



SLOCAT Transport, Climate and Sustainability Global Status Report

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The background is a solid blue color with several abstract, semi-transparent geometric shapes. There are large, overlapping circular and rectangular shapes in various shades of blue. Some of these shapes contain dotted patterns. A thin, light blue line starts from the top left and extends diagonally towards the center. Another dotted line starts from the bottom right and extends towards the center.

Section 1.1

Transforming Transport and Mobility to Achieve the Targets of the Paris Agreement and the Sustainable Development Goals

FIGURE 1. Global temperature change, 1880-2020

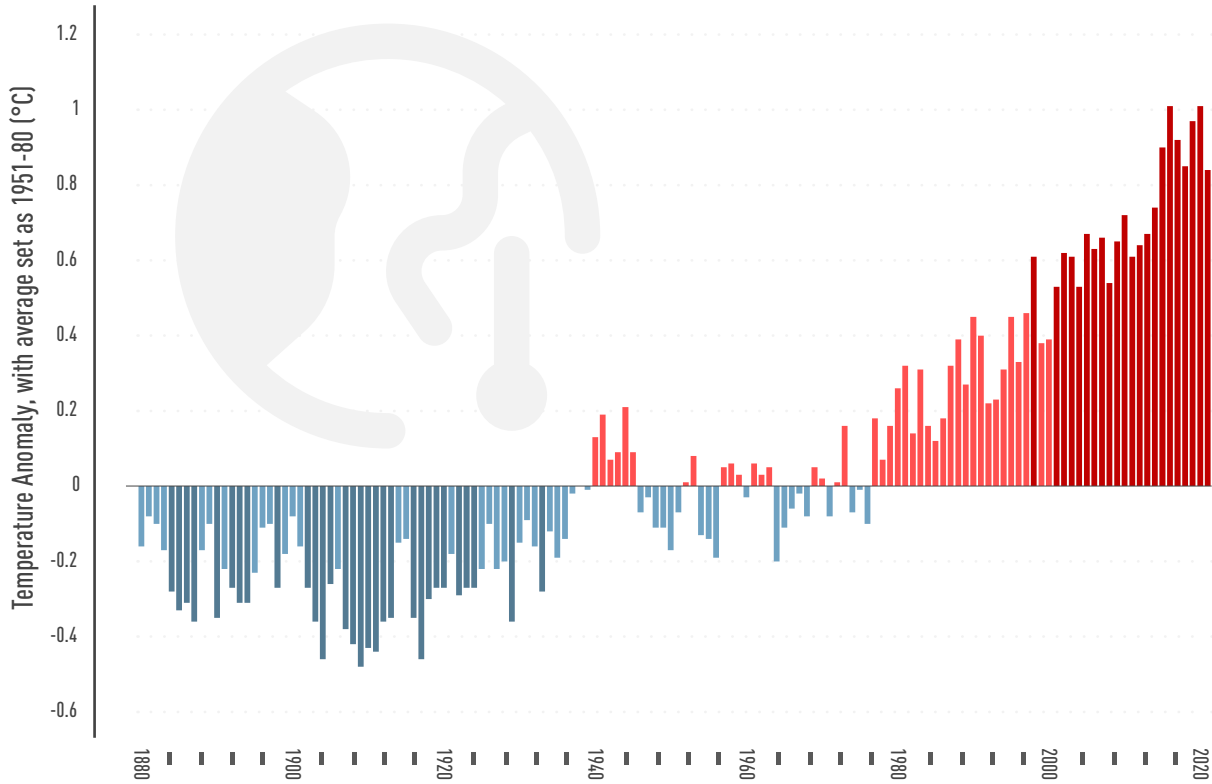


FIGURE 2. Annual change in transport CO2 emissions (including international aviation and shipping), 1971-2021

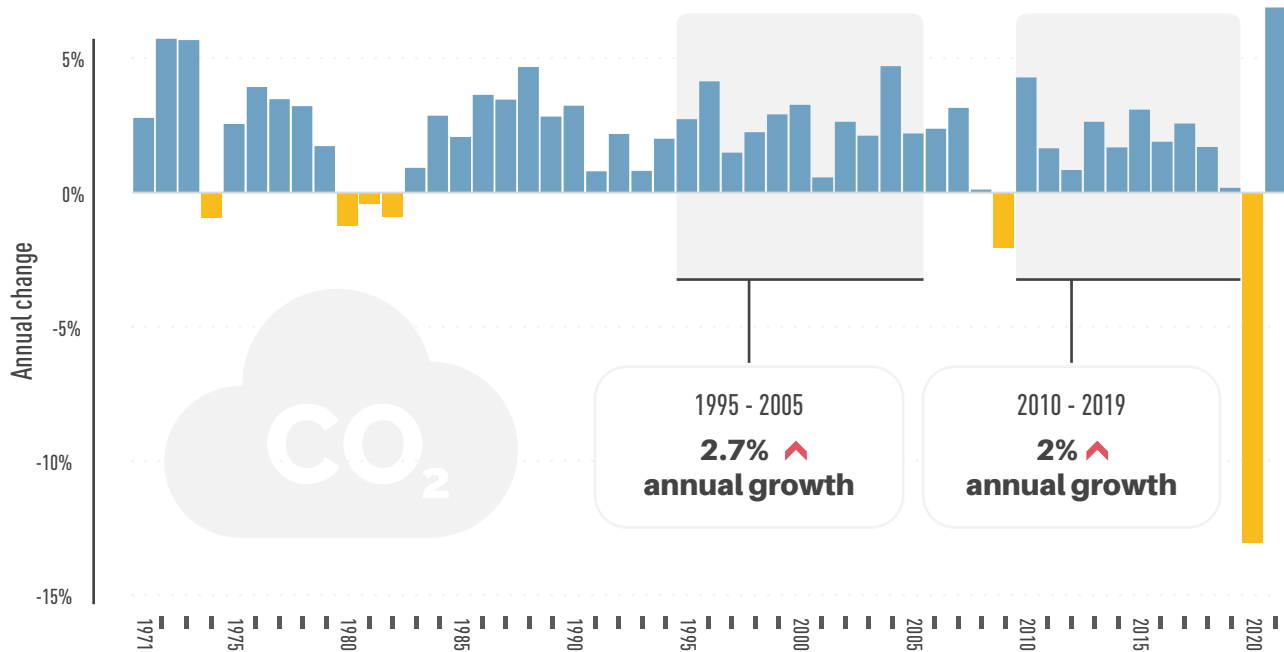


FIGURE 3. Changes in CO2 emissions by sector, 2010-2021

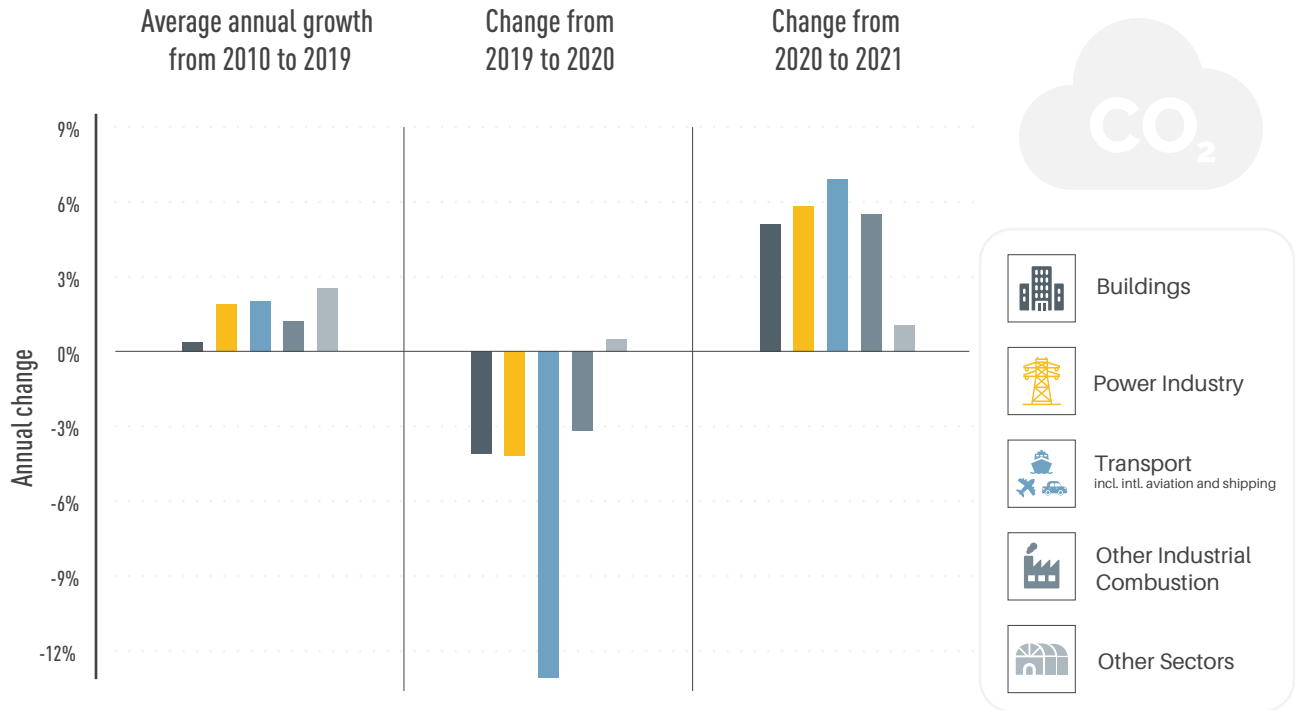
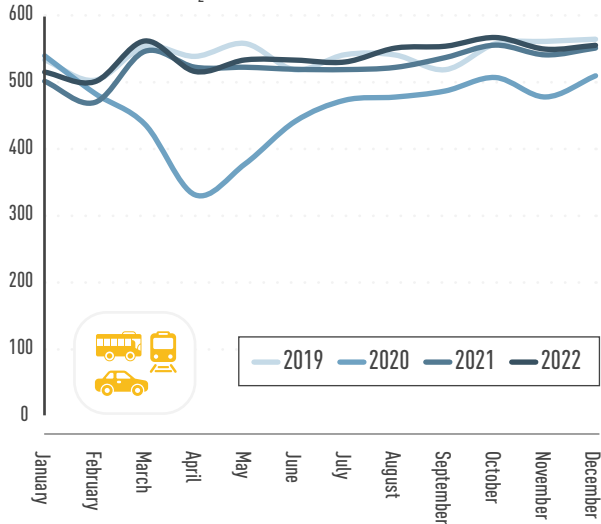


FIGURE 4.

CO₂ emissions from ground transport and aviation, 2019-2022

Ground transport CO₂ emissions (millions tonnes)



Domestic and international aviation CO₂ emissions (millions tonnes)

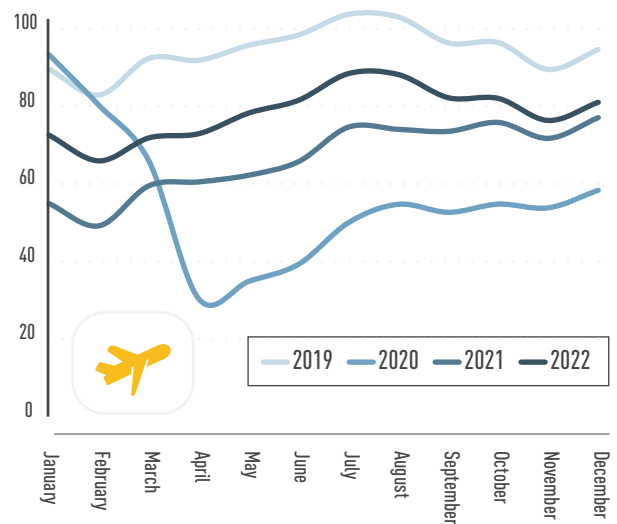


FIGURE 5.

Per capita transport CO₂ emissions versus per capita gross domestic product, by country grouping, 2021

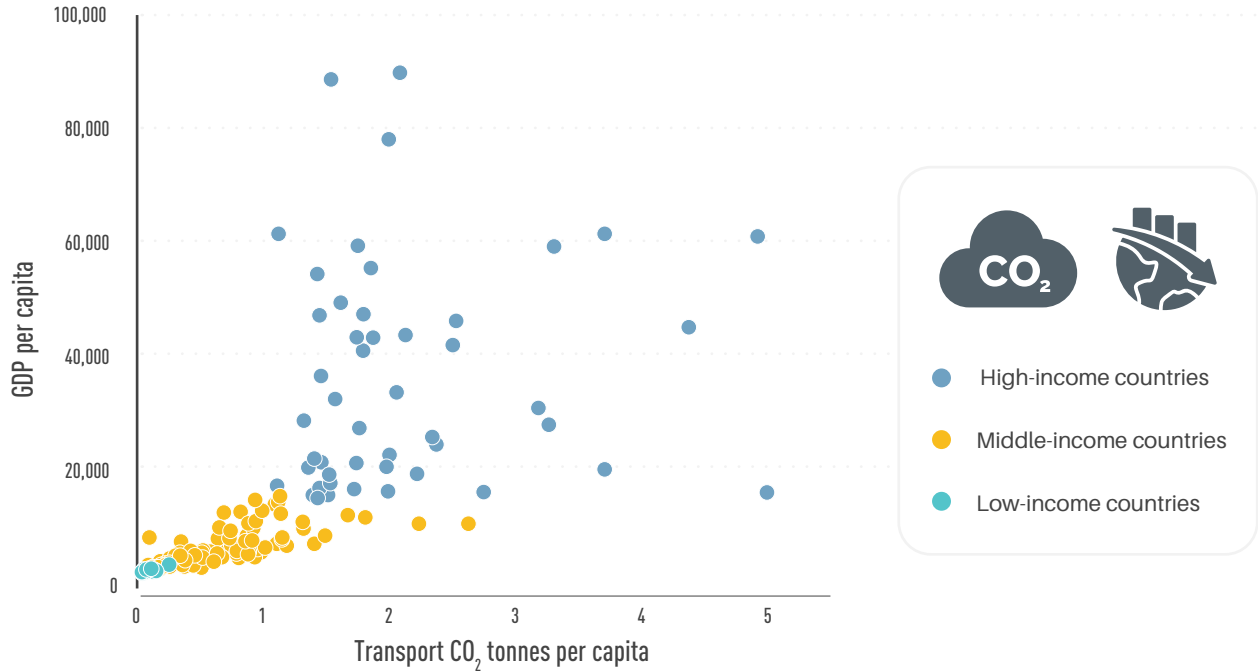


FIGURE 6. Transport CO₂ emissions, by region and for international shipping and aviation, 2010-2021

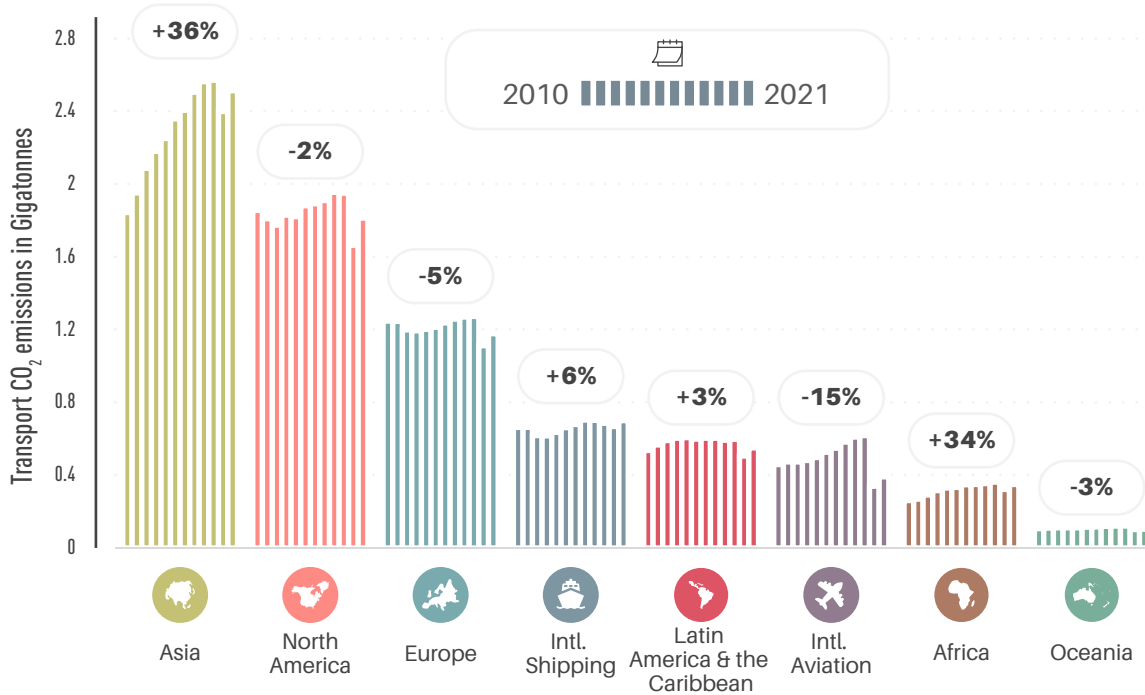


FIGURE 7. Transport CO₂ emissions by activity and mode, 2019

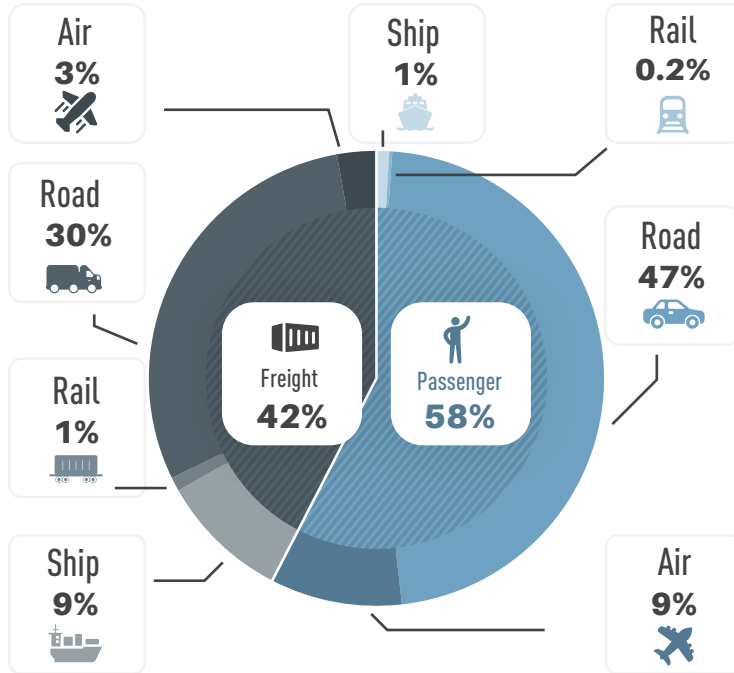
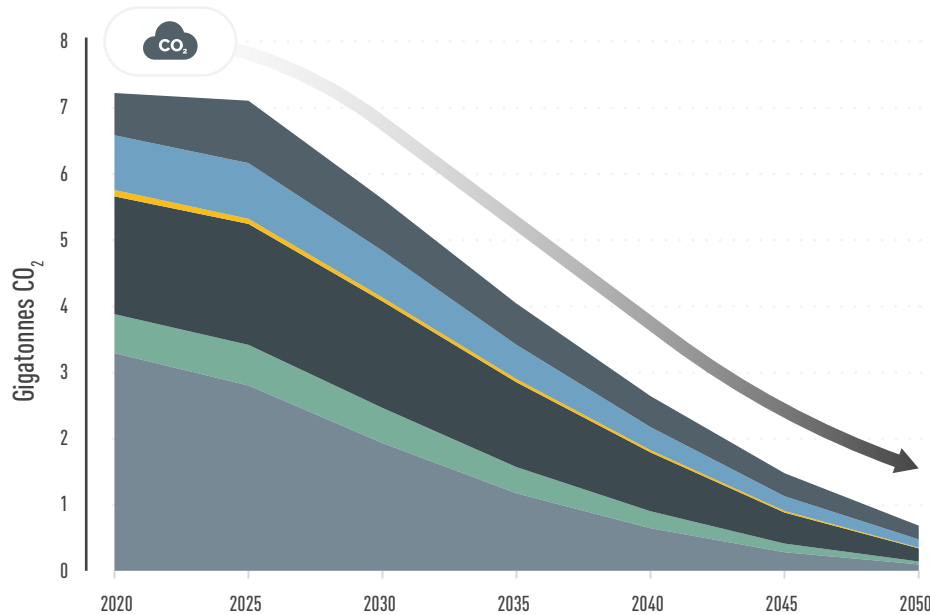


FIGURE 8. CO₂ emissions from international aviation and shipping, 2015-2021

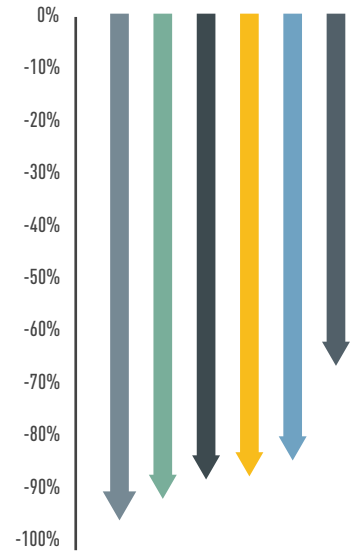


FIGURE 9. Global transport CO₂ emission trajectories by mode, 2020-2050

Global CO₂ transport emission trajectories by mode



CO₂ reduction from 2020 to 2050



-  Light-duty vehicles
-  Other road
-  Heavy trucks
-  Rail
-  Shipping
-  Aviation

FIGURE 10. Regional transport decarbonisation pathways for 2030 and 2050, by scenario



Transport CO₂ reductions aligned to global warming of 2°C



Transport CO₂ reductions aligned to global warming of 1.5°C with low overshoot

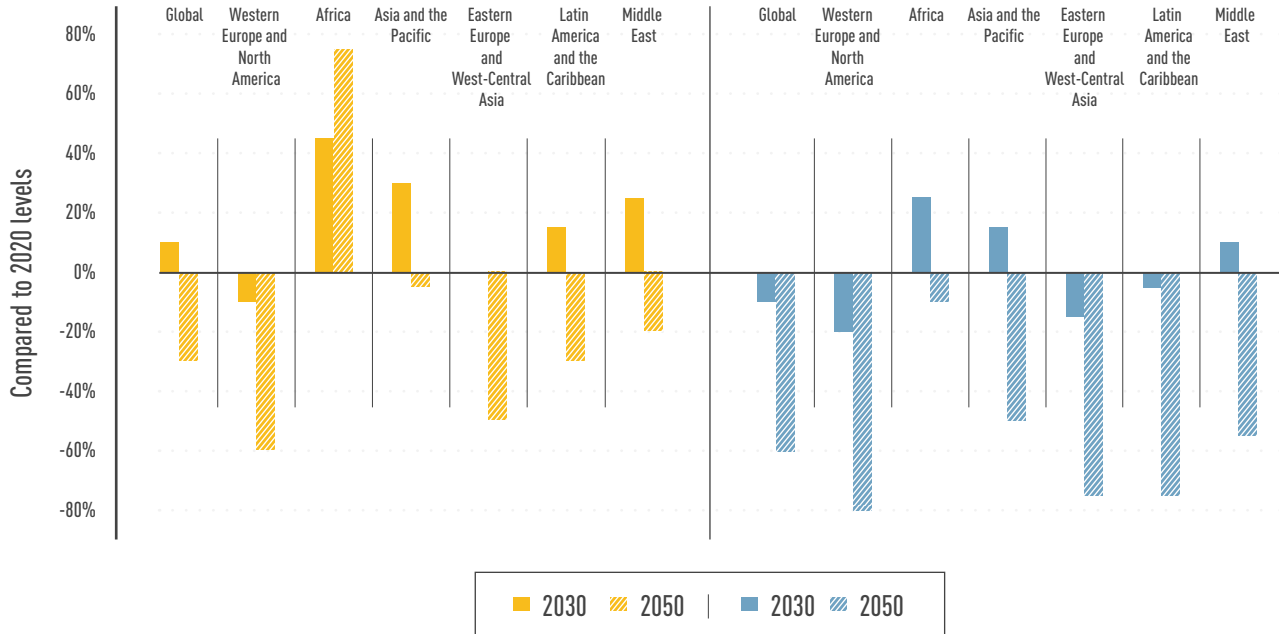


FIGURE 11. SLOCAT Wheel on Transport and SDGs



FIGURE 13. Synergies and trade-offs between transport mitigation options and the SDGs

Mitigation options have synergies with many Sustainable Development Goals, but some options can also have trade-offs. The synergies and trade-offs vary dependent on context and scale.

Type of relations:

- + Synergies
- Trade-offs
- Both synergies and trade-offs

Blanks represent no assessment

Confidence level:

- High confidence
- Medium confidence
- Low confidence

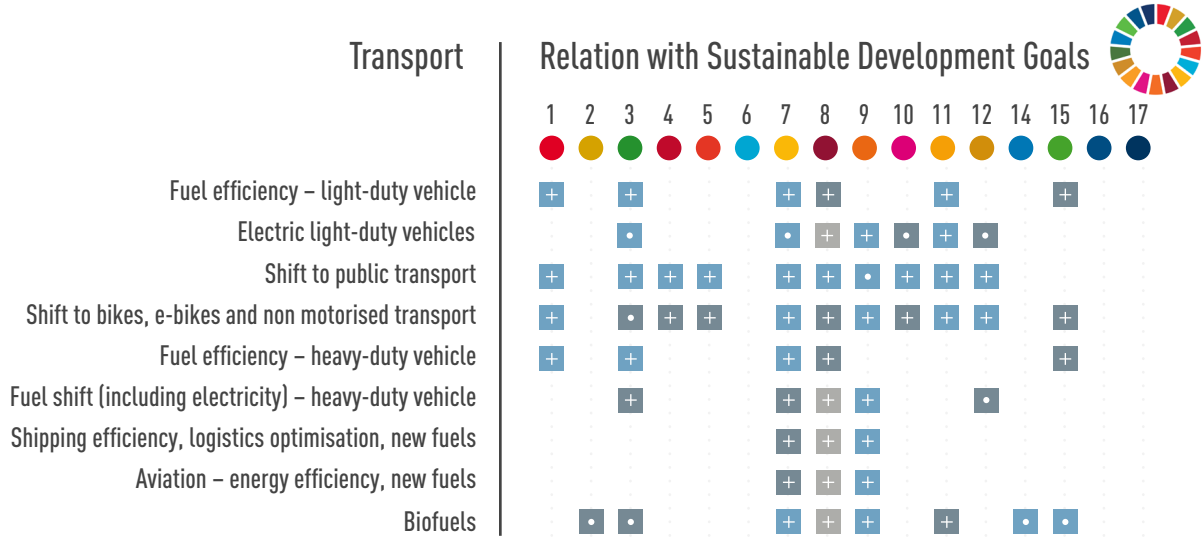
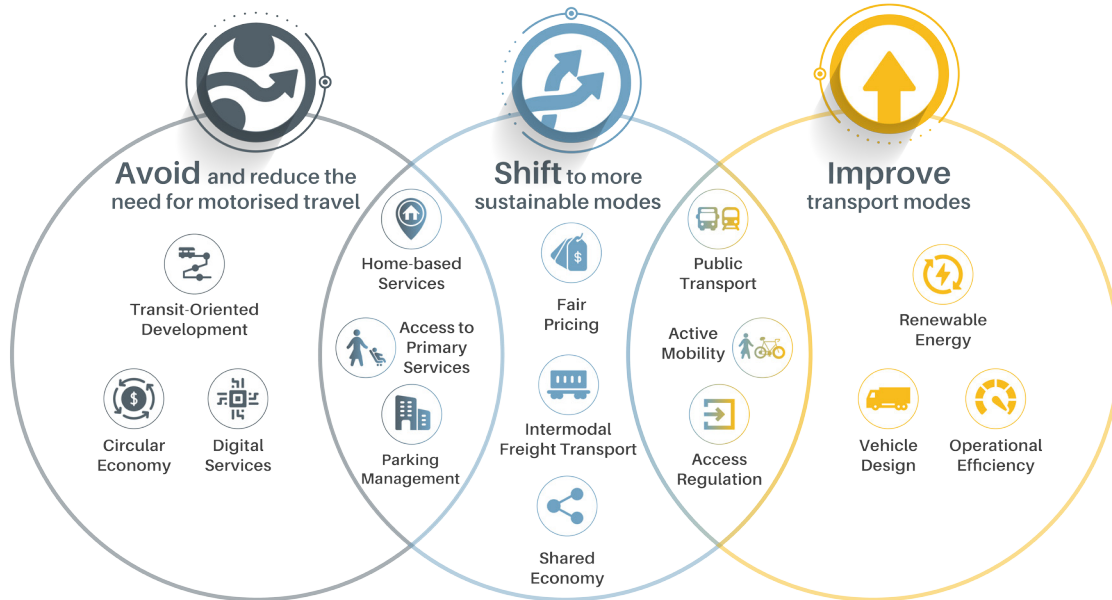
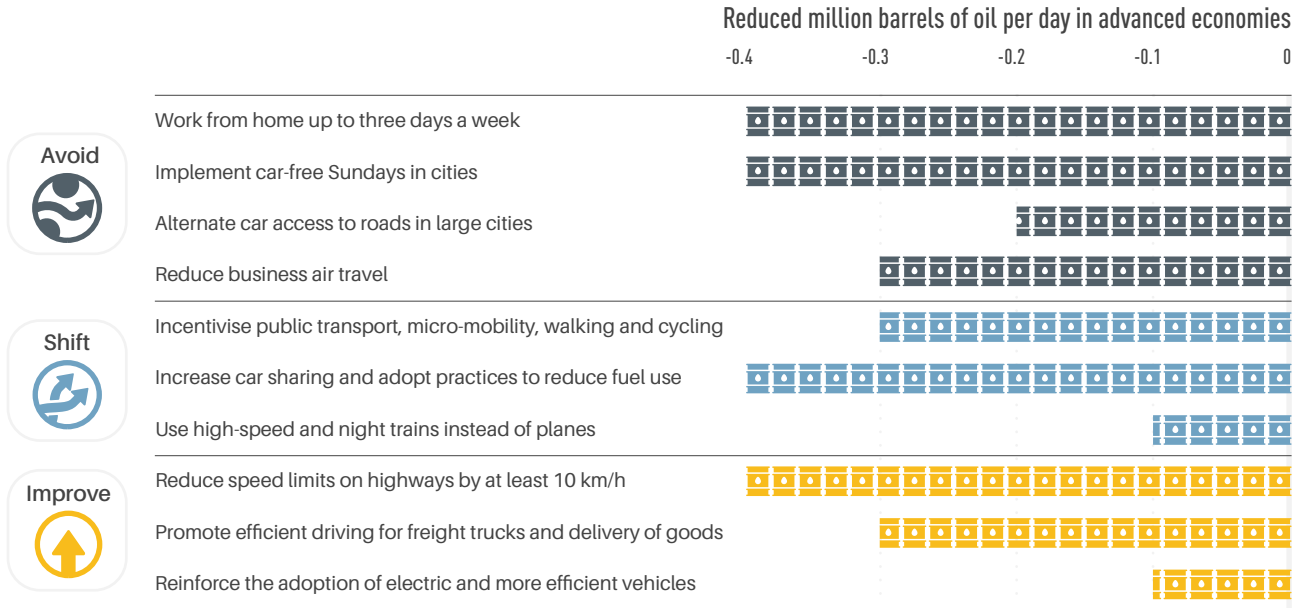


FIGURE 14. Avoid-Shift-Improve framework for transport



*The A-S-I diagramme presents a non-exhaustive list of measures for illustrative purposes only.

FIGURE 15. Actions to reduce oil dependency in transport, through Avoid-Shift-Improve measures

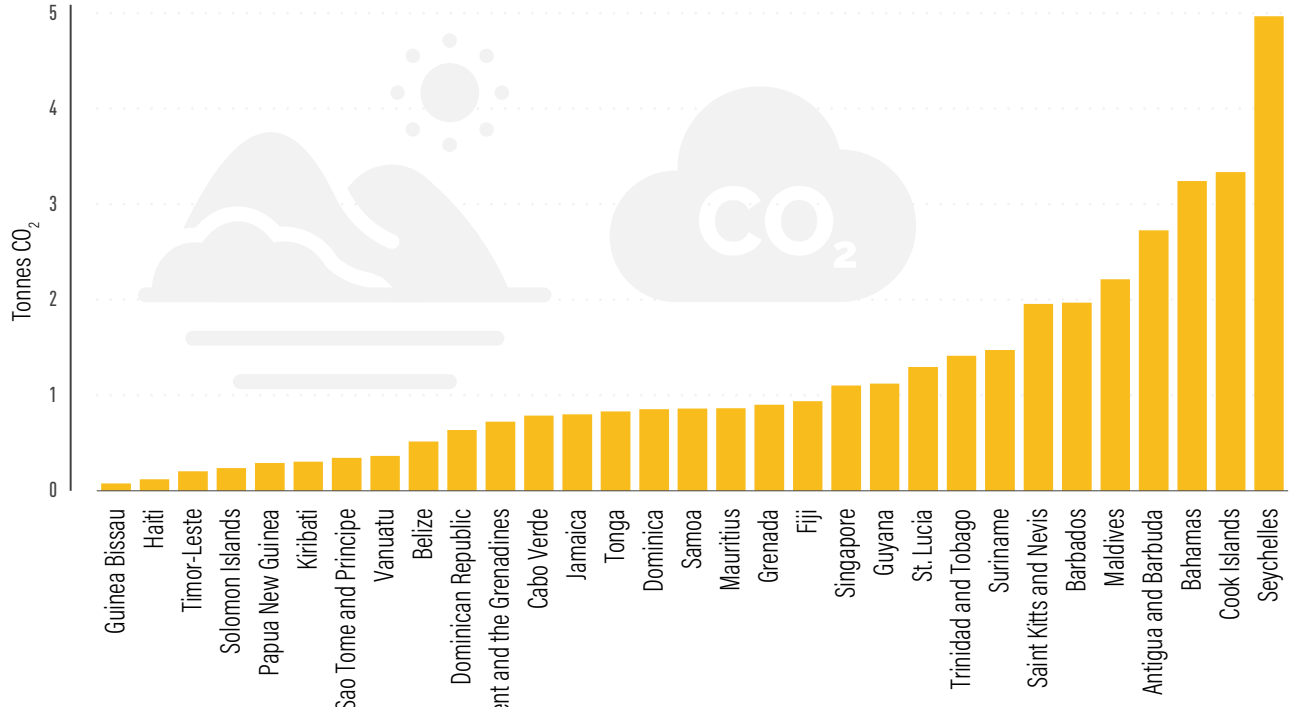


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Spotlight 2

Transport Adaptation, Resilience and Decarbonisation
in Small Island Developing States

FIGURE 2. Per capita transport CO₂ emissions in SIDS



Section 1.3.1

Transport in National Climate and Sustainability Strategies
to Achieve the Targets of the Paris Agreement and SDGs

FIGURE 1. Transport targets, by type, in second-generation NDCs

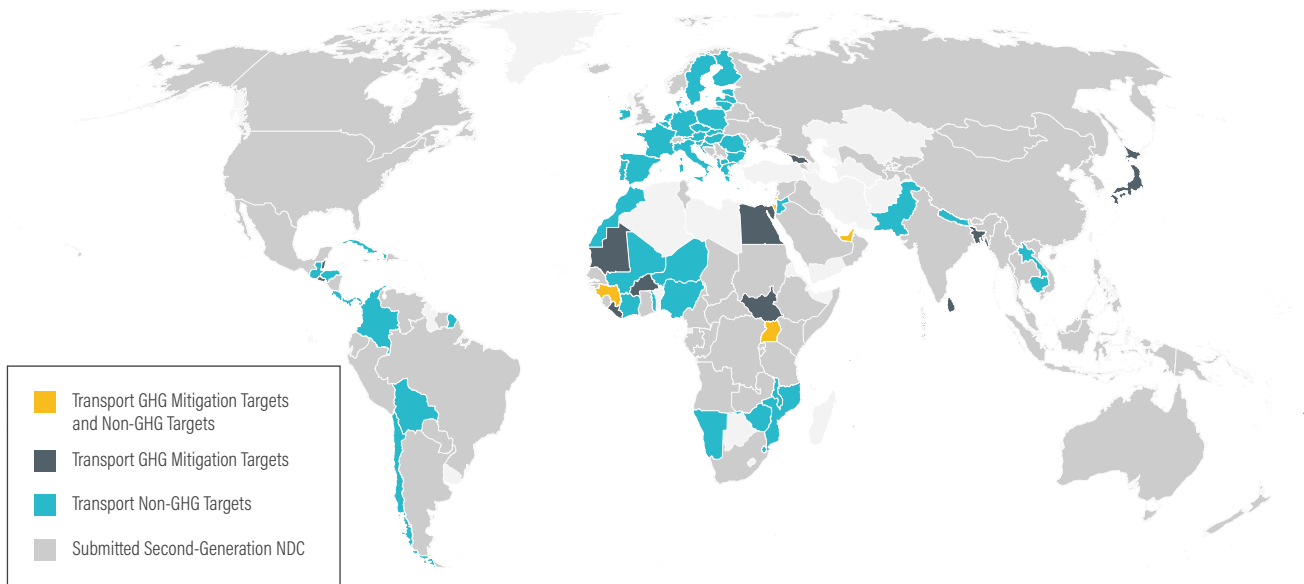
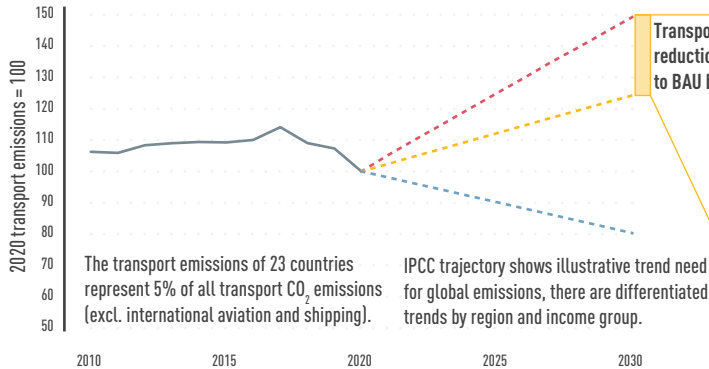
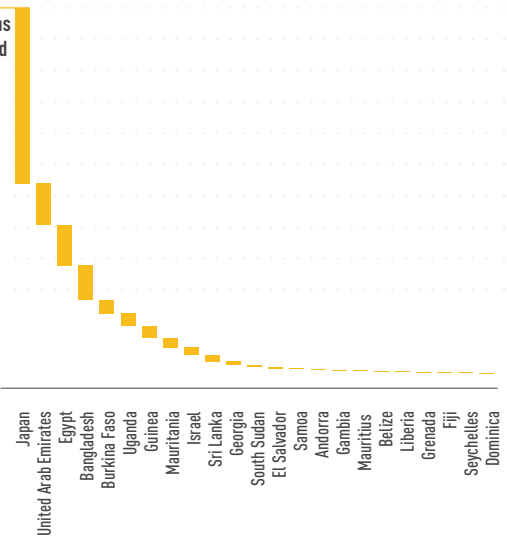


FIGURE 2. Impact of transport greenhouse gas mitigation targets in NDCs

Transport CO₂ emission trajectories by countries with transport emission mitigation targets in their NDCs (index with 2020 as 100)

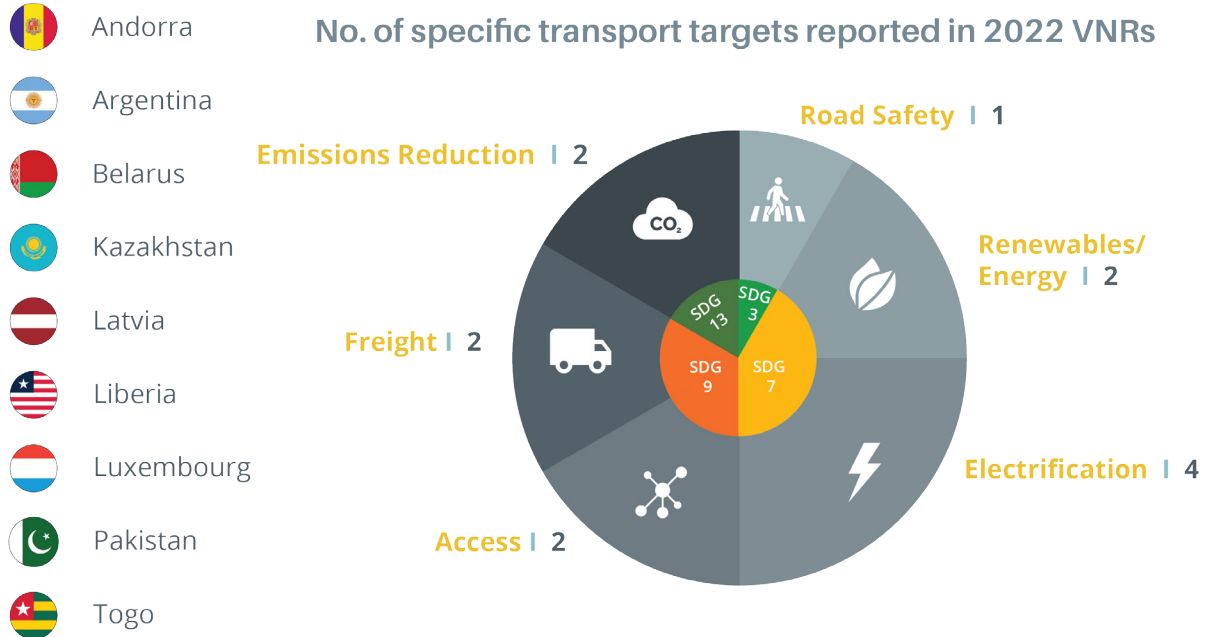


Individual country contributions in transport CO₂ emissions avoided by 2030 compared to 2030 BAU



- Historic transport emissions
- Transport mitigation targets
- Transport BAU emissions
- IPCC trajectory for 1.5 °C

FIGURE 3. Number of specific transport targets mentioned in 2022 Voluntary National Reviews



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Section 1.3.3

The Role of Business in Decarbonising Transport

FIGURE 1. Diagramme about the 4As



Ambition

Commit to net zero and set science-based targets in line with Paris Agreement goals and a just transition



Action

Take concrete action across the business value chain and involve employees, suppliers, and customers



Advocacy

Speak up to secure wider change through ambitious government policy and aligned trade associations



Accountability

Disclose emissions, progress against targets and plans, risk management, policy engagement, and governance

FIGURE 2. Transport stakeholders for passenger and freight transport

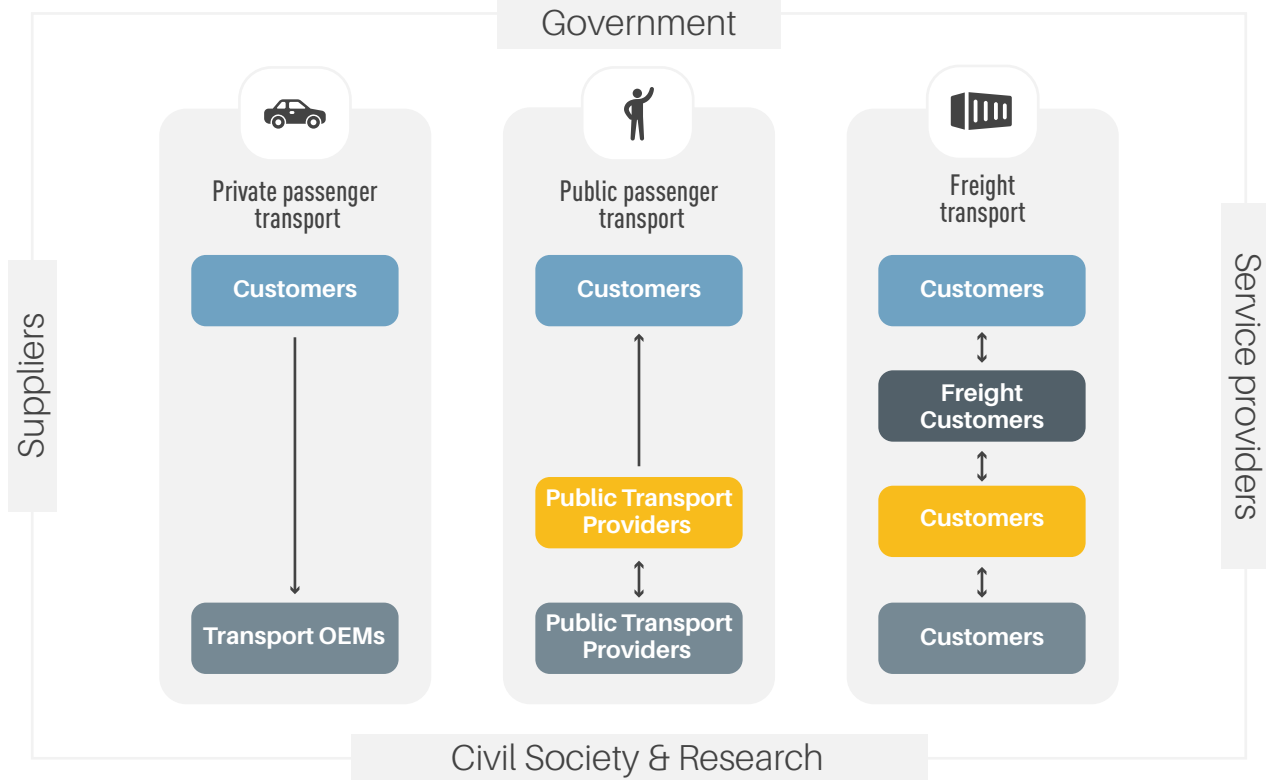


FIGURE 3. Regional market shares of original equipment manufacturers committed to zero-emission vehicles, 2020

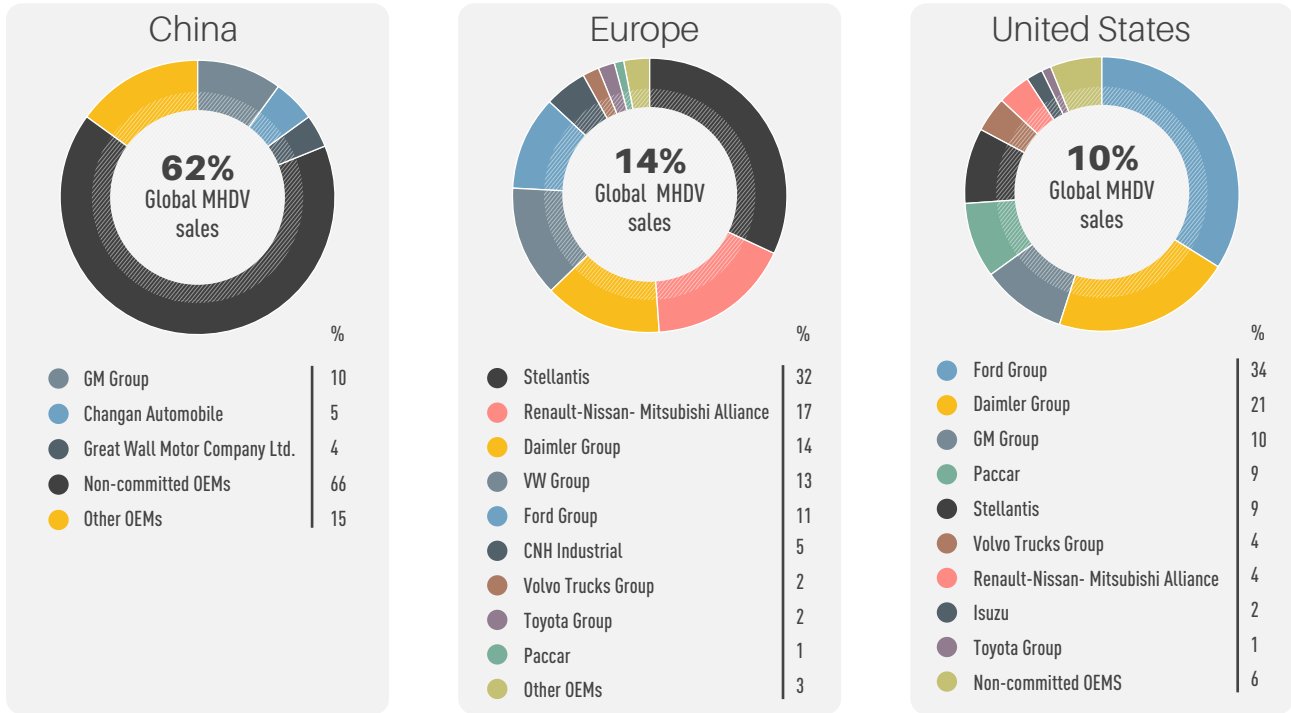


FIGURE 4.

Projected production of zero-emission vehicles versus targets set in the International Energy Agency's 1.5°C scenario, 2021-2029

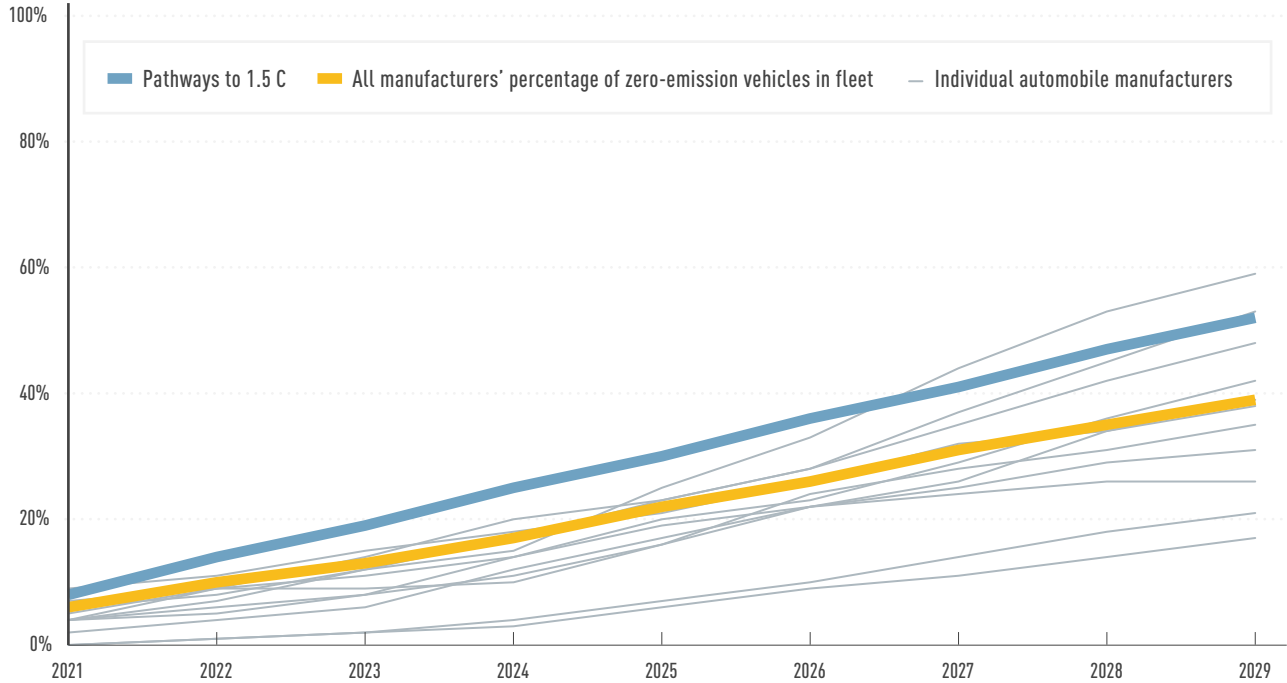


FIGURE 5. Projected composition of the global light-duty vehicle fleet, by technology, 2021-2029

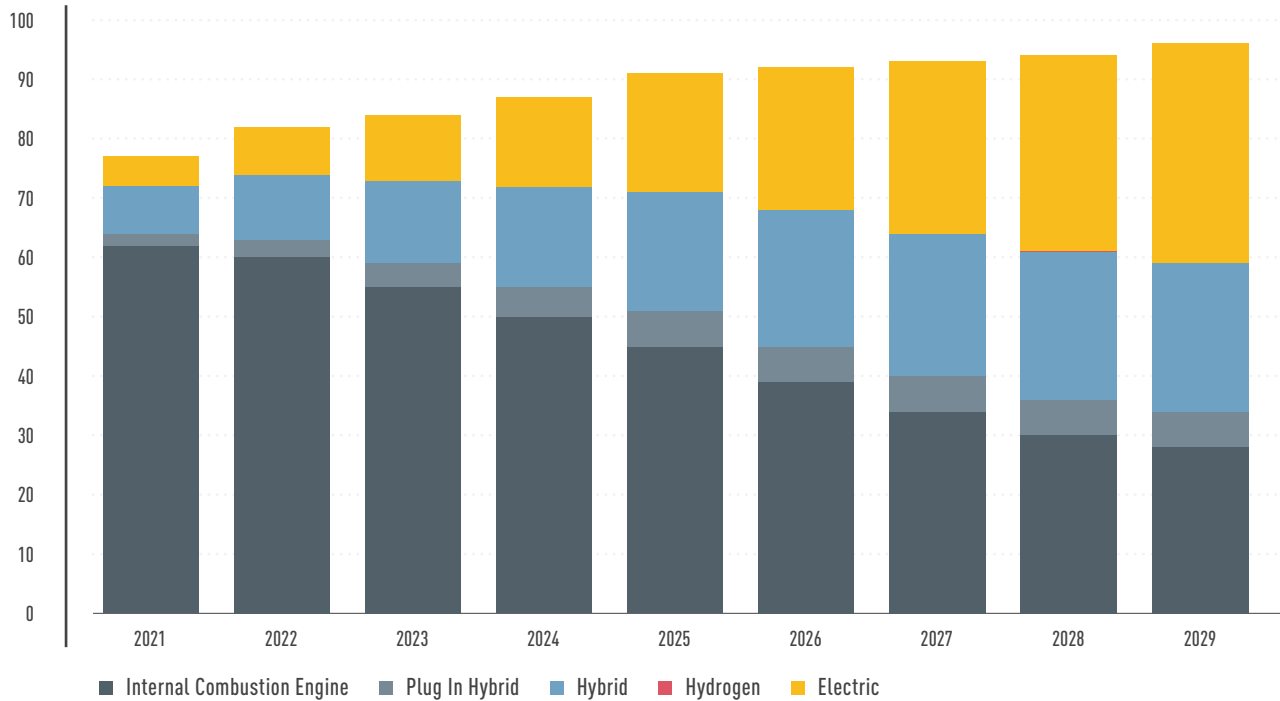


FIGURE 6. Global availability of zero-emission medium-and heavy-duty vehicles, by type, 2021-2023

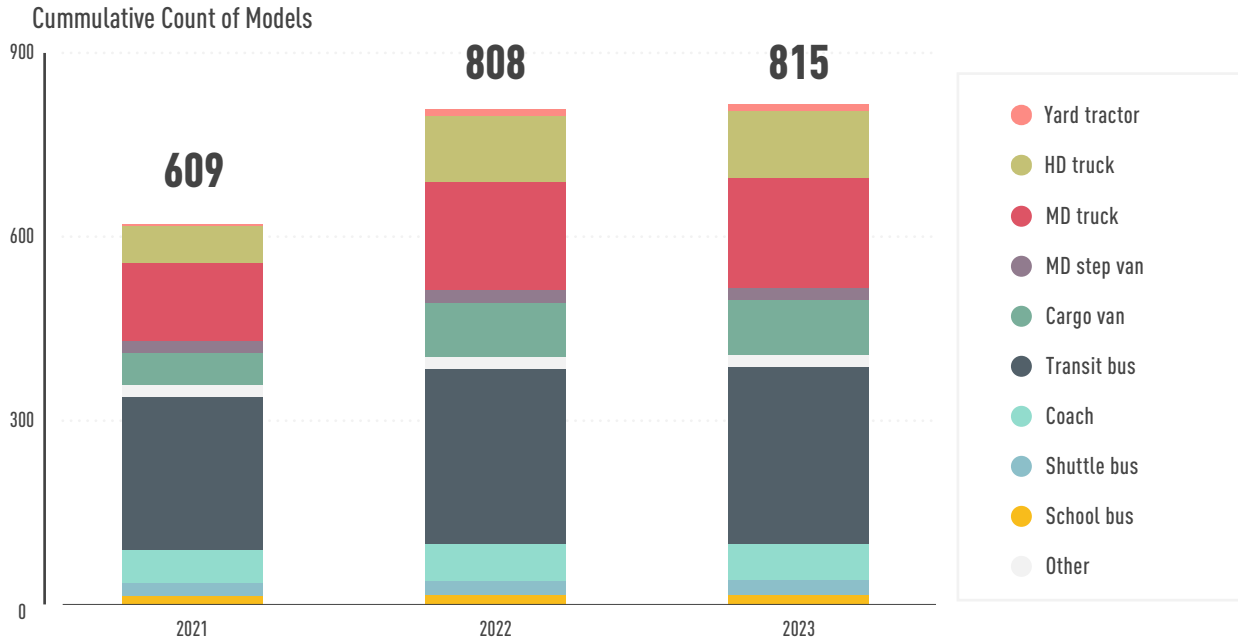


FIGURE 7.

Policy advocacy positions across transport modes in the EU (number of companies), as of January 2023

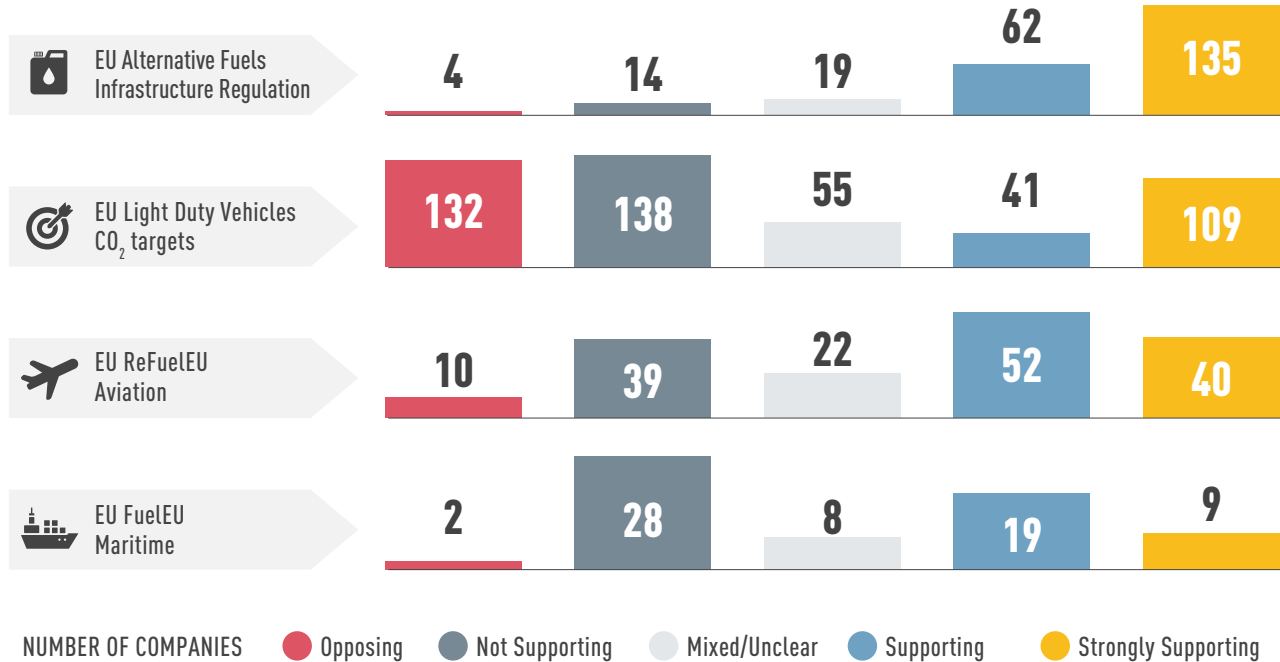


FIGURE 8. Zero-emission vehicle production and climate policy engagement, by region

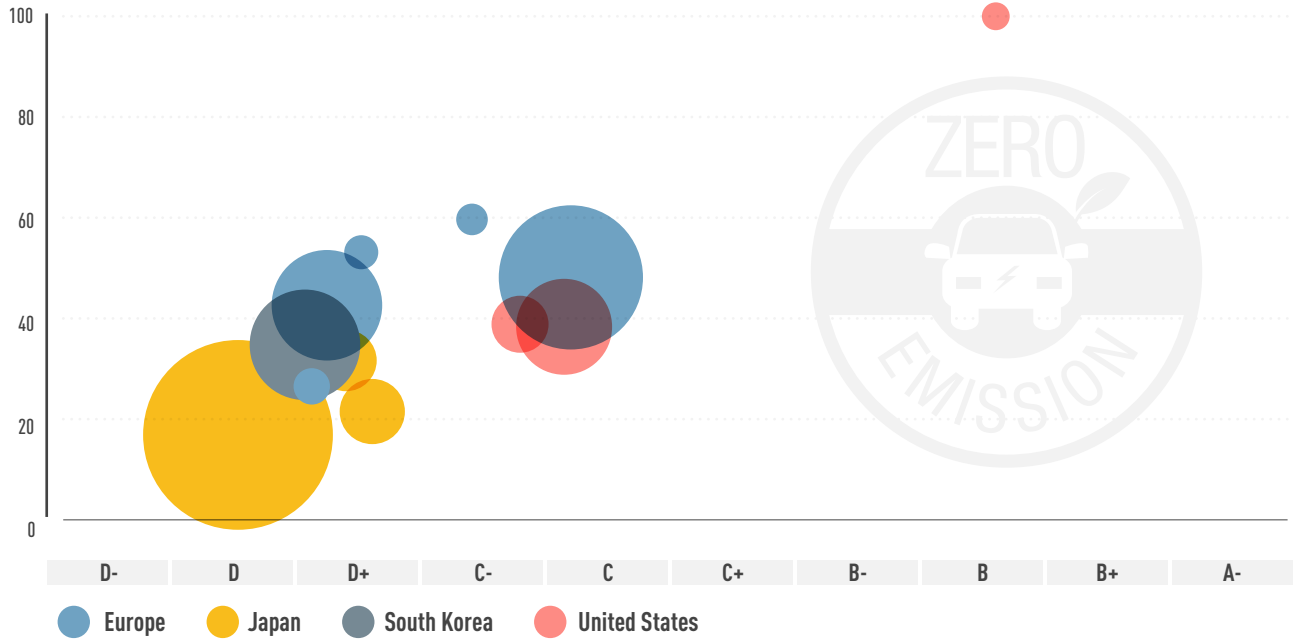


FIGURE 9. Transport companies with SBTi targets, by sector

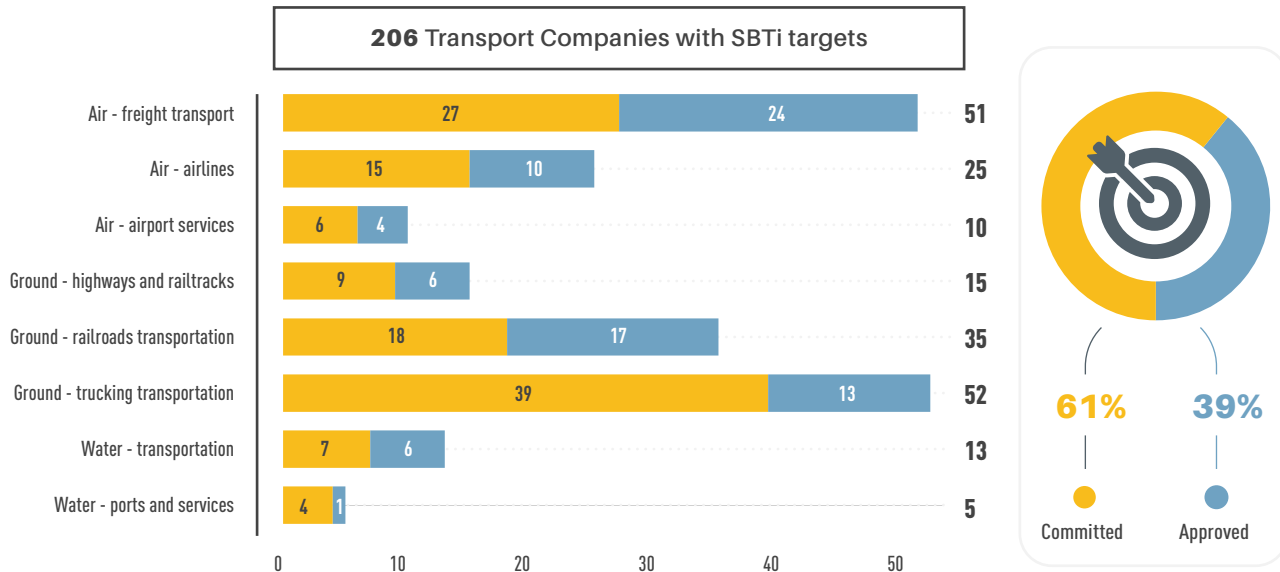
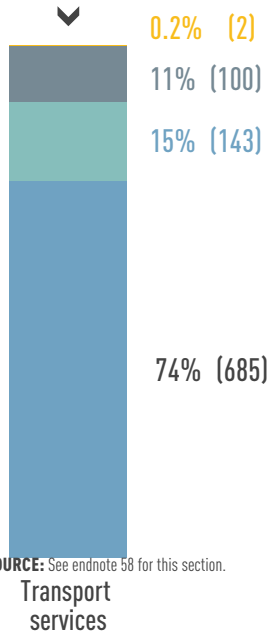


FIGURE 10. Transport companies with climate transition plans, by level of credible coverage

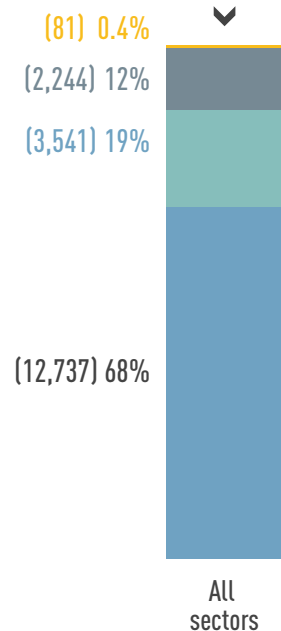
Climate Transition Plans

Total Companies

(930)



(18,603)



Indicators of a credible Climate Transition Plan cover governance, scenario analysis, financial planning, value chain engagement & low carbon initiatives, policy engagement, targets, and scope 1,2&3 accounting with verification.

- All: 21 indicators
- Many: 14-20 indicators
- Some: 7-13 indicators
- Few: <7 indicators

SOURCE: See endnote 58 for this section.

FIGURE 11. Comprehensiveness of climate transition plans of 90 transport companies

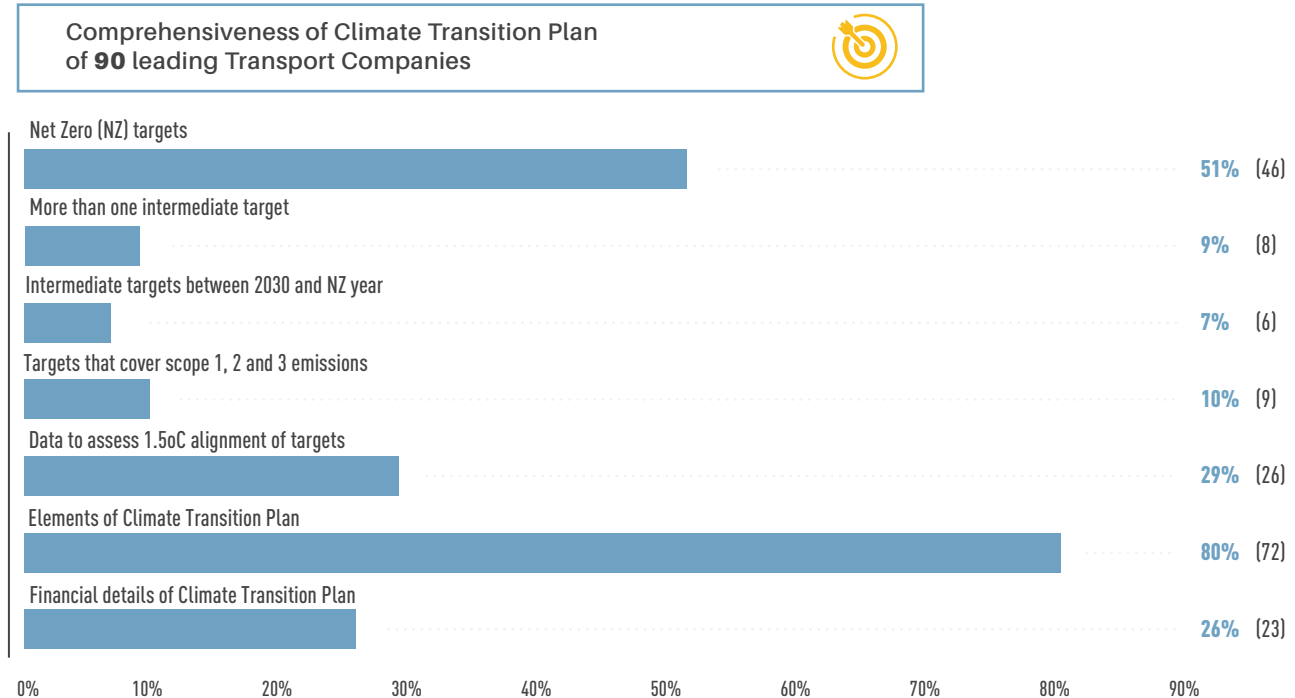
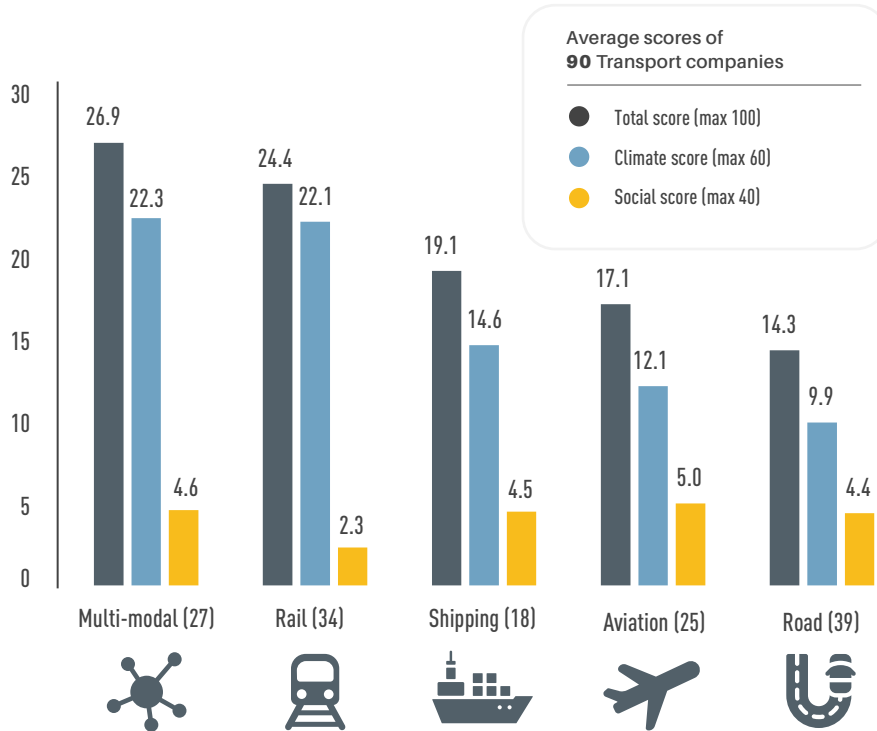


FIGURE 12. Average climate and social performance of 90 transport companies, by mode



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Spotlight 5

Shortening Global Supply Chains as a Key to Decarbonising Transport

FIGURE 1. The role of longer distance trade, 1965-2020

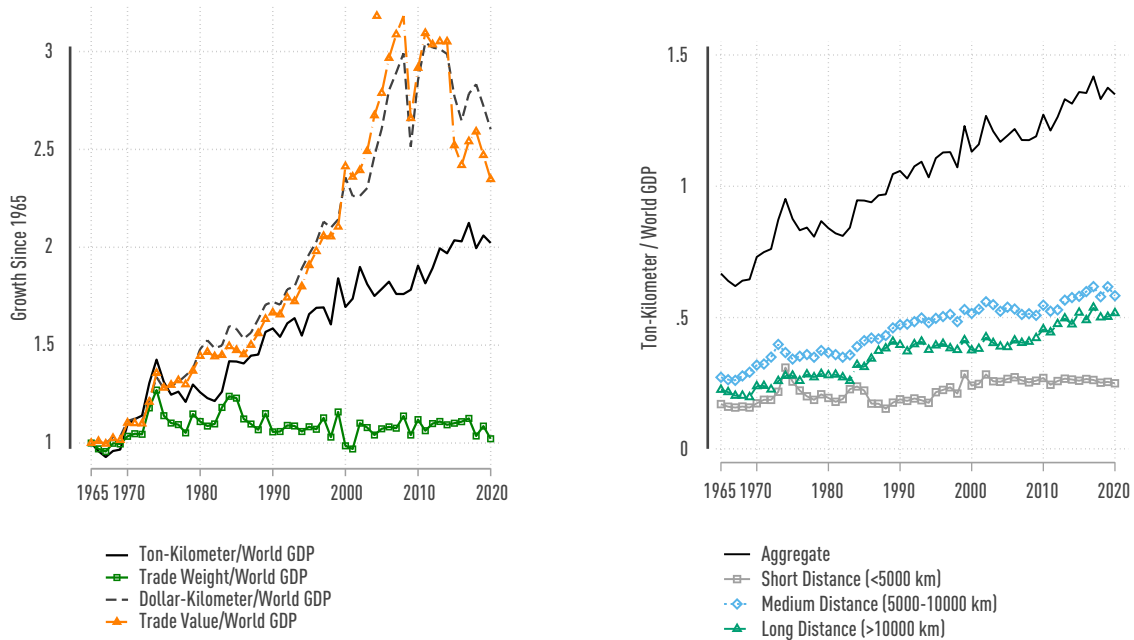


FIGURE 3. Global supply chain pressure index (higher value means higher pressure), 2015 to 2022

