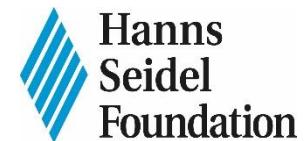


Overview of climate change mitigation efforts in ASEM partner countries

With an outlook on circular economy transition

Asia-Europe Environment Forum (ENVforum) Spin-off Conference 2022
October, 25, 2022

Dora Almassy, PhD

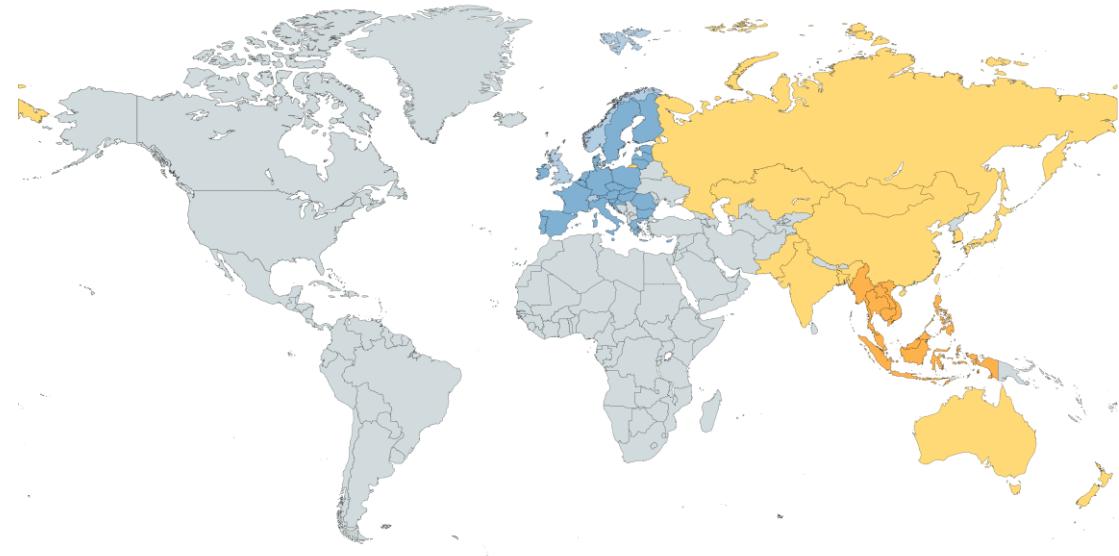


Objectives of the report

Detailed overview of climate change mitigation efforts in the 51 ASEM partner countries

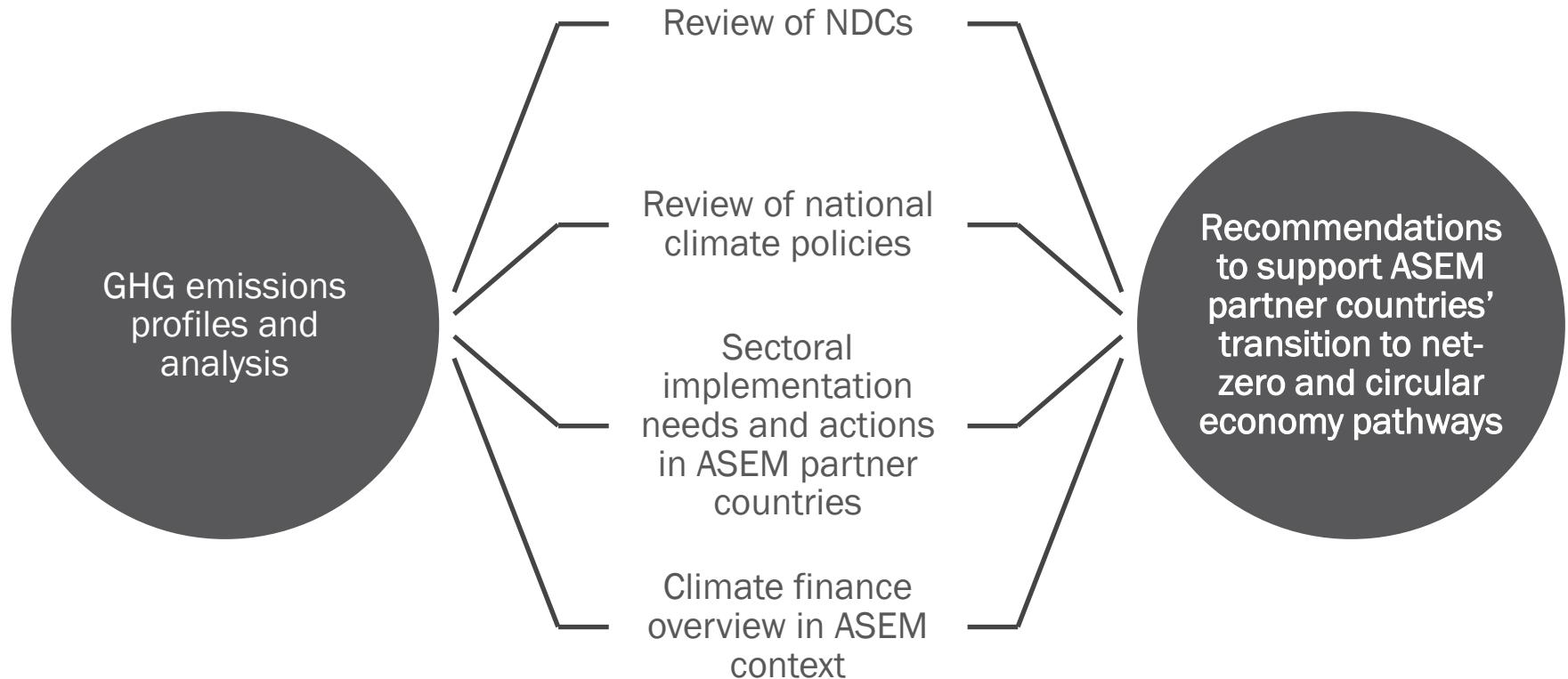
Policy recommendations to strengthen decarbonisation efforts towards net-zero ambitions

Map of ASEM partner countries



Source: Image generated from MapChart.

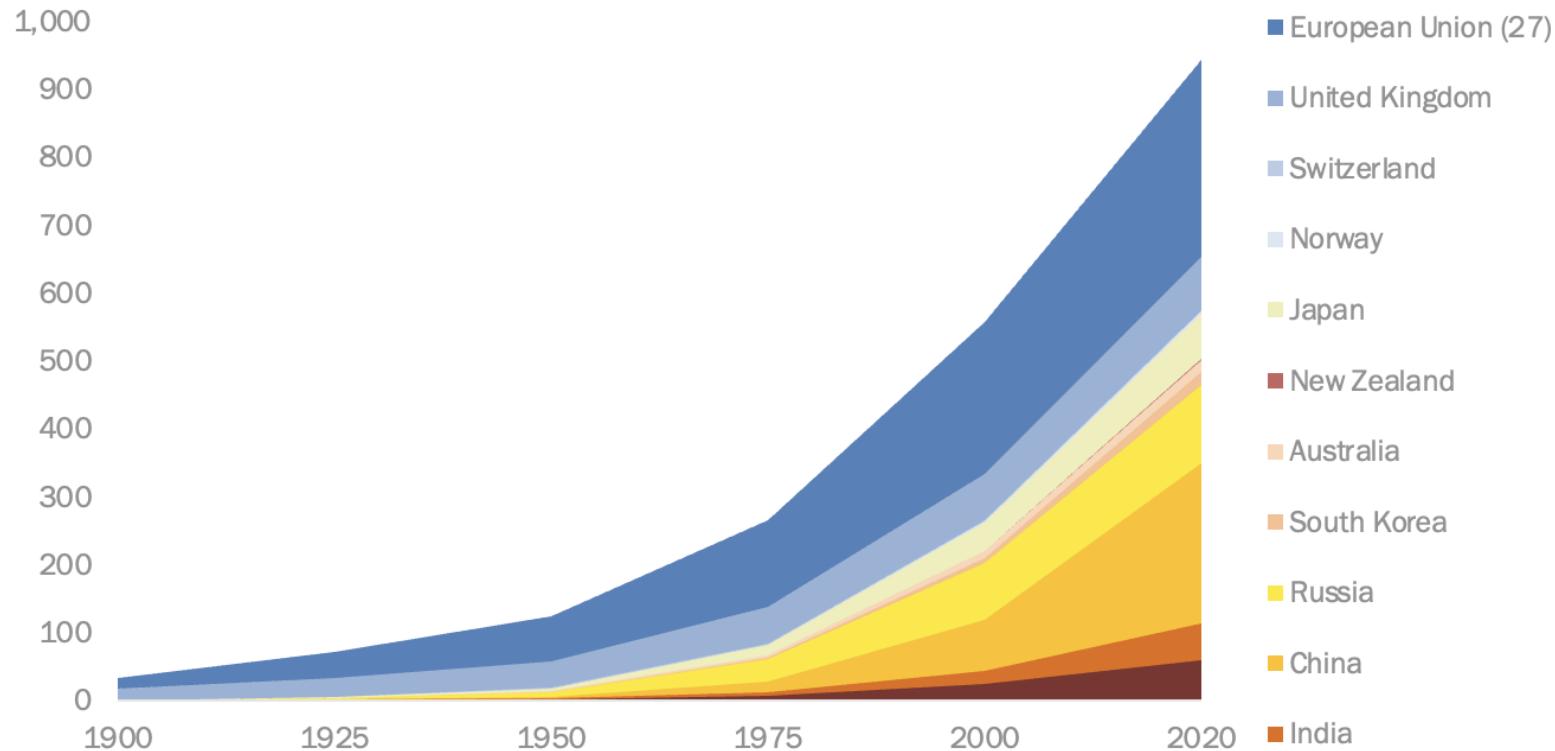
Research methodology



GHG emissions trends – the ASEM context

ASEM partner countries are responsible for over half of the global GHG emissions

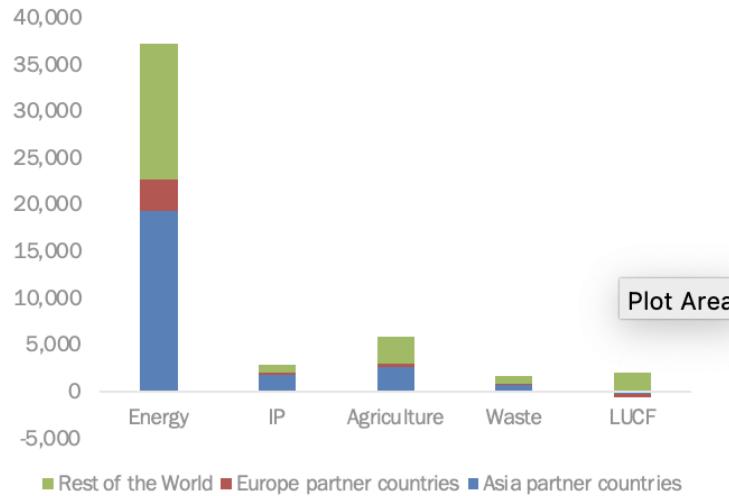
Cumulative CO₂ emissions in ASEM member countries (Gt CO₂e)



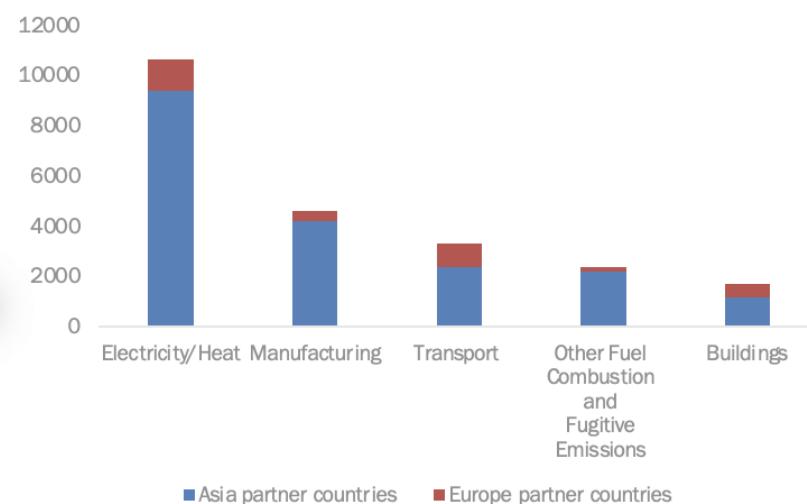
Source: Authors' calculation based on data from *Our World in Data*.

In 43 ASEM partner countries, the energy sector is the largest contributor to emissions

Overview of sectoral GHG emissions (Gt CO₂e)



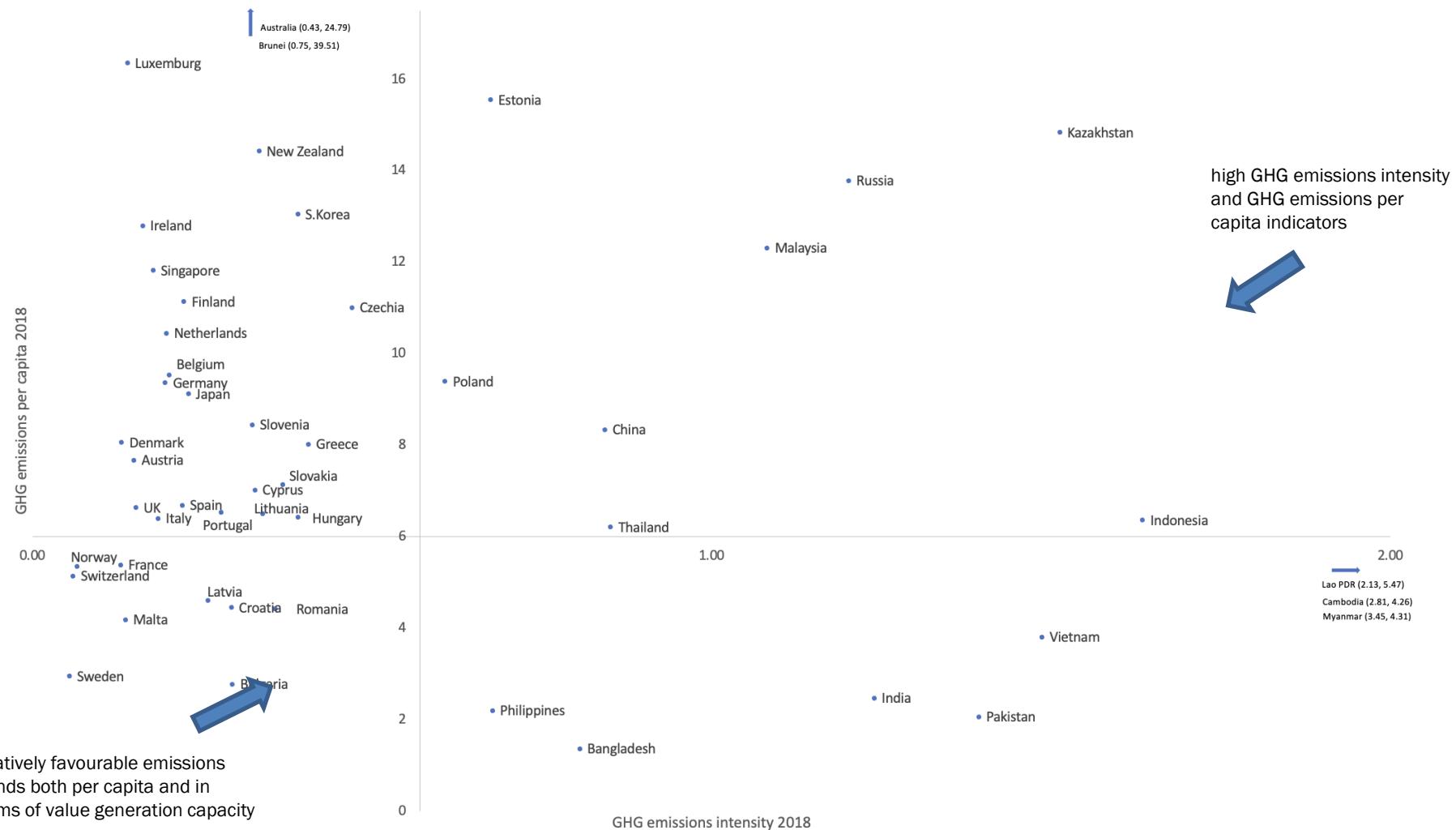
Energy-related emissions in the ASEM regions in 2018, (Gt CO₂e)



Source: Authors' calculation based on data from Climate Watch.

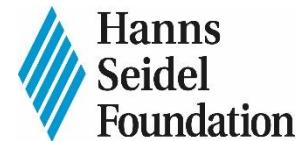
Source: Authors' calculation based on data from Climate Watch.

ASEM countries' GHG emissions and GHG intensity compared to the global averages



Source: Authors' calculation based on data from Climate Watch, accessed on 30 April 2022

Climate commitments and policy frameworks

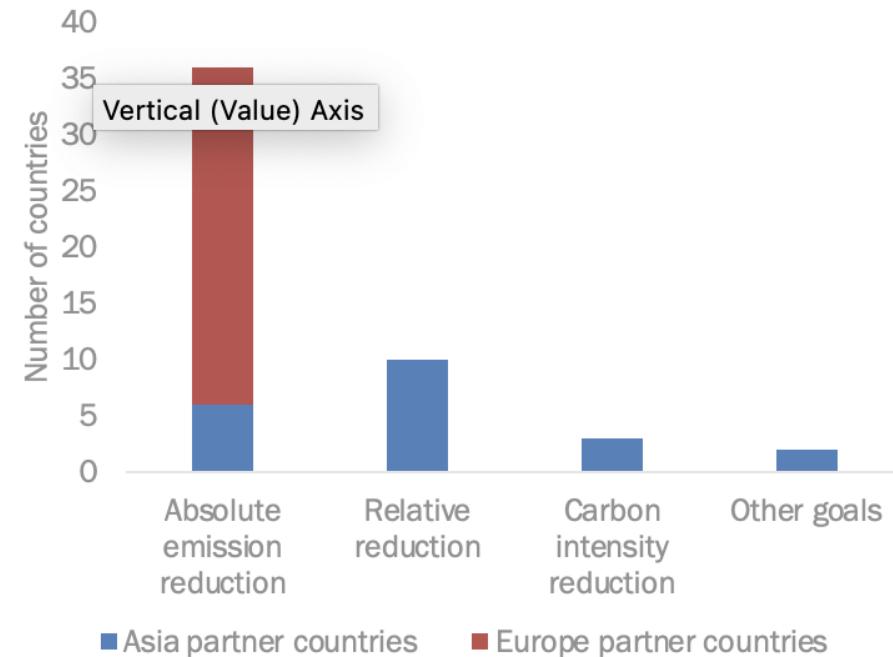


All partner countries have submitted their first NDCs and the majority also strengthened their commitments

ASEM NDC submissions ((as of May 2022)

	NDC	Updated first NDC	Status of the NDC
Australia	yes	yes	Not strengthened
Bangladesh	yes	yes	Strengthened
Brunei	yes	no	Not strengthened
Cambodia	yes	yes	Strengthened
China	yes	yes	Strengthened
India	yes	no	Not strengthened
Indonesia	yes	yes	Not strengthened
Japan	yes	yes	Strengthened
Kazakhstan	yes	no	Not strengthened
South Korea	yes	yes	Strengthened
Lao PDR	yes	yes	Strengthened
Malaysia	yes	yes	Strengthened
Mongolia	yes	yes	Strengthened
Myanmar	yes	yes	Strengthened
New Zealand	yes	yes	Strengthened
Pakistan	yes	yes	Strengthened
Philippines	yes	no	Not strengthened
Russia	yes	no	Not strengthened
Singapore	yes	yes	Not strengthened
Thailand	yes	yes	Not strengthened
Vietnam	yes	yes	Not strengthened
European Union	yes	yes	Strengthened
Norway	yes	yes	Strengthened
Switzerland	yes	yes	Not strengthened
United Kingdom	yes	yes	Strengthened

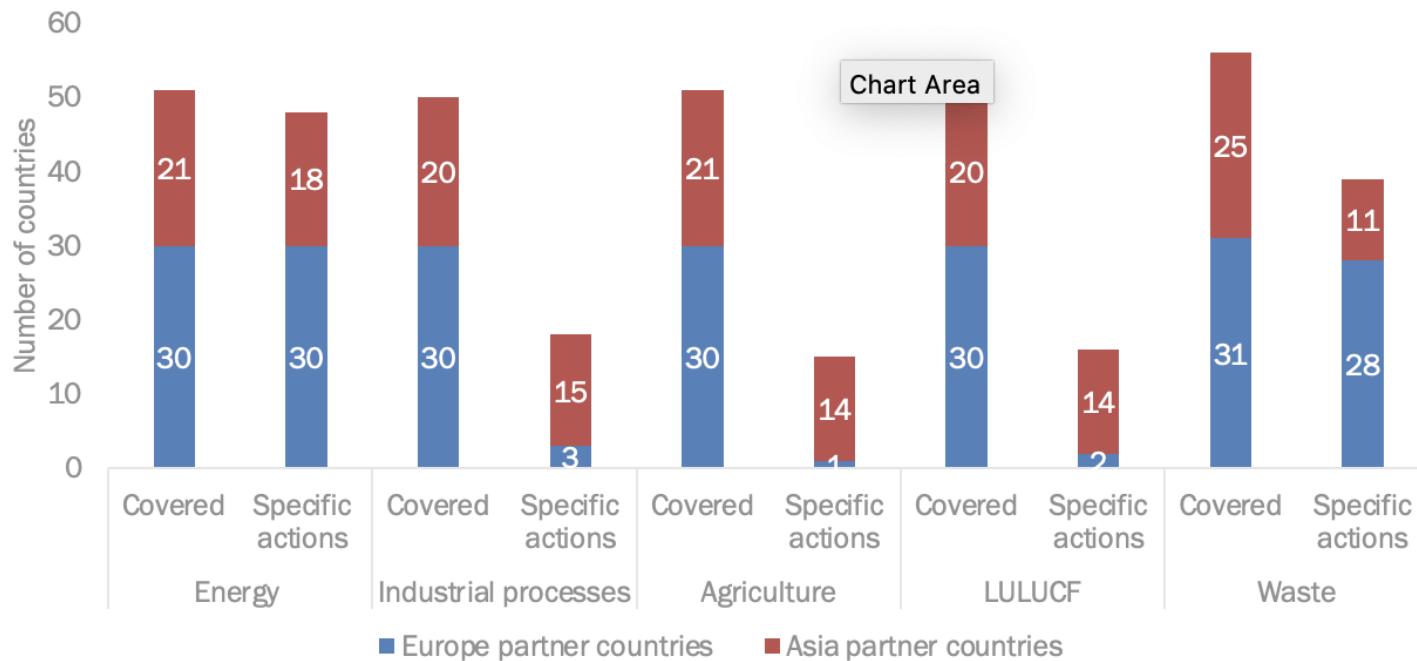
Overview of NDC commitments of ASEM partner countries



Source: Authors' analysis based on IGES and the NDC Database version 7.6.

All ASEM partner countries have established economy-wide emissions mitigation commitments, but some did not specify the planned implementation

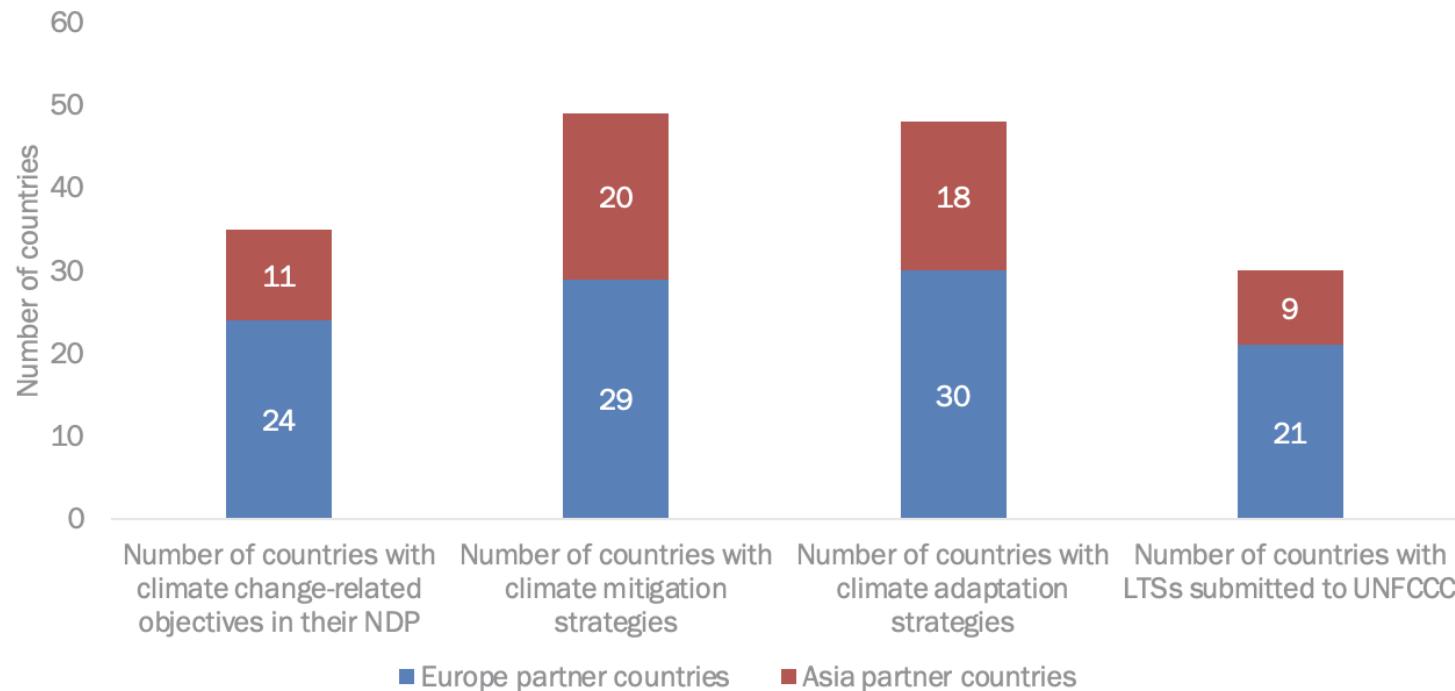
Overview of sectoral coverage in ASEM partner country NDCs



Source: Authors' analysis based on the review of ASEM NDCs and data derived from IGES and the NDC Database version 7.6

Most ASEM partner countries have a climate change policy framework, and 30 countries also submitted their LTS

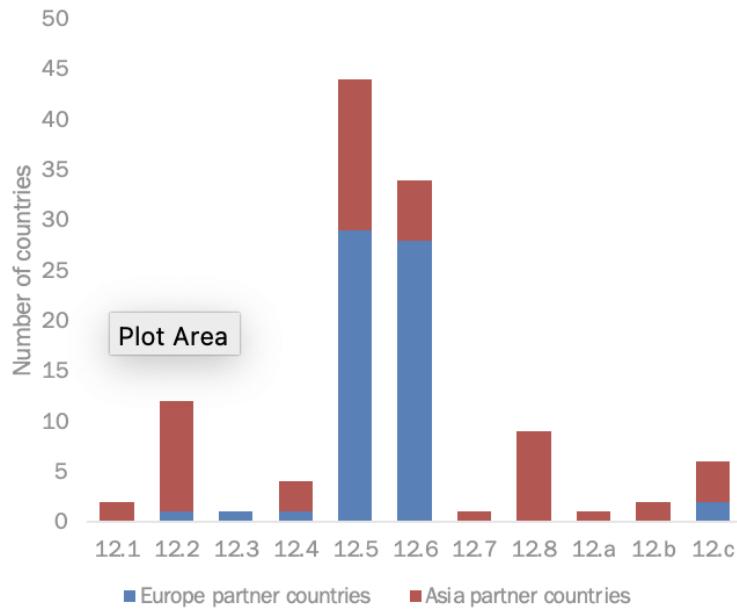
Overview of national climate change policy frameworks



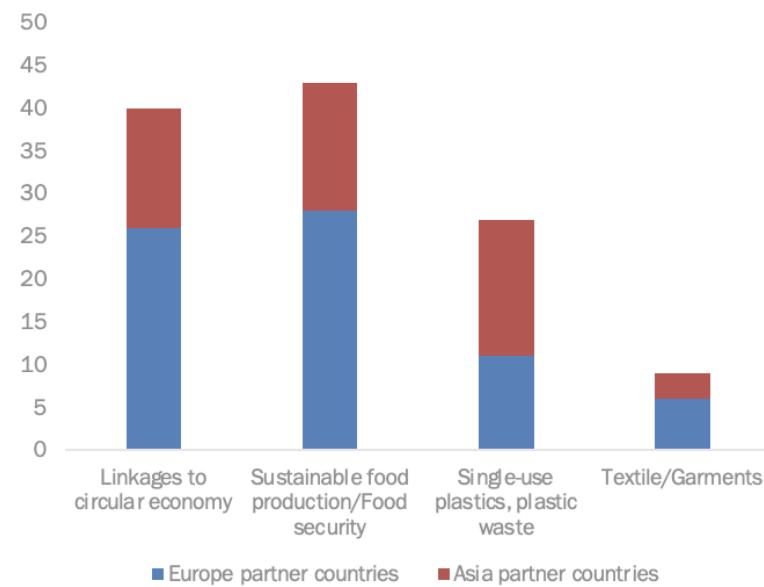
Source: Authors' analysis

ASEM partner countries linked climate commitments to SDG 12, but often with an exclusive focus on waste prevention and recycling

NDC-SDG 12 Linkages in ASEM partner countries



Circular economy and SCP considerations in ASEM climate policy frameworks



Source: Authors' analysis based on data sourced from Climate Watch, accessed on 30 April 2022. Source: Authors' analysis of the national policy frameworks

Sectoral needs recommendations

Energy sector

Percentage of national GHG emissions from electricity/heat (as a percentage of the total emissions from the energy sector), 2018

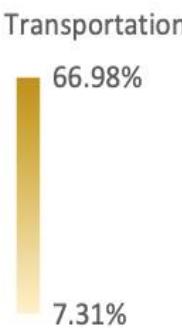
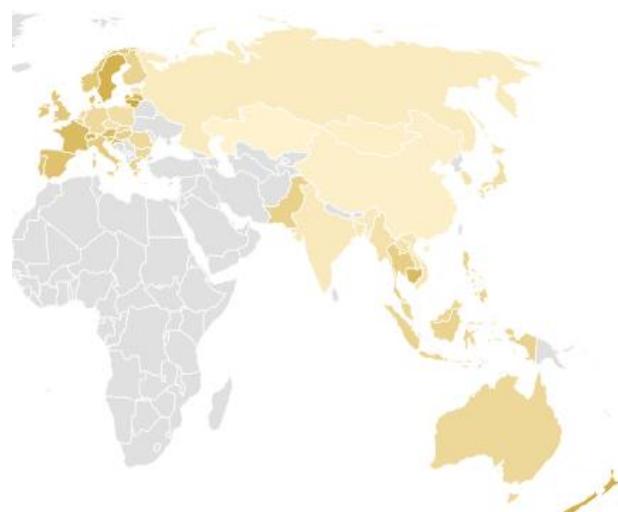


Source: Authors' calculation based on data from Climate Watch

- Energy conservation and energy efficiency measures should be the low hanging fruits that are further prioritised
- Countries should increase the share of renewable energy sources and upgrade the electricity grid
- Electricity demand at the household level should be minimised
- Support to modernisation of industrial installations and investment in carbon-neutral technologies and systems;
- The phase-out of coal needs be accelerated with different adjustment timelines

Transport

Percentage of national GHG emissions from transportation (as a percentage of the total emissions from the energy sector), 2018



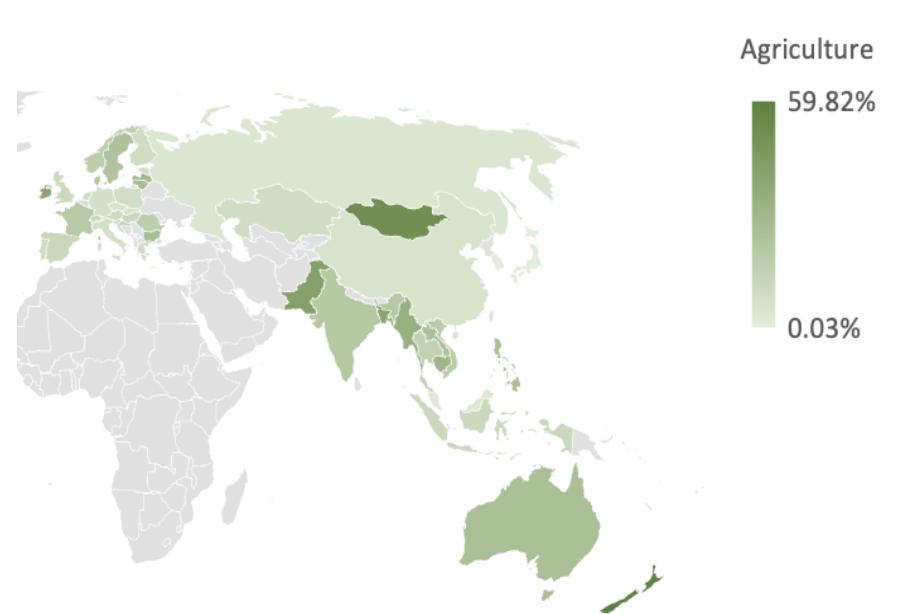
- Cities to shift from private motorised transport to integrated public transport modes
- Investments in inter-regional, low-carbon transport infrastructure
- Promote the use of electric vehicles; coupled with making renewable energy the main source of electricity.
- Discourage the use of private fossil-fuel vehicles
- Limit airport expansions and discourage short-haul flights

Source: Authors' calculation based on data from Climate Watch.

Agriculture and forestry

- Promote sustainable consumption via changes in dietary habits
- Create sustainable production systems, food value chains
- Promote climate-smart and regenerative agricultural practices
- Innovations for new and efficient food production solutions
- Halt deforestation and restore and conserve ecosystems,
- Systematically apply high-quality nature-based climate-solutions

Percentage of national GHG emissions from the agriculture sector (as percentage of the total national emissions), 2018



Source: Authors' calculation based on data from Climate Watch.

Key messages

Emission reduction

- Critically re-examine emissions reduction commitments and measures
- Focus emissions reduction efforts on critical, high-emitting sectors
- Center net-zero plans around a circular economy transition and NbCS

Climate policy frameworks

- Mainstream mitigation and adaptation goals into national policy frameworks
- Action plans with quantifiable and time-bound targets and implementation budget
- Co-benefits for mitigation targets and adaptation needs

Climate financing

- Donor countries
 - need to increase funding
 - avoid supporting fossil-fuel projects
- Middle and lower-income countries:
 - strengthen institutional capacities
 - pursuing funding for adaptation needs

Thank you!