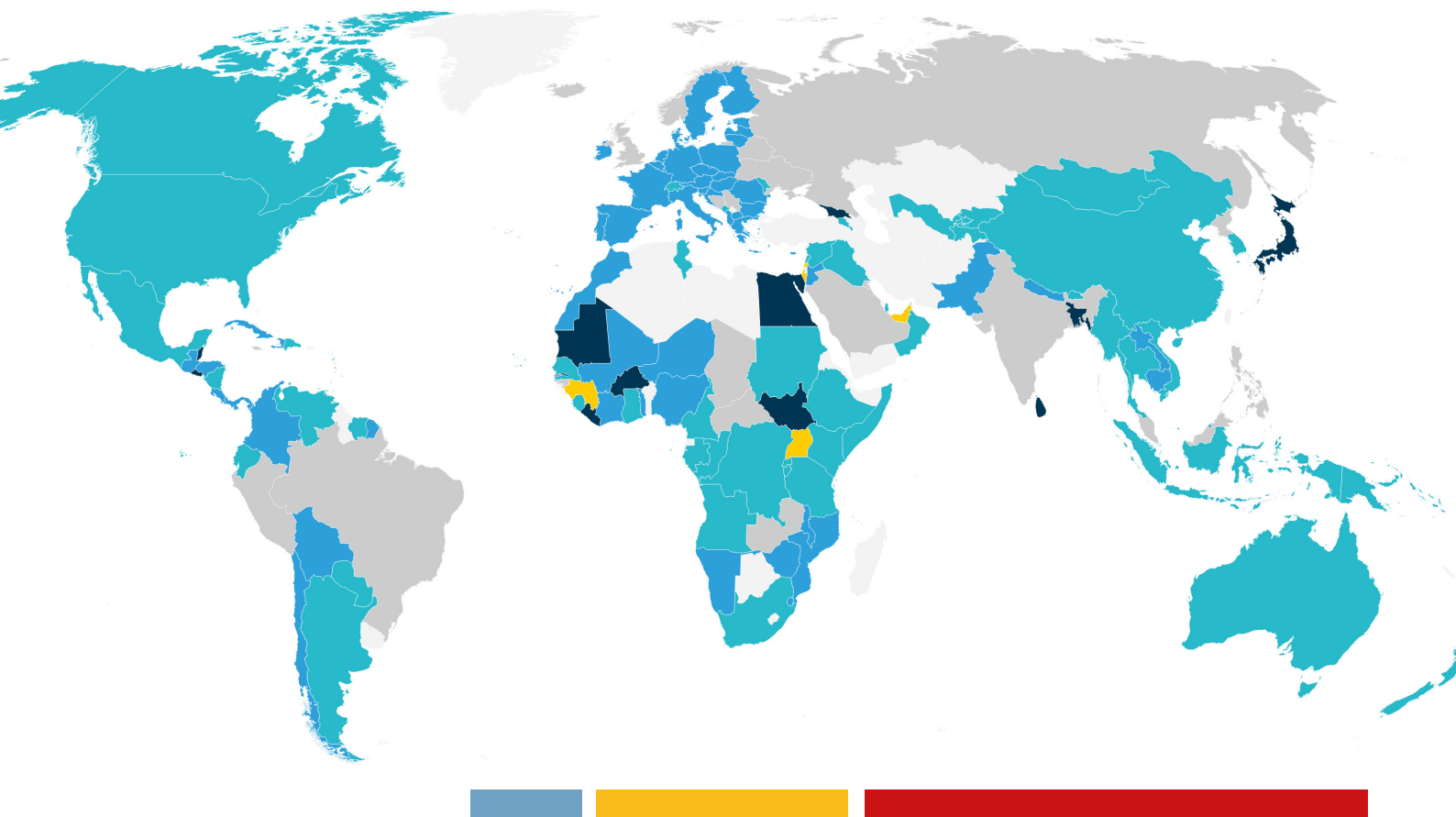


Climate Strategies for Transport: An Analysis of Nationally Determined Contributions and Long-Term Strategies



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About the report

This Report analyses trends in the transport decarbonisation ambition, targets and actions in the climate strategies submitted by countries in the framework of the Paris Agreement. Specifically, the analysis focuses on Long-Term Strategies (LTS) starting from 2016 and on Nationally Determined Contributions (NDCs) starting from 2019. On the basis of the analysis, the report seeks to establish to what extent climate action in transport by countries is on track to deliver on the Paris Agreement goal of limiting global warming below 1.5 °C. The Report also identifies gaps and shortcomings in the transport dimension of these national climate strategies; while it provides recommendations on how to enhance it. This October 2022 Update assesses the impact of NDCs with targets related to mitigating transport greenhouse gas emission on the overall trajectory of transport emissions. Findings show that, if the targets were to be met, the growth of transport emissions would only be slowed down but not put on the radical contention path that is required to support the goal of limiting global warming below 1.5 °C.

Available at

www.slocat.net/ndcs

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Executive Summary

Introduction

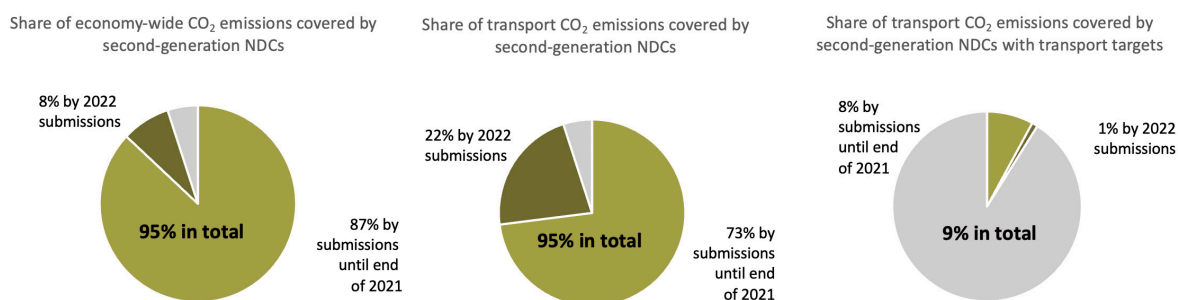
This analysis aims to support a better understanding of the level of transport decarbonisation ambition and supporting plans in long-term strategies (LTS) and second-generation Nationally Determined Contributions (NDCs) by examining the commitments and goals countries are setting to decarbonise the sector.

It focuses on LTS submitted between 2016 and 2022 and second-generation NDCs (covering both second NDCs, updated NDCs and newly submitted first NDCs) submitted to the UNFCCC between 2019 and 2022.

Overview and scope

Second-generation Nationally Determined Contributions

There are 15 second NDCs and 125 updated NDCs representing 166 countries as of 15 September 2022. The EU submitted an updated NDC on behalf of the 27 members of the EU. Countries with second-generation NDCs represent 95% of total transport CO₂ emissions (excluding international aviation and shipping).



Nearly all European and North American countries submitted second-generation NDCs, while around 80% of countries in other regions have done so. Climate strategies by low- and middle-income countries are important as future transport demand growth is projected to occur mainly in these country income groups. NDCs are also an opportunity to express the need for international support in regards to climate action. It is therefore welcomed to see more low-income countries submitting second-generation NDCs since the 2021 UN Climate Change Conference COP26 .

Long-Term Strategies

Through 15 September 2022, 51 countries plus the EU have submitted LTS. 18 individual EU member countries also submitted their respective LTS, resulting in a majority of LTS (51% of all submissions) coming from Europe. Since COP26, there have been 6 new submissions (**Cambodia, Lithuania, Morocco, Nigeria, Russia and Uruguay**). The **United Kingdom** and the **US** are the only countries that submitted a second version of their LTS. There have been no LTS submissions from low-income countries.

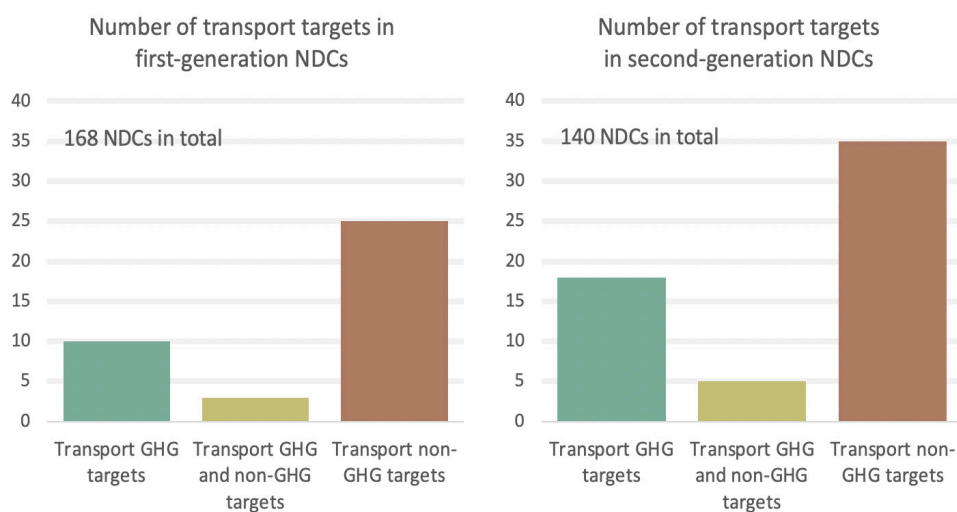
State of climate action for transport in 2022

Based on available info as of 15 September 2022

Progress on targets, yet more ambition is needed to maximise sustainability impacts.

Key insight: Progress has been achieved as more countries than in the first generation of NDCs embrace GHG mitigation targets for transport. However, the pledged targets are far away from being enough to put the world on a path to achieve the Paris Agreement goals.

Countries have made clear progress in developing long-term climate visions, with a growing number committing to long-term net-zero targets. 85 countries have submitted economy-wide net-zero targets in LTS, second-generation NDCs, or other policy documents.



41% of second-generation NDCs contain transport targets (either transport GHG mitigation targets and/or non-GHG targets for transport).

23 out of 140 second-generation NDCs have a transport GHG mitigation target, representing 16% of all second-generation NDCs. 13 of these targets are unconditional. 5 countries outlined conditional targets for transport GHG emission mitigation. The remaining 5 countries have a combination of unconditional and conditional targets. Nearly all of them have a target year of 2030.

In addition, 107 non-GHG transport targets have been identified in second-generation NDCs (a NDC can include several non-GHG mitigation targets). The percentage of targets about mode share was significantly reduced between the first and second generation of NDCs. The most frequent non-GHG target related to zero emission vehicles, followed by vehicle efficiency targets.

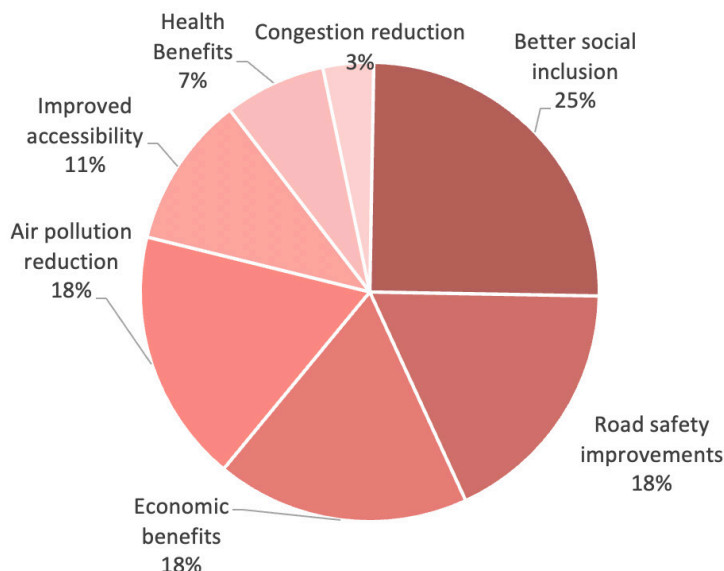
Targets in Long-Term Strategies

10 countries (Belgium, Germany, Japan, New Zealand, Portugal, Slovenia, Spain, Sweden, Switzerland and United Kingdom) outline transport targets in their LTS (representing 22% of submitted LTS). In contrast to second-generation NDCs' target year of 2030, LTS usually have a target year of 2050.

Maximising impacts

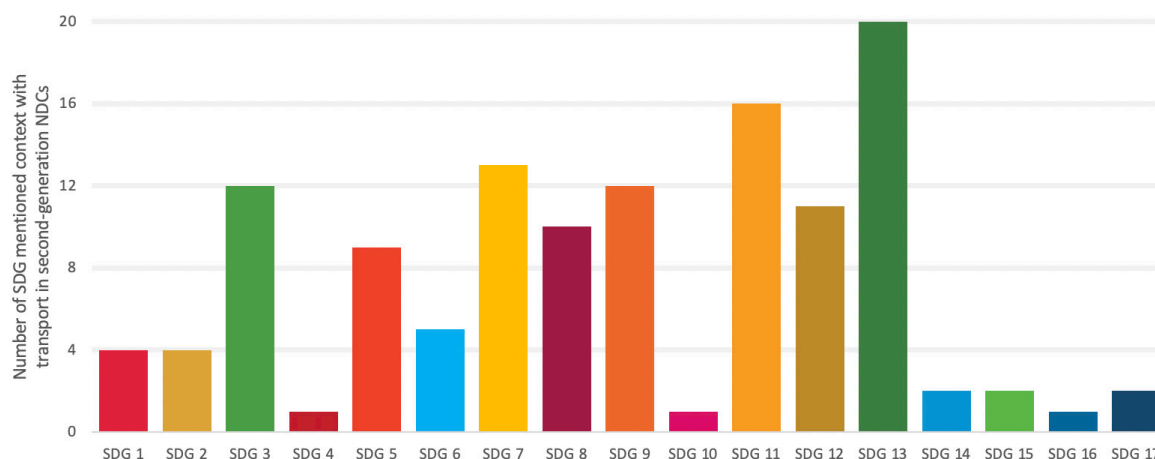
Key insight: Transport climate actions are not being developed in the context of transport's impact on the wider sustainable development agenda, and are therefore missing an opportunity to enable and accelerate a wider transformation.

The few second-generation NDCs which reference these wider benefits mainly focus on better social inclusion and road safety improvements.



21 second-generation NDCs link transport to specific Sustainable Development Goals (SDGs). The most often cited SDGs are: SDG 13 (Climate Action), SDG 11 (Sustainable Cities and Communities) and SDG 7 (Affordable and Clean Energy).

SDGs mentioned in the context of transport in second-generation NDCs



The few second-generation NDCs which reference these wider benefits mainly focus on better social inclusion and road safety improvements.

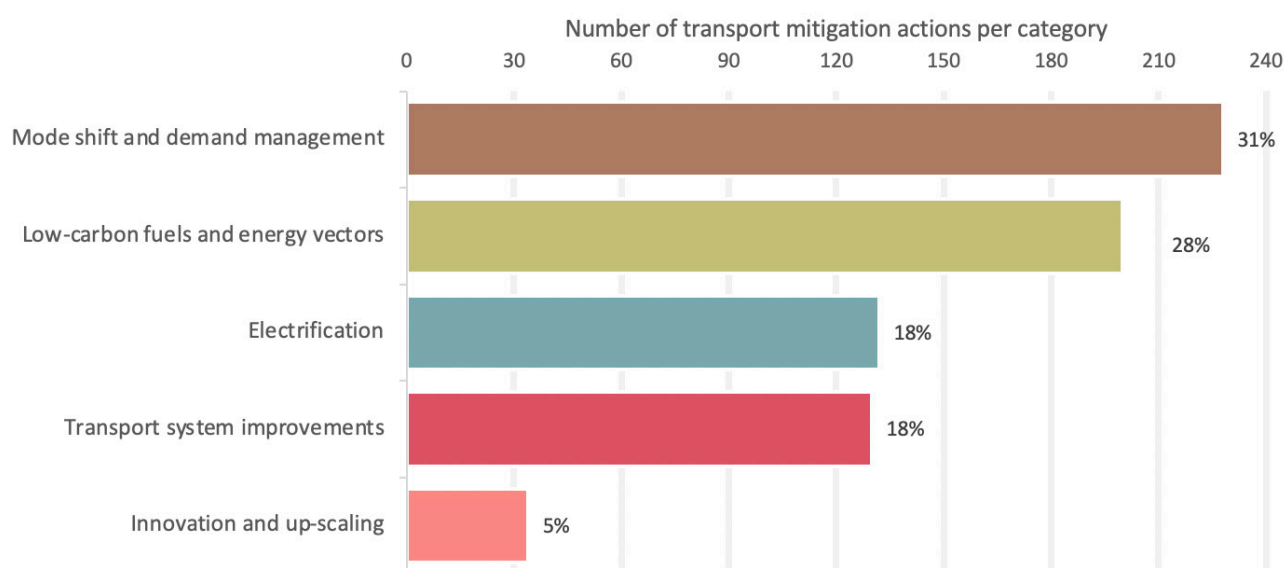
Actions to mitigate transport emissions are insufficient to reach Paris Agreement goals

Key insight: Climate strategies embrace a wider portfolio of transport mitigation actions than first-generation NDCs, but the mitigation actions continue to lean towards system efficiency improvements over transformation.

The second generation of NDCs include on average more transport mitigation and adaptation actions than the first generation. There are nearly twice as many transport mitigation actions featured in each second-generation NDC compared to first-generation NDCs. On average, there are:

2.7	5.2	20
Transport mitigation actions per first-generation NDC	Transport mitigation actions per second-generation NDC	Transport mitigation actions per LTS

In second-generation NDCs, there has been a clear shift away from actions related to public transport and towards e-mobility measures and targets.



An issue that continues from the first generation of NDCs is that many actions and measures have vague descriptions.

Transport adaptation targets and actions are still limited

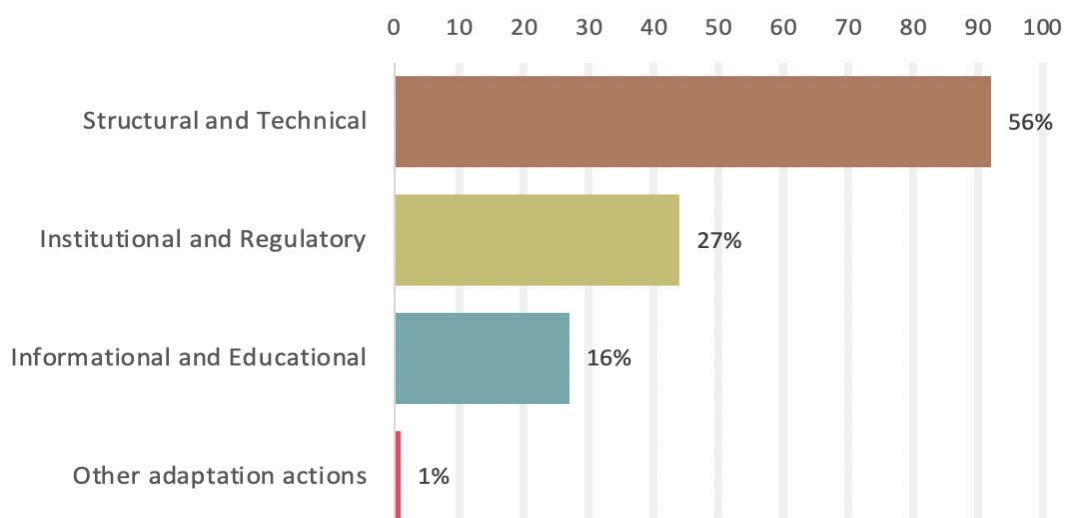
Key Insight: Adaptation in the transport sector has been largely limited to infrastructure resilience. More efforts are needed to strengthen transport adaptation and institutional capacity.

Similar to mitigation, there are more transport adaptation actions featured in second-generation NDCs compared to first-generation NDCs. On average, there are:

0.4	1.2
transport adaptation actions per first-generation NDC	transport adaptation actions per second-generation NDC

Only 6 second-generation NDCs (**Antigua and Barbuda, Burundi, Cambodia, Kenya, Liberia, and Papua New Guinea**) have transport adaptation targets. They include targets to climate-proof infrastructure and develop public transport and active mobility systems in support of more robust and resilient transport systems.

Number of transport adaptation actions per category

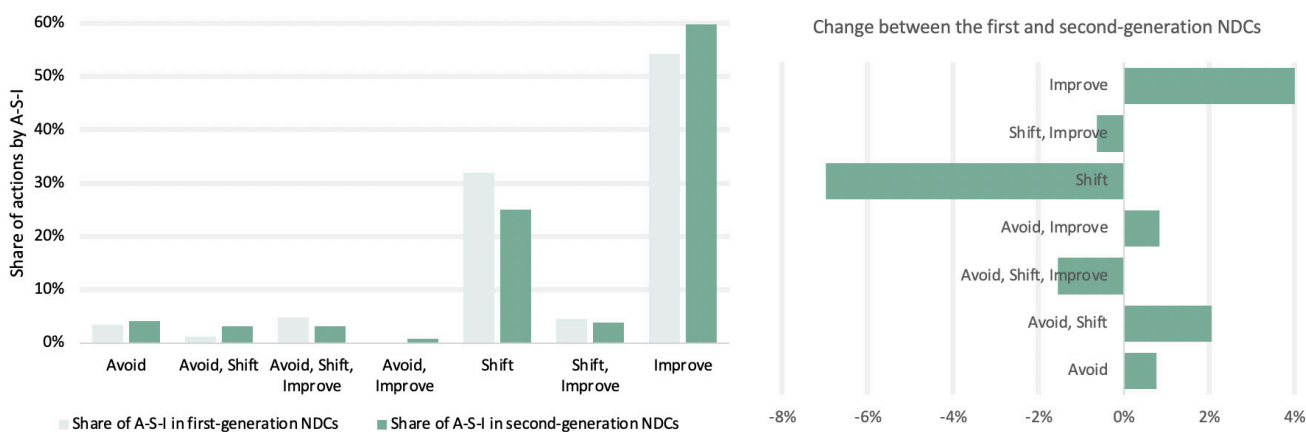


The adaptation content is very general and the majority is limited to road infrastructure resilience. Actions on transport adaptation rarely specify the type of transport activity they aim to address (i.e. passenger or freight).

57 second-generation NDCs (40% of all NDCs) include transport adaptation actions, a significant improvement over the first-generation NDCs where transport adaptation was covered in just 22%.

The full potential of Avoid and Shift benefits is not maximised; the focus on Improve prevails

Key Insight: The full potential of inclusion of Avoid and Shift actions has not yet been reached. Improve actions dominate in the second-generation NDCs and LTS.



Good examples:

Sri Lanka's updated NDC with comprehensive, well-balanced measures.

Singapore's LTS with clear linkages between urban planning and transport.

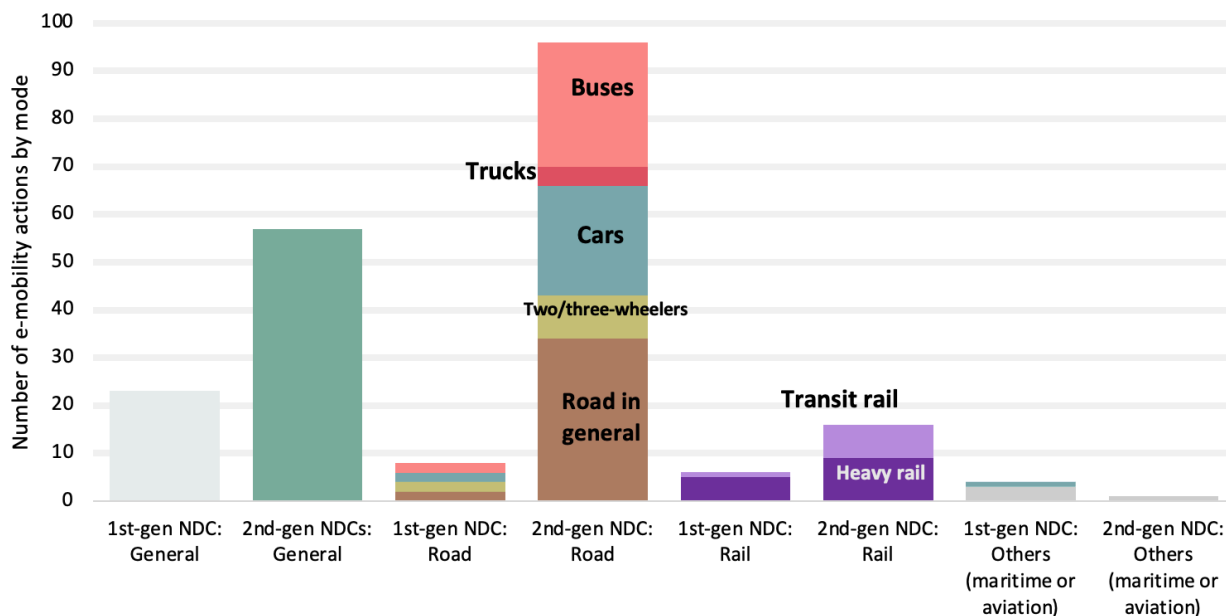
Learn more about the Avoid-Shift-Improve Framework here: www.slocat.net/asi/

Electrification takes pole position

Key insight: New climate strategies feature a strong focus on electrification of road transport across vehicle types.

Electric mobility (e-mobility) is the most common category of measures in second-generation NDCs. 74 second-generation NDCs (52%) include e-mobility-related actions, representing 19% of all actions.

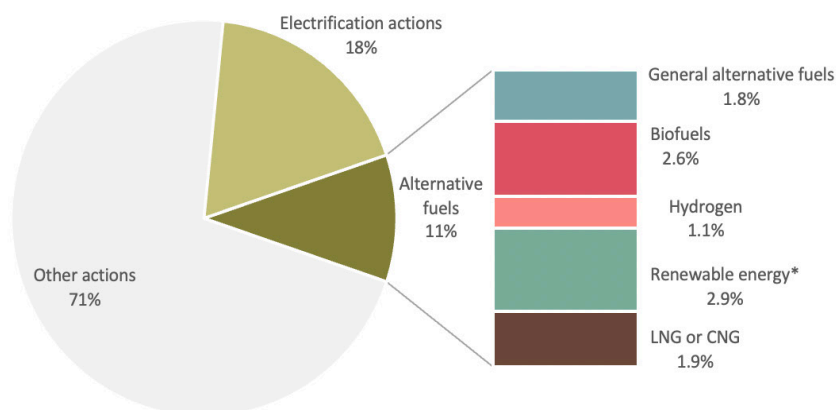
38 non-GHG transport targets in second-generation NDCs relate to vehicle electrification, and all are from middle and high-income countries.



Phase-out of fossil fuels is missing in action

Key insight: The impact of electrification on decarbonisation efforts could be significantly enhanced with more widespread use of renewable energy.

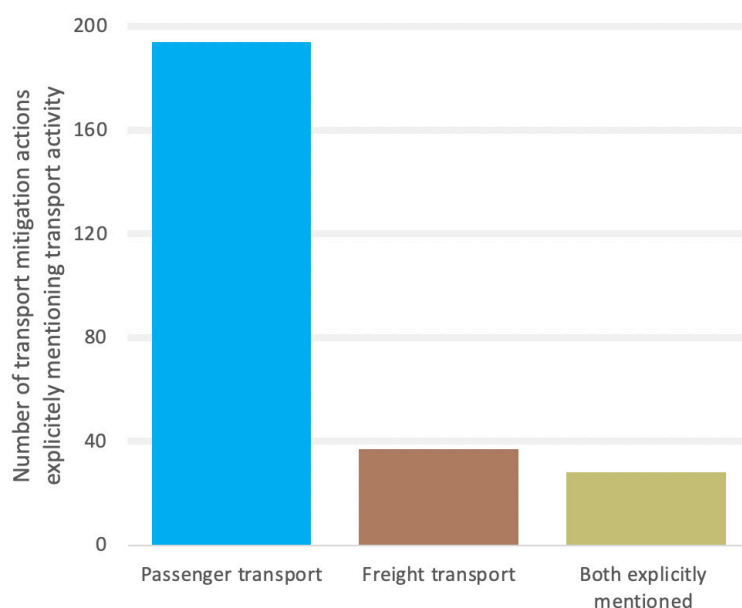
17 second-generation NDCs provide clear linkages between the electrification of transport and the use of renewable energy. The use of alternative fuels (not just limited to fuels from renewable sources) to lower transport emissions has been mentioned in 11% of transport mitigation actions in second-generation NDCs.



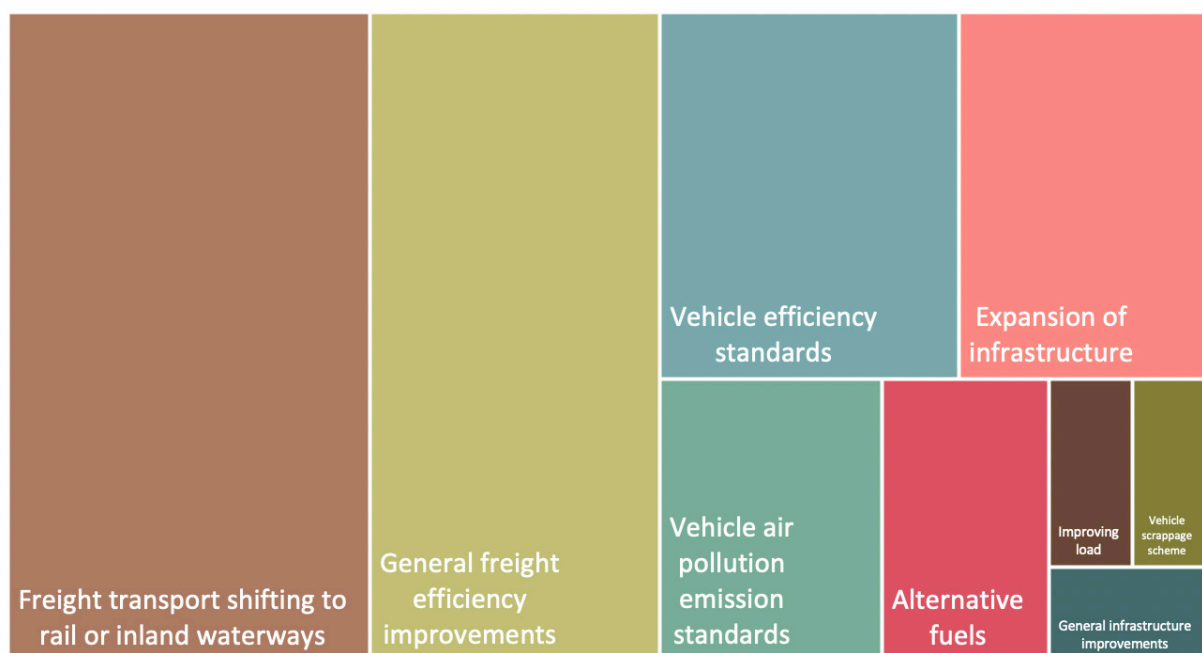
* It may include electricity through renewable energy or general references to renewable energy in transport.

Freight emissions growth continues unabated

Key Insight: Freight remains overlooked in NDC measures despite the sector's large contributions to GHG emissions. Action on freight is urgent due to rapidly rising demand and emissions. Only a few second-generation NDCs embrace a shift of road freight to rail and improvements of logistics.



The large majority of actions in second-generation NDCs do not specify which transport activity type they will apply to.



The most popular freight actions in second-generation NDCs include: shifting from road transport to rail or inland waterways (15 actions), freight efficiency improvements (12 actions) and vehicle-focused improvements (7 actions).

National frameworks to support sustainable urban mobility are absent in climate strategies

Key Insight: Achieving the NDCs will require climate action in cities, but NDCs lack national frameworks to support local action.

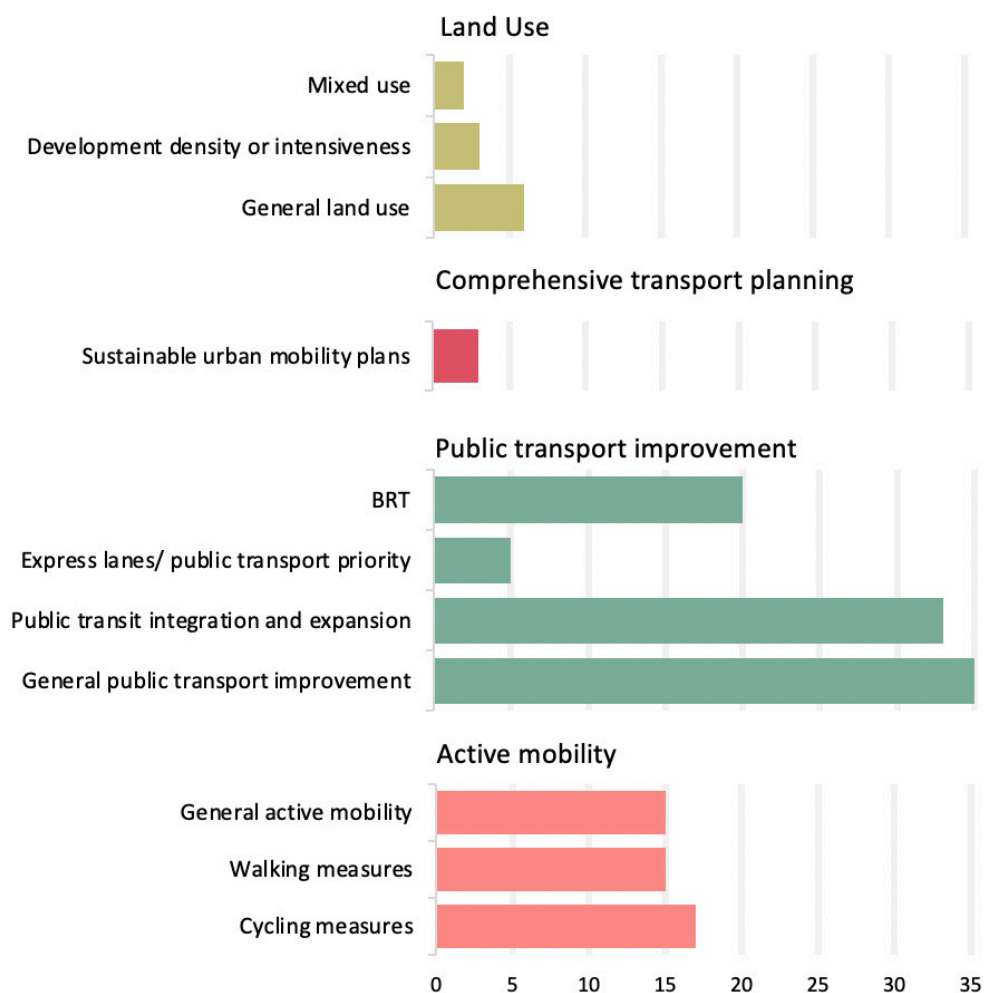
NDCs focus on climate action at the national level, but as urban transport is responsible for 60% of transport emissions, it is essential that cities are considered and supported in decarbonisation efforts. However, second-generation NDCs do not consider supporting frameworks for urban mobility.

Good example:

Canada to provide permanent funding of CAD 3 billion per year for investments in public transport and active mobility from 2026 to 2027.

Urban-level actions

Of the second-generation NDCs that include specific references to the geographic scope of measures, 19% (over 130 actions) mention urban transport.



Sustainable urban mobility plans (SUMPs) are an important enabler of sustainable mobility in cities. However, only three countries have included SUMPs in their second-generation NDCs (Barbados, Guinea and Panama).

The process to implement commitments has been strengthened

Governance and implementation

Key insight: The few NDCs with details on governance show that more engagement has been done than ever before including through stakeholder consultations and the involvement of multiple ministries.

In several second-generation NDCs references to national transport strategies have been included: **Rwanda** mentions its Transport Sector Strategic Plan, **South Africa** refers to its Green Transport Strategy, **Thailand** mentions its Environmentally Sustainable Transport System Plan 2013-2030, and the **United Kingdom** mentions its Transport Decarbonisation Plan.

Financing sustainable transport

35 second-generation NDCs outline how much investment is needed to support sustainable transport actions. For example, **Bangladesh** estimates that its transport mitigation actions will require over USD 124 billion until 2030. Out of this, the country notes that 88% will need to be provided through international support.

Attention to aviation and shipping emissions remains insufficient

Key insight: There is a notable lack of coherence between domestic and international commitments to decarbonise aviation and shipping. Only a few countries have expressed their intention to increase their engagement in global agreements on aviation and shipping.

Only 16 second-generation NDCs include plans to reduce emissions related to domestic aviation and maritime transport. A good example is **Fiji**, which has a target of reducing domestic maritime shipping CO₂ emissions 40% below BAU by 2030.

In addition, only a few countries have expressed their intention to increase their engagement in global agreements on aviation and shipping: The LTS by the **EU, Luxembourg, Singapore** and the **United Kingdom** have, for example, pointed out that efforts to minimise their aviation and shipping emissions will be addressed through their active participation in International Civil Aviation Organization and International Maritime Organization.

The information featured in the executive summary and the full analysis is based on data in the [Tracker of Climate Strategies for Transport](#), a database on ambition, targets and policies in NDCs and LTS of the Paris Agreement, jointly developed by GIZ and SLOCAT and launched in May 2021.

Recommended reads:

- [SLOCAT Partnership's NDCs Offering Opportunities for Ambitious Climate Action report of 2016](#)
- [GIZ's 2017 Transport in NDCs report](#)
- [GIZ's Six Action Recommendations](#) to enhance climate ambition in transport
- SLOCAT's [Ten Recommendations](#) to raise ambition for transport in NDCs
- [Preliminary analysis](#) released in January 2021
- [An updated summary](#) of May 2021



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