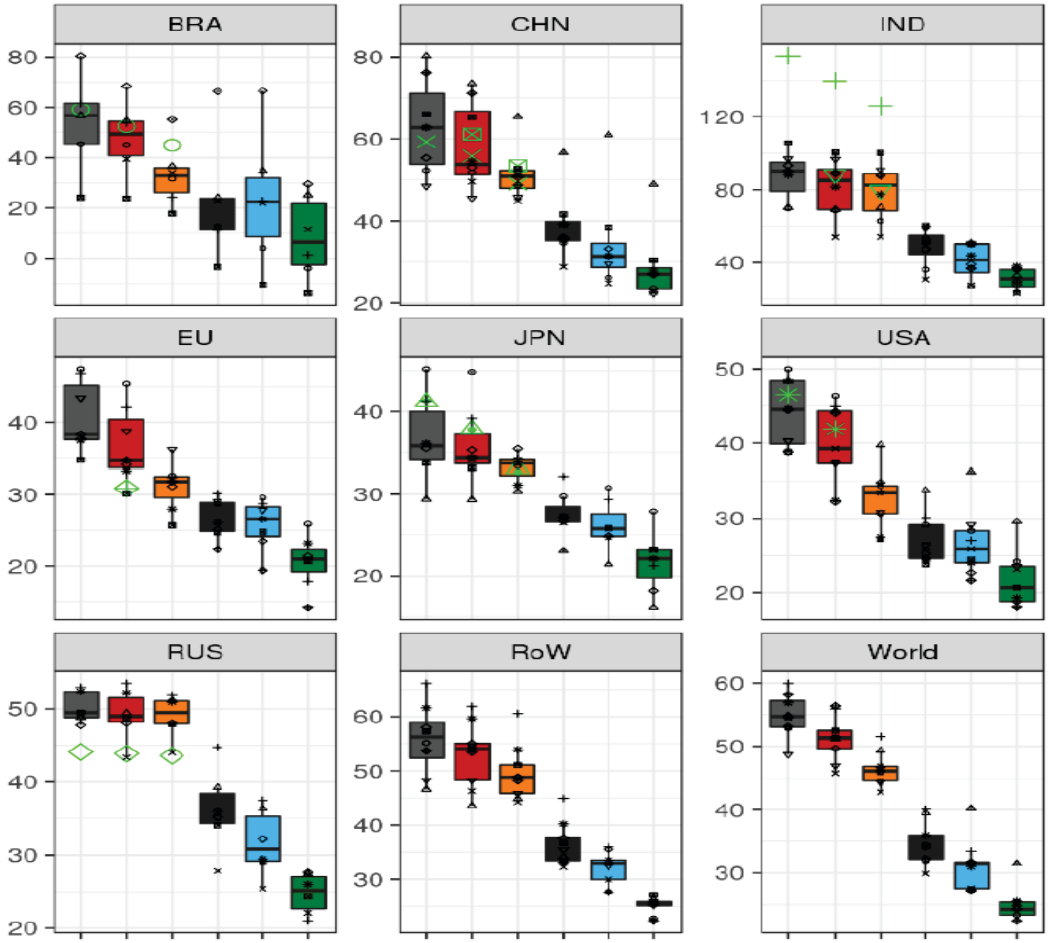
Where do we want to go?

Where are we?

How do we get there?

How do we get there?





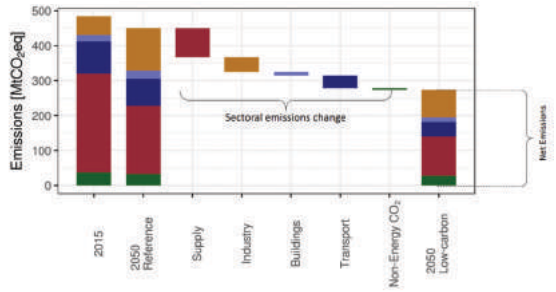
National fact sheets: Participating teams and energy-economy models

Country	Institution	Models
Australia	CSIRO	ESM, VURM, LUTO, TIMES
Brazil	COPPETEC	COFFEE, BLUES, TEA
Canada	ECCC	GCAM-Canada, EC-MSMR
China	ERI, NCSC	IPAC-AIM, IAMC, PECE
EU	E3Modelling	PRIMES, GEM-E3, PROMETHEUS
India	TERI	MARKAL-Answers
Indonesia	BAU, CREP-ITB	AIM/CGE
Japan	IGES, NIES	AIM/CGE
Russia	HSE	TIMES/RUSSIA
South Korea	UOS	AIM/CGE, AIM
USA	PNNL	GCAM-USA

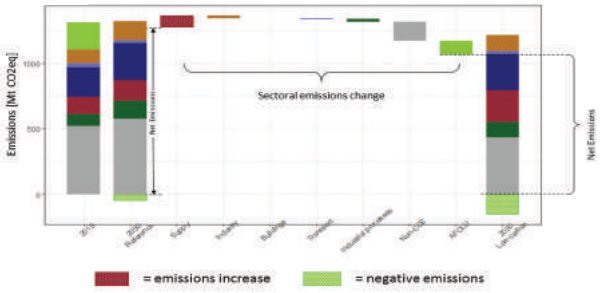
National Fact Sheet outline

- Three Talanoa dialogue related sections:
  - Where are we?
  - Where do we want to go?
  - How do we get there?
- One section focusing on a specific key issue for each country
- Scenario results do not define where a country ought to be, but where models expect them to be – informing national low-carbon strategies

Australia

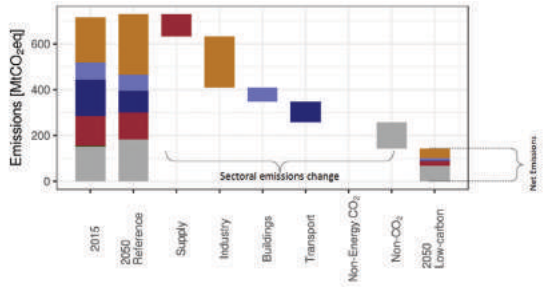


Brazil

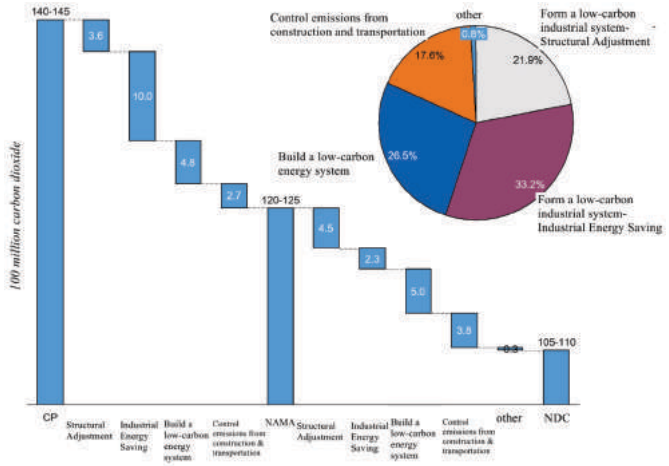


Canada

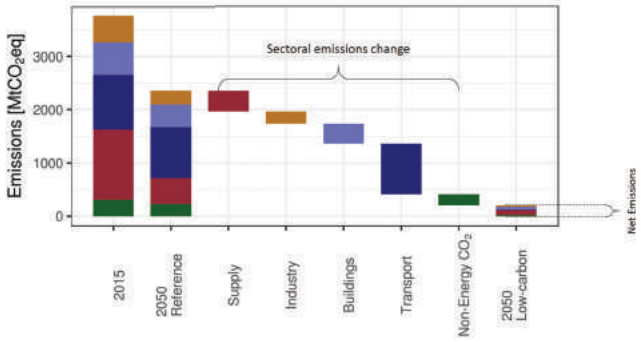
Environment and Climate Change Canada



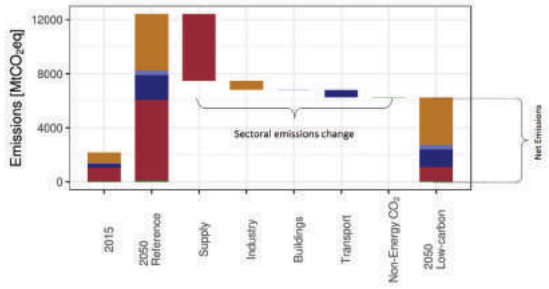
China



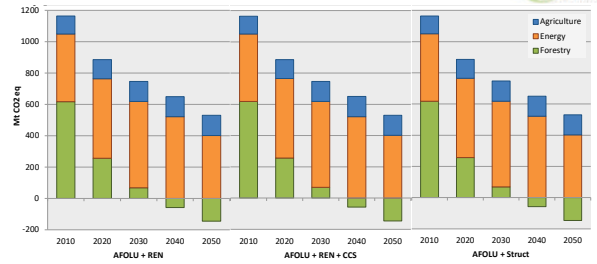
European Union



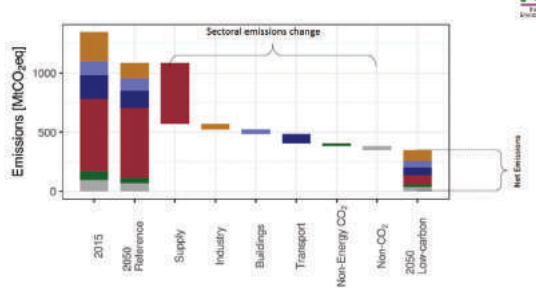
India



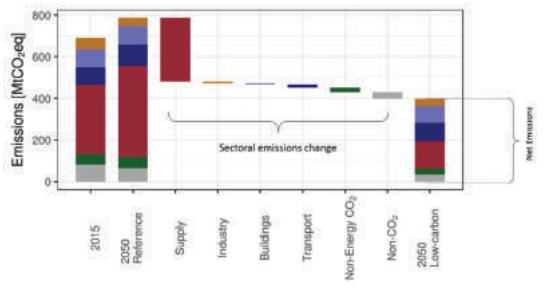
Indonesia



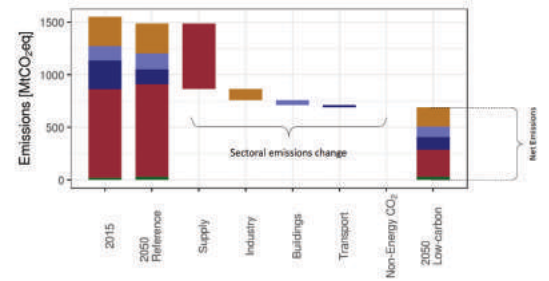
Japan



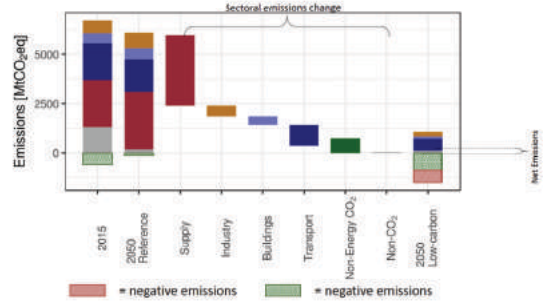
Republic of Korea



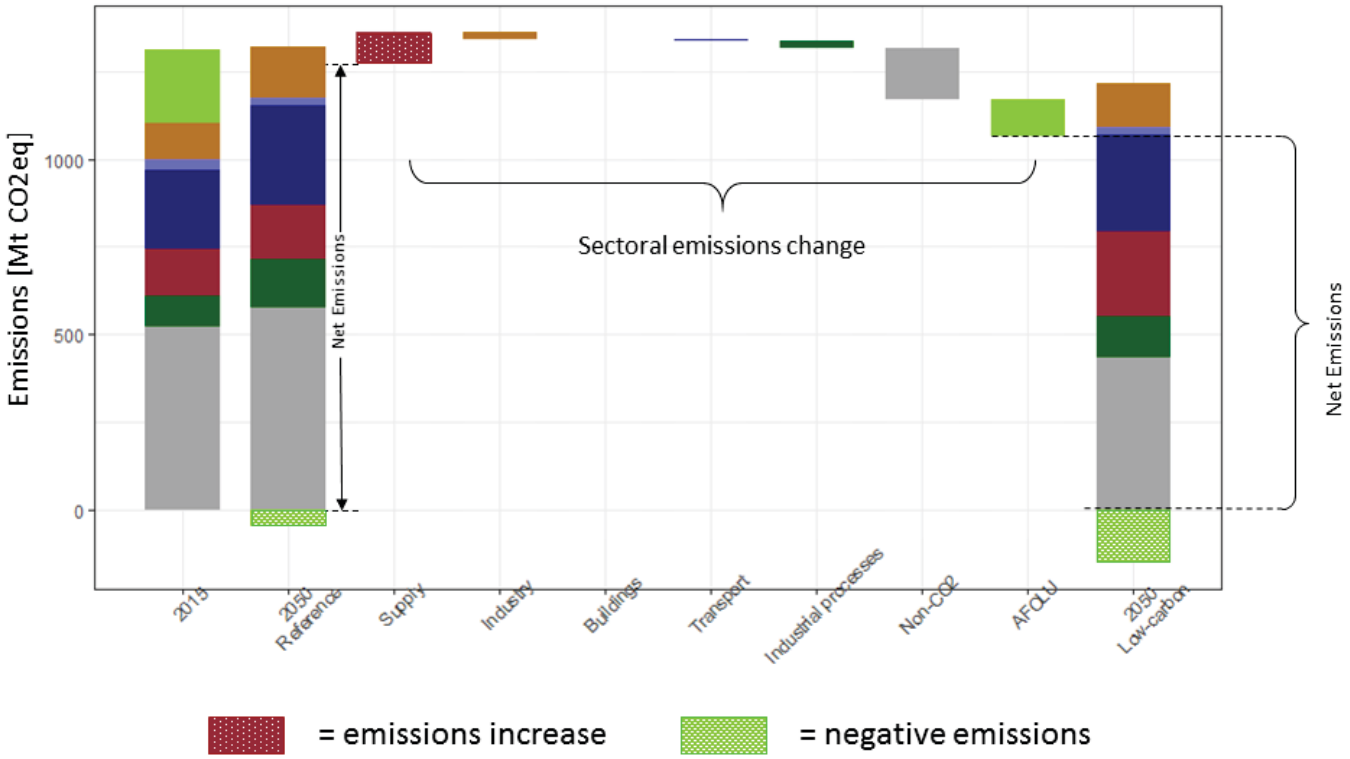
Russian Federation

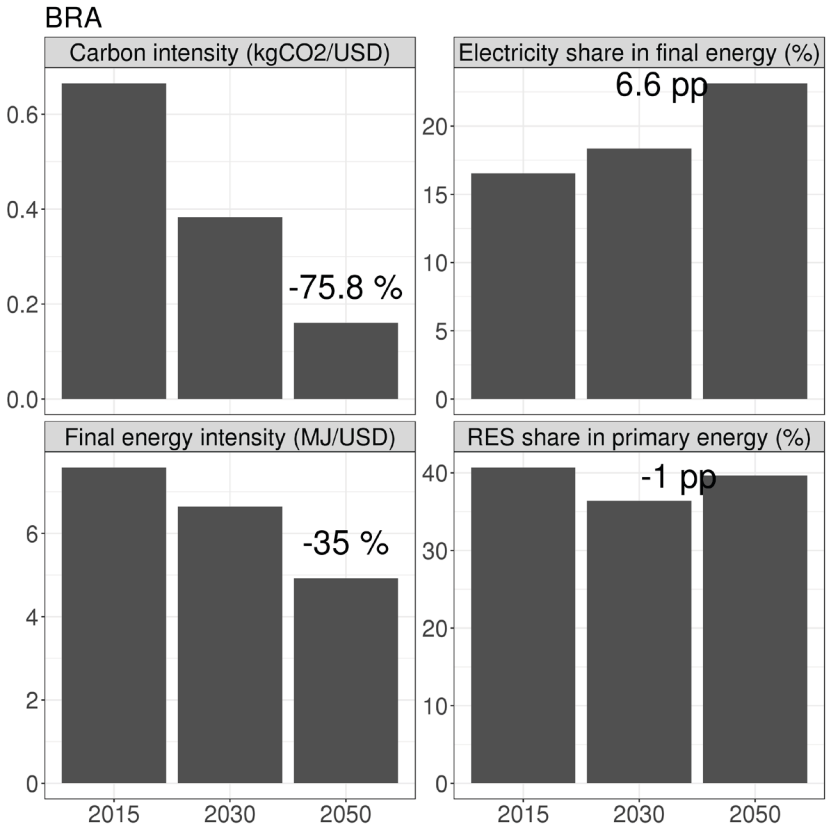


United States of America

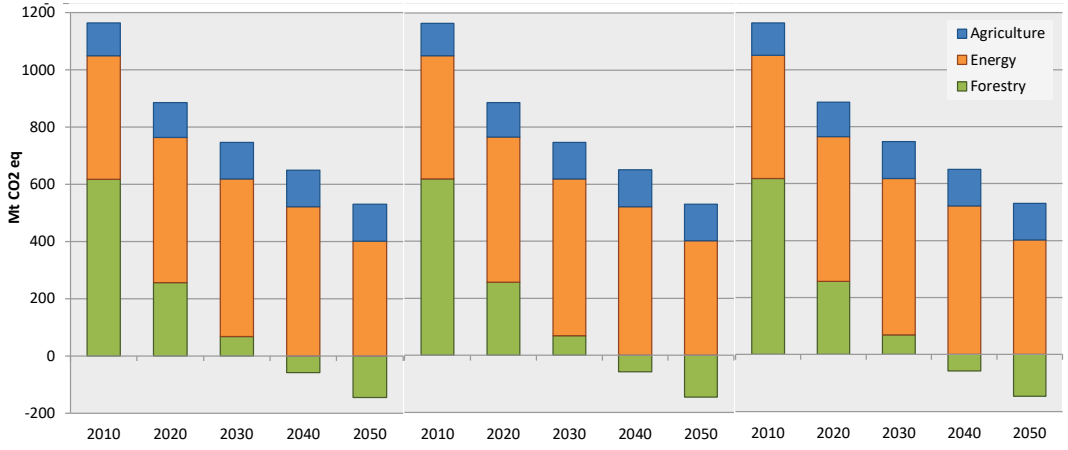


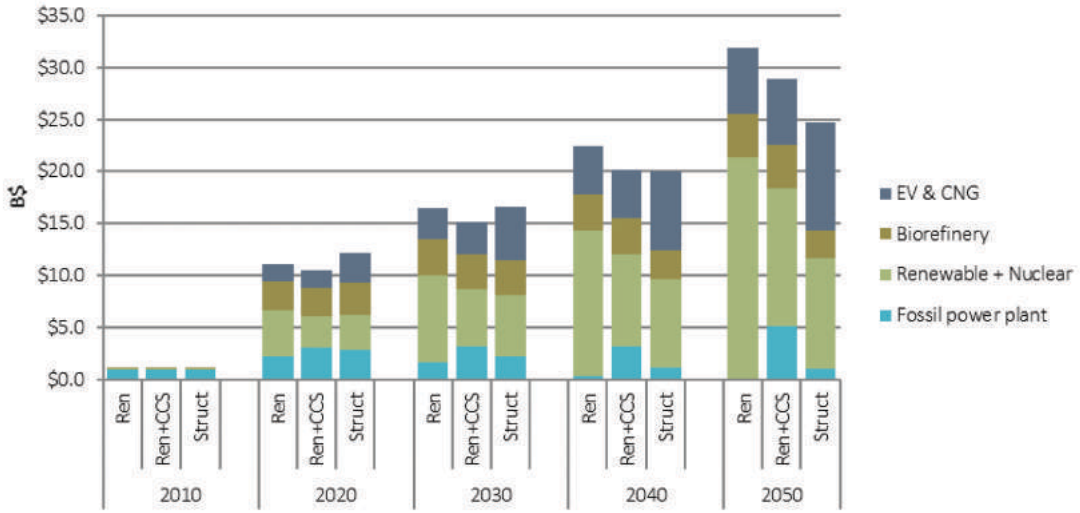
Brazil: opportunities from AFOLU and non-CO_2 mitigation could reduce pressure on productive sectors

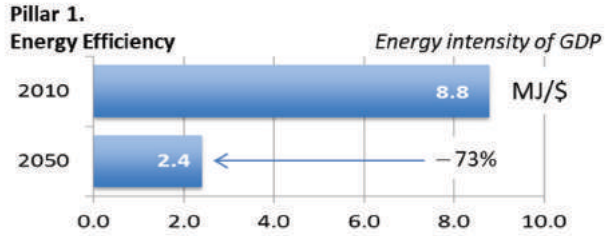


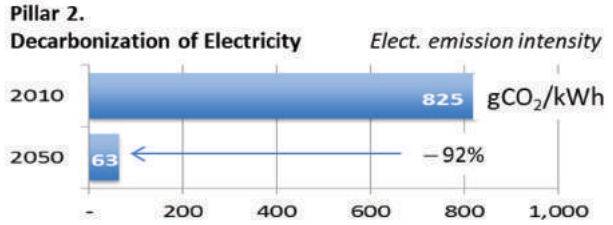


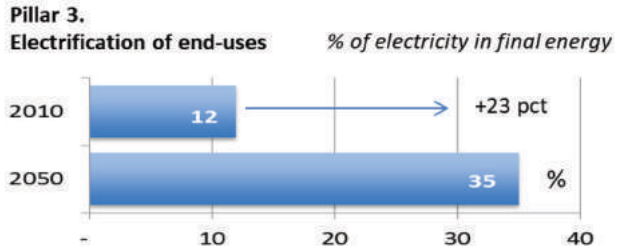
Indonesia: would need to study the link between a low-carbon economy and SDGs such as clean energy, poverty eradication

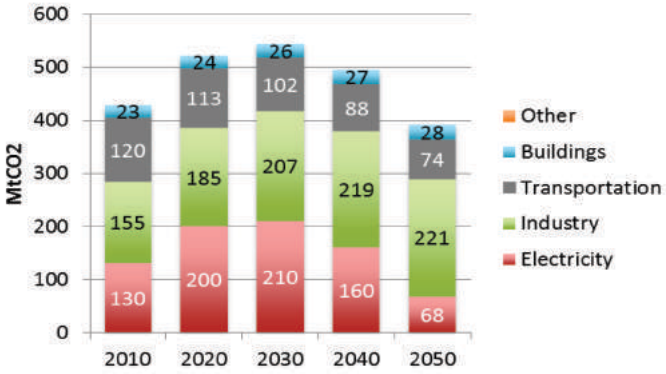












Key findings national fact sheets

- Opportunities exist to strengthen existing climate policies
- Implementing these opportunities will require a massive **redirection of current investments** and using the possible **synergies between climate policies and national development** objectives
- All countries rely on **renewable energy** (mainly wind and solar) and **energy efficiency** to reduce emissions, albeit to different extents
- The deployment of other low-carbon options highly depends on **national specificities**, policy considerations and priorities (e.g. CCS, bioenergy, nuclear power, carbon dioxide removal technologies)
- Role of **innovative systems** has to be examined for longer-term MCS (ICT, demand management, storage, electric vehicles, H_2)
- **National specificities play a key role in developing low-carbon pathways**

Thank you!

- https://themasites.pbl.nl/commit/
- @COMMIT_MCS