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



**SLOCAT** Partnership on Sustainable,  
Low Carbon Transport

Transport, Climate and Sustainability  
Global Status Report - 3<sup>rd</sup> edition

## Key findings



- To achieve the objectives of the Paris Agreement and of the 2030 Agenda on Sustainable Development – including decarbonisation by 2050 and improved accessibility, resilience and sustainability by 2030 – the transport sector must accelerate its transformation immediately.
- The Nationally Determined Contributions (NDCs) submitted as of 23 September 2022 are insufficient to avoid an average temperature increase of 2.5°C by the end of this century.

### Nationally Determined Contributions in the framework of the Paris Agreement

- Most countries (169 countries in total) submitted second-generation NDCs before the end of 2022 and strengthened their overall climate ambitions.
- On average, the second-generation NDCs included more transport mitigation and adaptation actions than the first generation of NDCs. Each second-generation NDC featured nearly twice as many transport mitigation actions as did first-generation NDCs.
- The second-generation NDCs also featured twice as many transport targets (109 targets in total in 64 NDCs) as the first-generation ones. However, this does not translate into more impact because targets do not result in absolute reductions in transport emissions.
- Of the second-generation NDCs, 23 (or 16%) had a target for mitigating transport greenhouse gas emissions, mostly for countries in Europe and Africa and for the year 2030; this was up from only 13 first-generation NDCs (or 8%).
- Adaptation is still neglected in transport, as few second-generation NDCs feature transport adaptation targets and actions. In both generations of NDCs, there is little explicit mention of freight-related actions.
- The level of ambition on transport (i.e., targets and actions) in second-generation NDCs remains insufficient to achieve the goals of the Paris Agreement, and implies a further 11% increase in transport greenhouse gas emissions by 2030.

### Long-Term Low Emission Development Strategies (LT-LEDS or LTS) in the framework of the Paris Agreement

- By the end of 2022, only a quarter of the world's countries had developed LTS.
- All LTS mentioned transport, although only 22% of LTS (13 countries) outlined transport targets, with nearly all having a target year of 2050.

### Initiatives and commitments at recent United Nations (UN) climate conferences

- During the 2021 UN Climate Change Conference in Glasgow, UK (COP 26), stakeholders launched an unprecedented number of commitments and initiatives on sustainable, low carbon transport (i.e., zero-emission passenger and freight vehicles, shipping, aviation), and several of these have since expanded in scope and/or signatories.
- At the 2022 UN Climate Change Conference in Sharm El-Sheikh, Egypt (COP 27), the COP 27 Presidency of Egypt launched an initiative on low carbon transport for urban sustainability that aims to activate systemic change beyond the legacy “mode-first” mindset (i.e., focus on specific transport modes).

## Linkages between national planning processes and Paris Agreement mechanisms

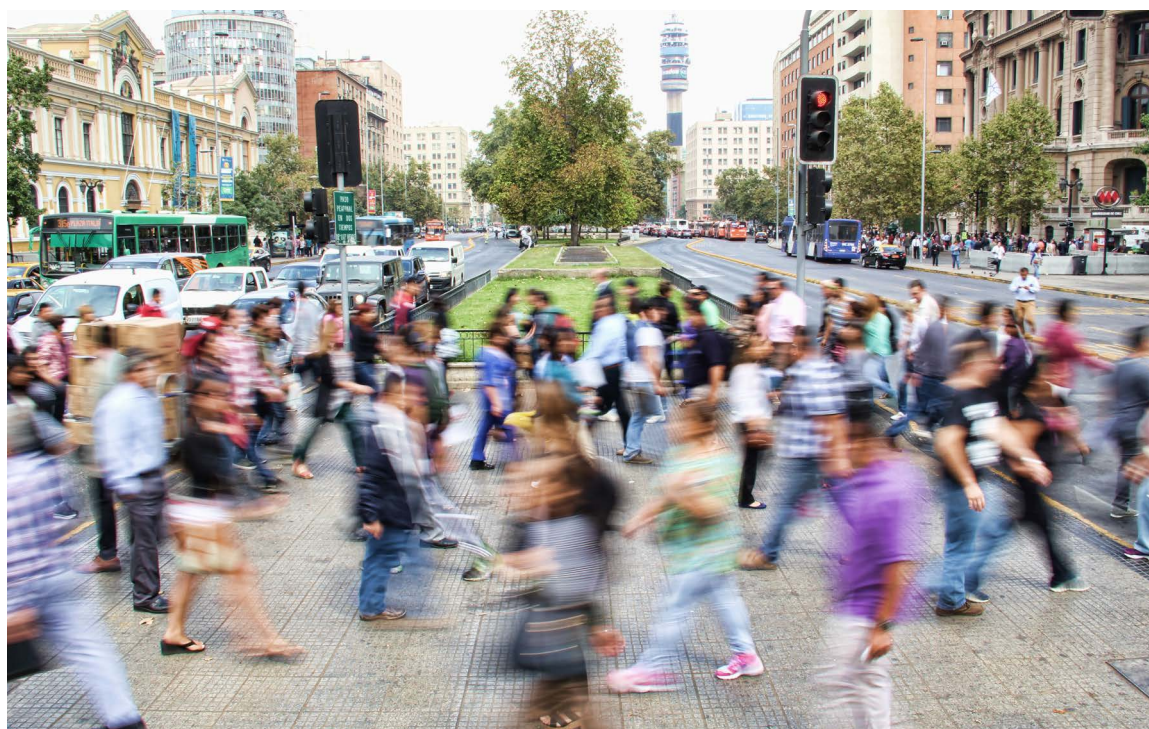
- Linkages between national strategies (such as transport development plans, electric vehicle plans and multi-year infrastructure plans) and Paris Agreement mechanisms have been strengthened as more climate strategies reference national strategies.
- The number of countries working on transport decarbonisation strategies has increased since the second edition of this report in 2021. At the sub-national level, several jurisdictions released transport decarbonisation plans.

## Voluntary National Reviews (VNRs) in the framework of the 2030 Agenda for Sustainable Development

- The VNRs from 2016 to 2022 revealed consensus on the role of transport as a key contributor to implementation of the Sustainable Development Goals (SDGs). In the first VNR reporting cycle (2016-2019), 92% of VNRs highlighted progress in the transport sector, and 18% of VNRs reported specific targets covering 12 areas in sustainable transport.
- In 2022, 21% of the VNRs (9 out of 42 VNRs) mentioned specific transport targets, up from 20% (9 out of 40) in 2021 and 17% (8 out of 47) in 2020.
- Most of the 2022 VNRs described only the adverse impacts of global issues, without presenting concrete policy measures; when they did, these measures did not fully address the urgent systemic transformations necessary to enable equitable access to transport and mobility for all.

## Impacts of global shocks

- Global shocks since 2020 – such as the COVID-19 pandemic and the Russian Federation’s invasion of Ukraine – have put at increased risk any overall progress towards the SDGs and the Paris Agreement goals.
- The COVID-19 pandemic induced long-lasting negative impacts on urban mobility, land use and transport systems across low-, middle- and high-income countries.





## Overview



**To achieve the objectives of the Paris Agreement and of the 2030 Agenda on Sustainable Development - including decarbonisation by 2050 and improved accessibility, resilience and sustainability by 2030 - the transport sector must accelerate its transformation immediately.** Different mechanisms under the Paris Agreement on Climate Change, the UN 2030 Agenda and the Sendai Framework for Disaster Risk Reduction provide countries with framework avenues to set their transport ambitions, targets, and actions and to learn from each other.

Under the Paris Agreement, Parties to the United Nations Framework Convention on Climate Change (UNFCCC) are required to submit Nationally Determined Contributions (NDCs), outlining their specific ambitions, targets and actions to reduce emissions and enhance adaptation and resilience.<sup>1</sup> In addition to NDCs, the UNFCCC provides several mechanisms under the Paris Agreement to describe intended ambitions, targets and actions on climate change mitigation and adaptation. These include: Long-Term Low Emission Development Strategies (LT-LEDS or LTS), National Adaptation Plans (NAPs), National Adaptation Programmes of Action (NAPAs) and Nationally Appropriate Mitigation Actions (NAMAs).<sup>2</sup>

The Paris Agreement also provides a mechanism for collaboration among Parties and non-Party stakeholders (all stakeholders that are not national governments) through the Marrakech Partnership for Global Climate Action.<sup>3</sup> The Marrakech Partnership elaborates Climate Action Pathways, which set out visions for various sectors - including transport - to achieve a world where global temperature rise is kept within 1.5 degrees Celsius (°C) by 2050.<sup>4</sup>

Countries also have the opportunity to achieve sustainable, low carbon transport through their implementation of the UN global agendas on sustainable development and adaptation and resilience - namely the 2030 Agenda for Sustainable Development and its Voluntary National Reviews (VNRs) for tracking progress towards the Sustainable Development Goals (SDGs), as well as the Sendai Framework for Disaster Risk Reduction and its Global Assessment Report.

Overall, there remains significant need to strengthen the linkages between the UNFCCC mechanisms for the Paris Agreement and the 2030 Agenda and the Sendai Framework, helping to assure that progress towards climate change mitigation and adaptation yields broader positive impacts on sustainable development.

Global shocks since 2020 - such as the COVID-19 pandemic and the Russian Federation's invasion of Ukraine - have put at increased risk the overall progress towards the SDGs and the Paris Agreement goals.<sup>5</sup> In the words of UN Secretary-General Antonio Guterres, the war is "putting our world at immediate risk of hurtling past the 1.5-degree temperature increase limit".<sup>6</sup> **Already, the NDCs submitted as of 23 September 2022 are insufficient to avoid an average temperature increase of 2.5°C by the end of this century.**<sup>7</sup>

Global events also have had long-lasting impacts on mobility. Ridership levels on public transport and other collective urban mobility in 2021 and 2022 were still below pre-COVID-19 levels (see Section 3.4 Shared Mobility). Meanwhile, aviation has suffered from the rerouting of air traffic resulting from the closure of Russian skies (see Section 3.7 Aviation), and the Russian invasion of Ukraine has disrupted maritime shipping and raised trade costs (see Section 3.8 Shipping).

Since the previous two editions of this report, many countries have responded to the request to enhance their NDCs under the terms of the Paris Agreement, by submitting second-generation or updated versions. While a few submissions occurred in 2023, the available analysis to the end of 2022 provides a near-complete picture of the second generation of NDCs and the role of transport in them. Similarly, the VNRs submitted in the second reporting cycle (2020-2022) for the 2030 Agenda for Sustainable Development reveal a general consensus that transport is a key contributing factor to implementation of the SDGs, following a similar pattern to the first reporting cycle (2016-2019).

## Nationally Determined Contributions in the framework of the Paris Agreement

NDCs are submitted in a five-year cycle, with the first generation submitted in 2015 and subsequent generations to be submitted every five years thereafter. The NDC process is supported by a set of “global stocktakes” to assess progress towards implementation of the Paris Agreement, with the first stocktake scheduled to occur in 2023 (and subsequent ones every five years thereafter).

**Most countries (169 countries in total) submitted second-generation NDCs before the end of 2022, taking the opportunity to strengthen their overall climate ambitions.<sup>8</sup>**

- ▶ By the end of 2022, a total of 169 countries had submitted 16 second-generation NDCs and 128 updated NDCs.<sup>9</sup> This was up from only 54 second-generation and updated NDCs submitted as of May 2021.<sup>10</sup> (The analysis includes a single NDC submitted on behalf of the European Union Member States but excludes the NDCs of Kiribati and Turkmenistan, which were submitted in 2023.)
- ▶ Between 2021 and 2022, 23 countries added enhanced economy-wide targets for greenhouse gas mitigation to their second-generation NDCs.<sup>11</sup>

**On average, the second-generation NDCs included more transport mitigation and adaptation actions than the first generation of NDCs. Each second-generation NDC featured nearly twice as many transport mitigation actions as did first-generation NDCs.<sup>12</sup>**

- ▶ Whereas only 66% of first-generation NDCs featured transport among their climate mitigation actions, 80% of second-generation NDCs did so.<sup>13</sup>
- ▶ In the **first-generation NDCs**, the most popular transport-related mitigation actions were vehicle improvements, public transport improvements, infrastructure improvements, and alternative fuels, followed by electric mobility (e-mobility).<sup>14</sup>
- ▶ In **second-generation NDCs**, the attention moved away from public transport actions and towards e-mobility actions, with the most popular mitigation actions being e-mobility, mode shift, demand management and low carbon fuels. The e-mobility actions featured a diversity of road transport modes, with buses and cars each representing 20% of all e-mobility actions mentioned.<sup>15</sup>

**The second-generation NDCs featured twice as many transport targets (109 targets in total in 64 NDCs) as the first-generation ones.<sup>16</sup> However, this does not translate into more impact because targets do not result in absolute reductions in transport emissions.**

- ▶ A total of **64 second-generation NDCs (45%) contained transport targets** (either transport greenhouse gas mitigation targets and/or non-greenhouse gas targets for transport that feature a quantitative target for a specific year); this was up from only 21% of first-generation NDCs with any kind of transport target in 2021.<sup>17</sup>
- ▶ Overall, second-generation NDCs identified **109 non-greenhouse gas transport targets** (a single NDC can include several targets).<sup>18</sup> The most frequent non-greenhouse gas targets were related to zero-emission vehicles (39%), followed by vehicle efficiency (25%), mode share (10%), biofuels (10%), infrastructure (9%), “Avoid” strategies (4%) and renewable energy (3%).<sup>19</sup>

**Of the second-generation NDCs, 23 (or 16%) had a target for mitigating transport greenhouse gas emissions, mostly for countries in Europe and Africa and for the year 2030 (see Figure 1 and Table 1); this was up from only 13 first-generation NDCs (or 8%).<sup>20</sup>**

- ▶ Grenada and Japan reiterated their targets from their first-generation NDCs, while Bangladesh, Burkina Faso and Dominica revised their transport greenhouse gas mitigation targets.




























**Adaptation is still neglected in transport, as few second-generation NDCs feature transport adaptation targets and actions.** Only six second-generation NDCs had transport adaptation targets as of the end of 2022 (see Table 2).<sup>21</sup> Such targets relate to climate-proof infrastructure as well as the deployment of public transport and active mobility systems towards more robust and resilient transport systems.<sup>22</sup>


However, the second-generation NDCs featured more transport adaptation actions than did the first-generation NDCs.

- ▶ Of the total second-generation NDCs, 63 (43%) included transport adaptation actions, compared to 22% of first-generation NDCs.<sup>23</sup>
- ▶ More than two-thirds (67%) of the NDCs of low-income countries featured transport adaptation measures, compared to 30% of the NDCs of high-income countries.<sup>24</sup>
- ▶ Transport adaptation actions in second-generation NDCs included structural and technical actions (56% of the total), institutional and regulatory actions (27%), informational and educational actions (16%) and other adaptation actions (less than 1%).<sup>25</sup>


**TABLE 1.** Transport greenhouse gas emission mitigation targets in countries' second-generation NDCs, as of end-2022


Source: See endnote 20 for this section.

Country	Targeted reductions in transport emissions (in carbon dioxide equivalents)	Type of target
Andorra	50% in road transport by 2030	
Bangladesh	9.3% below business as usual (BAU) by 2030, to 32.9 million tonnes (unconditional) 27% below BAU by 2030, to 26.6 million tonnes (conditional)	 
Belize	Reduce conventional transport fuel 15% by 2030, to avoid 117 kilotonnes annually Achieve 15% efficiency per passenger- and tonne-kilometre through appropriate policies and investments	
Burkina Faso	Limit the emission increase to 1,210 gigagrams (Gg) by 2025, 3,563 Gg by 2030 and 8,265 Gg by 2050 (unconditional) Further limit to 267 Gg in 2025, 867 Gg in 2030 and 4,153 Gg in 2050 (conditional)	 
Dominica	20% below 2014 levels by 2030; 100% below 2014 levels for shipping by 2030	
Egypt	7% by 2030, reducing from 124,360 Gg under BAU to 8,960 Gg	
El Salvador	Limit transport emissions to 334 kilotonnes below BAU by 2030	
Fiji	40% below BAU for domestic maritime shipping by 2030	
Gambia	22.2% below BAU by 2030	
Georgia	15% below BAU by 2030	
Grenada	20% below 2010 levels by 2025, with further reductions by 2030 (continuation from first NDC)	
Guinea	2,300 kilotonnes per year below BAU by 2030 (unconditional) 2,600 kilotonnes per year below unconditional scenario by 2030 (conditional)	 
Israel	No more than 3.3% above 2015 levels by 2030; 96% below 2015 levels by 2050	
Japan	27% below 2013 levels by 2030, to reach 163 million tonnes or less (continuation from first NDC)	
Liberia	15.1% below BAU by 2030	
Mauritania	5.21% by 2030, avoiding 92.7 Gg between 2021 and 2030	
Mauritius	Limit to 129 kilotonnes per year by 2030	
Seychelles	30% below BAU for petrol vehicles by 2030	
Samoa	5.2 Gg (land transport) and 3 Gg (maritime transport) by 2030	
South Sudan	44% below BAU by 2030	
Sri Lanka	4% below BAU by 2030 (1% unconditional, 3% conditional)	 
Uganda	29% below BAU by 2030, reducing from 9.6 million tonnes under BAU to 6.8 million tonnes	
United Arab Emirates	14% below BAU by 2030 (due mainly to enhanced vehicle standards in road transport)	



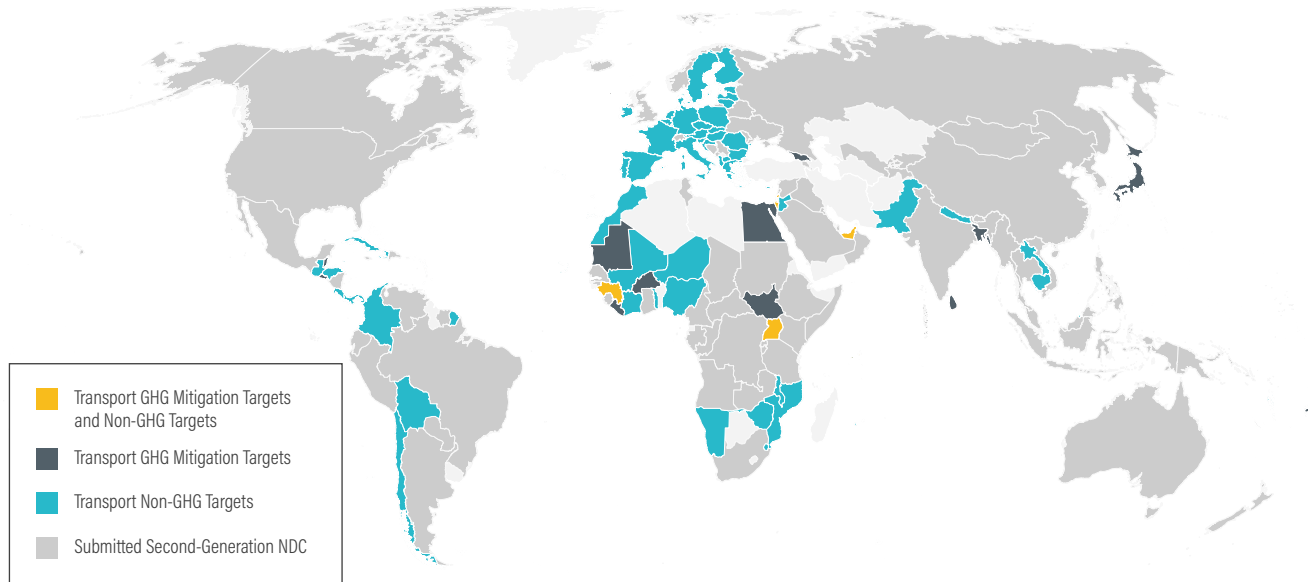
**Type of Target**

 Conditional

 Unconditional


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

Source: See endnote 20 for this section.



**TABLE 2.** Transport adaptation targets in countries' second-generation NDCs, as of end-2022

Source: See endnote 21 for this section.

Country	Transport adaptation target	
Antigua and Barbuda	Ensure that all waterways are protected to reduce the risks of flooding and health impacts by 2030.	
Burundi	Build 7.5 kilometres (unconditional) and 42.5 kilometres (conditional) of infrastructure exclusively for active mobility, and 3 modern ports with 6 ships to be acquired for Lake Tanganyika (conditional).	
Cambodia	Develop a guidebook with design standards for climate-proof roads by 2022, establish a monitoring and evaluation framework for such roads by 2023 and ensure that road construction and repair follow these standards by 2030.	
Kenya	Promote the use of appropriate designs and building materials to enhance resilience of at least 4,500 kilometres of roads.	
Liberia	Implement infrastructure that fosters the development of a bus public transport network for Monrovia and that ensures that low-income groups can reach jobs, education and healthcare services through improved access to economic and social opportunities.	
Papua New Guinea	Build and rehabilitate USD 1.2 billion (PGK 4.2 billion) worth of air, sea and land transport infrastructure and assets according to climate-resilient codes and standards.	

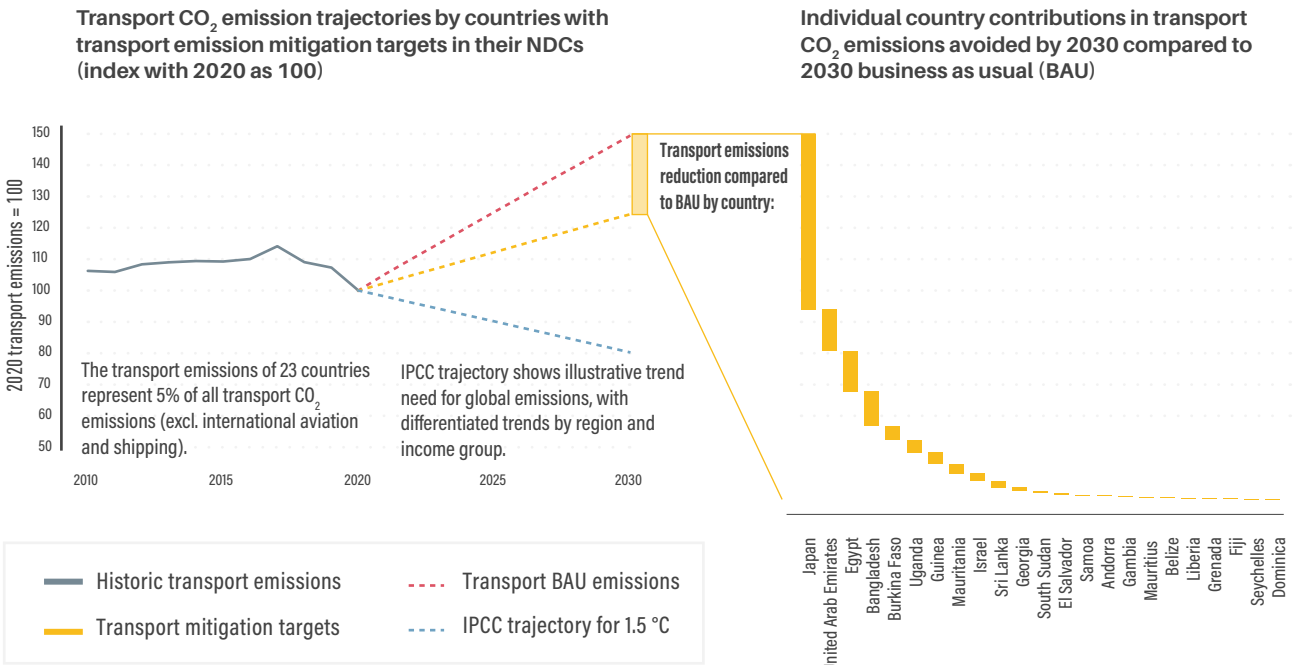
In both generations of NDCs, there were very few explicit mentions of freight-related actions. Around two-thirds of the transport mitigation actions in each generation of NDCs did not explicitly mention freight or passengers, while 25% mentioned passenger transport and only around 5% mentioned freight transport.<sup>26</sup>

The level of ambition on transport (i.e., targets and actions) in second-generation NDCs remains insufficient to achieve the goals of the Paris Agreement, and implies a further 11% increase in transport greenhouse gas emissions by 2030.<sup>27</sup> An October 2022 report found that under the current NDCs, the average global temperature would increase by 2.5 degrees Celsius (°C) (range of 2.1°C to 2.9°C).<sup>28</sup>

SLOCAT analysis of the transport greenhouse gas mitigation targets in the second-generation NDCs shows that while the growth in transport carbon dioxide (CO<sub>2</sub>) emissions will slow, overall emissions will not be reduced in absolute terms, due to the shortfall in NDC ambitions. The main reason is that many transport greenhouse gas mitigation targets in the second-generation NDCs are set against a business-as-usual growth. Rather than reducing absolute transport CO<sub>2</sub> emissions, this just results in less growth than under business-as-usual projections (see Figure 2).<sup>29</sup>

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

Source: See endnote 29 for this section



## Long-Term Low Emission Development Strategies in the framework of the Paris Agreement

To complement the NDCs, the Paris Agreement invites (but does not require) countries to formulate and communicate Long-Term Low Emission Development Strategies (LT-LEDS or LTS), to help establish low carbon trajectories to 2050.

**By the end of 2022, only a quarter of the world’s countries had developed LTS.<sup>30</sup> All LTS mentioned transport, although only 22% of LTS (13 countries) outlined transport targets, with nearly all having a target year of 2050.<sup>31</sup>** This continued the pattern from 2021, when all 29 of the LTS at the time mentioned transport.<sup>32</sup>

- ▶ In addition to the 58 LTS officially submitted, 19 individual European Union Member States submitted their respective LTS, resulting in a majority of LTS submissions (51%) coming from Europe.<sup>33</sup> Except for Australia, the Gambia, New Zealand and Nigeria, all of the LTS that had transport greenhouse gas mitigation targets were from European countries (see Table 3).<sup>34</sup>
- ▶ Seven countries – Canada, France, Germany, Japan, Thailand, the United Kingdom and the United States – submitted updated LTS in 2021 and 2022.<sup>35</sup>

Only nine LTS (Austria, Cambodia, Colombia, Fiji, Japan, Lithuania, Malta, Singapore and Tonga) discussed the topic of transport adaptation, covering 52 transport adaptation actions.<sup>36</sup> This was a significant contrast to the 176 adaptation actions mentioned in second-generation NDCs.<sup>37</sup> Among these countries, Cambodia and Colombia also feature transport adaptation in their second-generation NDCs.





**TABLE 3. Transport targets in countries' LTS as of end-2022**

Source: See endnote 34 for this section.

LTS	Targeted reductions in transport CO <sub>2</sub> -equivalent emissions
Australia	53-71% below 2005 levels by 2050
Belgium	Zero emissions for passenger and freight transport by 2050
The Gambia	From 1,026 Gg in 2020 to 315 Gg in 2050
Germany	40-42% below 1990 levels by 2030 (reducing around 95-98 million tonnes)
Lithuania	At least 14% below 2005 levels by 2030; 90% by 2050
New Zealand	Net zero by 2050
Nigeria	Around 4 million tonnes annually by 2030
Portugal	43-46% below 2005 levels by 2030; 84-85% by 2040; 98% by 2050
Slovenia	90-99% below 2005 levels by 2050
Spain	30% below BAU by 2030
Sweden	70% below 2010 levels by 2030 (excluding domestic aviation)
Switzerland	Zero for domestic land transport by 2050 (with few exceptions); net zero for international aviation by 2050
United Kingdom	Net zero for domestic aviation and shipping by 2050

## Initiatives and commitments at recent United Nations climate conferences

During the 2021 UN Climate Change Conference in Glasgow, UK (COP 26), stakeholders launched an unprecedented number of commitments and initiatives on sustainable, low carbon transport, and several of these have since expanded in scope and/or signatories (see Table 4).<sup>38</sup> Both the aviation-related commitment and the Global Memorandum of Understanding on Zero-Emission Medium- and Heavy-Duty Vehicles have gained a substantial number of new country signatories, whereas few new countries have joined the commitments on zero-emission vehicles and green shipping corridors.

Comparing the NDCs of signatory countries to the transport commitments that they have signed onto reveals that there is a weak alignment. In particular, there is a weak alignment between NDCs and the commitments related to zero-emission vehicles and green shipping corridors. The strongest alignment exists in the case of the International Aviation Climate Ambition Coalition, as the NDCs of several of the signatory countries express their intention to engage with the International Civil Aviation Organization (ICAO) or to tackle aviation emissions (in some cases, limited only to domestic aviation emissions).<sup>39</sup>

At the 2022 UN Climate Change Conference in Sharm El-Sheikh, Egypt (COP 27), the COP 27 Presidency of Egypt launched an initiative on low carbon transport for urban sustainability that aims to “activate systemic change beyond the legacy ‘mode-first’ mindset (i.e., focus on specific transport modes)”.<sup>40</sup> Among the 14 flagship initiatives of the COP 27 Presidency is the Low Carbon Transport for Urban Sustainability (LOTUS) initiative, which aims to activate systemic change to improve and decarbonise the urban mobility landscape, and specifically to:

- ▶ Scale up investment for electric vehicles and sustainable mobility infrastructure (led by the Institute for Transportation and Development Policy, the World Resources Institute and the Smart Freight Centre).
- ▶ Empower and invest in informal transport to decarbonise and mobilise towards achievement of SDG 11 (sustainable cities and communities), achieve climate resilience, and develop a global agenda for a just transition and transformation (led by the Global Network for Popular Transportation).
- ▶ Build capacity to develop integrated, multi-modal policy frameworks in low- and middle-income countries (led by the International Association of Public Transport (UITP), the International Union of Railways (UIC) and Walk21).<sup>41</sup>

**TABLE 4.** Overview of COP 26 commitments as of 14 December 2022

Source: See endnote 38 for this section.

COP 26 COMMITMENTS	Total signatories at COP 26 in November 2021	Total signatories as of 14 December 2022	New country signatories since COP 26 as of 14 December 2022	Other updates
<b>Accelerating to Zero Coalition (A2Z)</b>	178 (38 countries)	221 (40 countries)	2 (Greece and Spain)	Previously called the Declaration on Accelerating the Transition to 100% Zero Emission Cars and Vans
<b>Breakthrough Agenda on Transport</b>	33 countries	33 countries	0	Previously called the Breakthrough Agenda on Road Transport. The scope has since been widened to include aviation and shipping. In 2022, the focus was on implementation.
<b>Clydebank Declaration for Green Shipping Corridors</b>	22 countries	24 countries	2 (Palau and Singapore)	No update since April 2022.
<b>Global Memorandum of Understanding on Zero-Emission Medium- and Heavy-Duty Vehicles</b>	15 countries	27 countries	12 (Belgium, Croatia, Dominican Republic, Ireland, Liechtenstein, Lithuania, Portugal, Ukraine and the United States, plus constituent countries Aruba, Curaçao and Sint Maarten)	Introduced a progress dashboard to monitor the relevant policies by signatory countries. Also received several new endorsements in 2022.
<b>International Aviation Climate Ambition Coalition</b>	25 countries	59 countries	34 (Albania, Austria, Belgium, Belize, Bulgaria, Chad, Côte d'Ivoire, Croatia, Cyprus, Czech Republic, Dominican Republic, Equatorial Guinea, Georgia, Greece, Guinea, Hungary, Iceland, Latvia, Lithuania, Luxembourg, Madagascar, Mexico, Monaco, Montenegro, Niger, Republic of North Macedonia, Papua New Guinea, Poland, Portugal, Romania, Rwanda, Slovak Republic, Switzerland, Ukraine)	

However, except in the first focus area related to electric vehicles and sustainable mobility infrastructure, no national governments are part of LOTUS. Additionally, during COP 27 the following transport commitments, initiatives and campaigns emerged:

- ▶ **Green Shipping Challenge:** Countries, ports and companies made more than 40 announcements under the Green Shipping Challenge, including an agreement between the Netherlands, Norway, the United Kingdom and the United States to establish green shipping corridors.<sup>42</sup>
- ▶ **Partnership for Active Travel and Health (PATH):** In a letter to governments signed by more than 400 civil society organisations from around the world, PATH called on national and city

governments to commit to prioritising investment in walking and cycling, including through NDCs as well as concrete actions for infrastructure, campaigns, land-use planning, integration with public transport and capacity building.<sup>43</sup>

- ▶ **Transport Decarbonisation Alliance's Call to Support Active Mobility Capacity Building:** The Alliance called on all Parties to the UNFCCC and global financial institutions to invest USD 100 million to train 10,000 mobility professionals in the planning, design, operations, and promotion of walking and cycling, in order to build a local knowledge base and to create a pipeline of projects to ensure sustained, high-quality investment in active mobility at a global scale.<sup>44</sup>

## Linkages between national planning processes and Paris Agreement mechanisms

**Linkages between national strategies (such as transport development plans, electric vehicle plans and multi-year infrastructure plans) and Paris Agreement mechanisms have been strengthened as more climate strategies reference national strategies.** As of 2021, NDCs were increasingly referencing other national strategies, and this trend continued in the NDCs and LTS submitted by countries in 2021 and 2022. Such linkages enhance policy coherence and policy synergies towards the acceleration of transport decarbonisation and broader sustainability objectives.

- ▶ The updated NDC of Mexico mentioned progress on a National Electric Mobility Strategy, with a focus on public transport, since this mode helps advance fairness, safety and other social benefits.<sup>45</sup>
- ▶ The LTS of Morocco referred to the Sustainable Mobility Roadmap, which is based on the Paris Process on Mobility and Climate's Global Macro Roadmap.<sup>46</sup>
- ▶ Vietnam's updated NDC pointed to the National Climate Change Strategy and the Transport Development Strategy, reflecting climate actions on transport closely co-ordinated with the transport ministry.<sup>47</sup>
- ▶ For Latin America and the Caribbean, a 2022 analysis on both climate strategies and transport policies at the national and sub-national levels found general coherence on these high-level strategies related to transport, energy and urban planning.<sup>48</sup>

Several countries have implemented advanced sustainable transport policies aligned to their second-generation NDCs (2020-2022). Colombia, Peru and Uruguay sent political signals from the national level to support the sub-national level in implementing sustainable mobility.<sup>49</sup> Many of the capitals and largest cities of the countries featured in this analysis have made efforts towards sustainable urban mobility plans (SUMPs).<sup>50</sup> The World Bank's Global Facility to Decarbonize Transport (GFDT) supports national commitments to the Paris Agreement and NDCs. In 2022, activities initiated under the GFDT included bus electrification in Ghana and urban transport modernisation in Lima, Peru.<sup>51</sup>

**The number of countries working on transport decarbonisation strategies has increased since the second edition of this report in 2021,** in which Costa Rica's strategy, released in 2019, was identified as a frontrunner.

- ▶ In 2021, the United Kingdom published a national transport decarbonisation plan, labelled as the "world's first greenprint to decarbonise all modes of domestic transport by 2050".<sup>52</sup>
- ▶ Ireland released a Climate Action Plan in 2022 with specific transport goals for 2030: reduce CO<sub>2</sub> emissions 50% below

2018 levels; decrease the share of cars from 72% in 2018 to 53%; increase fuel prices 65%; improve public transport and reduce prices 50%; and have all new car sales be electric.<sup>53</sup>

**At the sub-national level, several jurisdictions released transport decarbonisation plans:**

- ▶ Auckland (New Zealand) adopted the Transport Emissions Reduction Pathway aimed at reducing transport emissions 64% by 2030.<sup>54</sup>
- ▶ In early 2023, Freetown (Sierra Leone) launched a Climate Action Plan, including goals to encourage public transport while maintaining low shares of private transport, to proactively address historical land-use planning challenges to support efficient, low carbon transport and transit-oriented development, and to promote behaviour change in support of public transport, cycling and walking.<sup>55</sup>
- ▶ Mumbai is India's first city with a Climate Action Plan, released in 2022, and the first member of C40 Cities in South and West Asia with such a plan.<sup>56</sup> As one of the six key action areas, sustainable mobility aims to improve the availability and accessibility of public transport, provide inclusive planning for walking and cycling, and induce a shift from private to public transport.<sup>57</sup>
- ▶ In 2020, Vancouver (Canada) released its Climate Emergency Action Plan 2020-2025, with goals for 2030 that include conducting 66% of all trips by public transport, walking and cycling; and using zero-emission vehicles for 50% of all kilometres driven.<sup>58</sup>



## Voluntary National Reviews in the framework of the 2030 Agenda for Sustainable Development

A just transition to equitable, healthy, green, and resilient transport and mobility systems is central to socio-economic prosperity for people and the planet. To achieve such systems, key transformations in land transport – linked to wider socio-economic transformations – are needed.<sup>59</sup>

The UN 2030 Agenda on Sustainable Development is a cross-cutting, interconnected agenda, wherein the achievement of one of the 17 Sustainable Development Goals (SDGs) is often dependent on the achievement of others. Although sustainable, low carbon mobility is not represented by a stand-alone SDG, its successful implementation supports the achievement of almost every SDG. The SLOCAT Wheel on Transport and the SDGs (see Section 1.1) shows the extent of positive interactions to define equitable, healthy, green, and resilient transport and mobility systems. SDG 13 (climate action) provides a direct linkage between the actions to support the 2030 Agenda and the Paris Agreement.

The 2030 Agenda encourages UN Member States to submit Voluntary National Reviews (VNRs) to the annual UN High-Level Political Forum on Sustainable Development. The VNR process facilitates sharing of successes and challenges, with a view towards accelerating the implementation of the 2030 Agenda. Since the first High-Level Political Forum in 2016, countries have reported on transport as a vital sector to implement the SDGs, showcasing on-the-ground implementation and best practices. SLOCAT has conducted detailed annual analyses of the VNRs.

The development, implementation and reporting of NDCs and VNRs can be leveraged through concerted and co-ordinated efforts to scale up sustainable transport (see Box 1).<sup>60</sup>

**The VNRs from 2016 to 2022 revealed consensus on the role of transport as a key contributor to implementation of the SDGs.<sup>61</sup> In the first VNR reporting cycle (2016-2019), 92% of VNRs (144 of 156 VNRs) highlighted progress in the transport sector, and 18% of VNRs reported specific targets covering 12 areas in sustainable transport.<sup>62</sup>** The majority of targets were short- to medium-term targets (for 2020 and 2030), with only five countries setting long-term targets for 2050.<sup>63</sup> The transport dimension of the VNRs reported between 2020 and 2022 revealed consensus around transport as a key contributor to implementation of the SDGs, largely following a pattern similar to the first reporting cycle (2016-2019).

All 40 VNRs submitted in 2021 included references to sustainable transport policies and, for the first time since the inaugural High-Level Political Forum in 2016, they also included transport measures.

In 2022, the number of VNRs mentioning transport decreased to 36 out of the 42 submitted VNRs, or 86%, the lowest share since 2017.<sup>64</sup> Yet more VNRs reported specific transport targets

and included explicit references to the four themes on transport and sustainability of the SLOCAT Wheel on Transport and the SDGs: equitable, healthy, green and resilient.<sup>65</sup>

Possible factors that may have contributed to the decrease in transport mentions in 2022 include:

- ▶ Lack of reporting in a number of VNRs on the SDGs that have the most transport relevance (e.g., SDG 3 on good health and well-being, SDG 9 on industry, innovation and infrastructure, and SDG 11 on sustainable cities and communities) because these were not a focus of the High-Level Political Forum of 2022.
- ▶ A possible and persisting gap in incorporating green and equitable recovery strategies for transport systems in COVID-19 pandemic response packages.
- ▶ Severely limited data collection for transport infrastructure and services development due to the pandemic, especially in developing countries.
- ▶ Pandemic-related budgetary cuts in national strategies and programmes for the transport sector.

### BOX 1. Synergies among Nationally Determined Contributions and Voluntary National Reviews

Creating a common methodological framework between the Paris Agreement and the implementation and monitoring mechanisms for the 2030 Agenda for Sustainable Development can maximise the combined potential of both global frameworks for accelerating sustainable, low carbon transport.

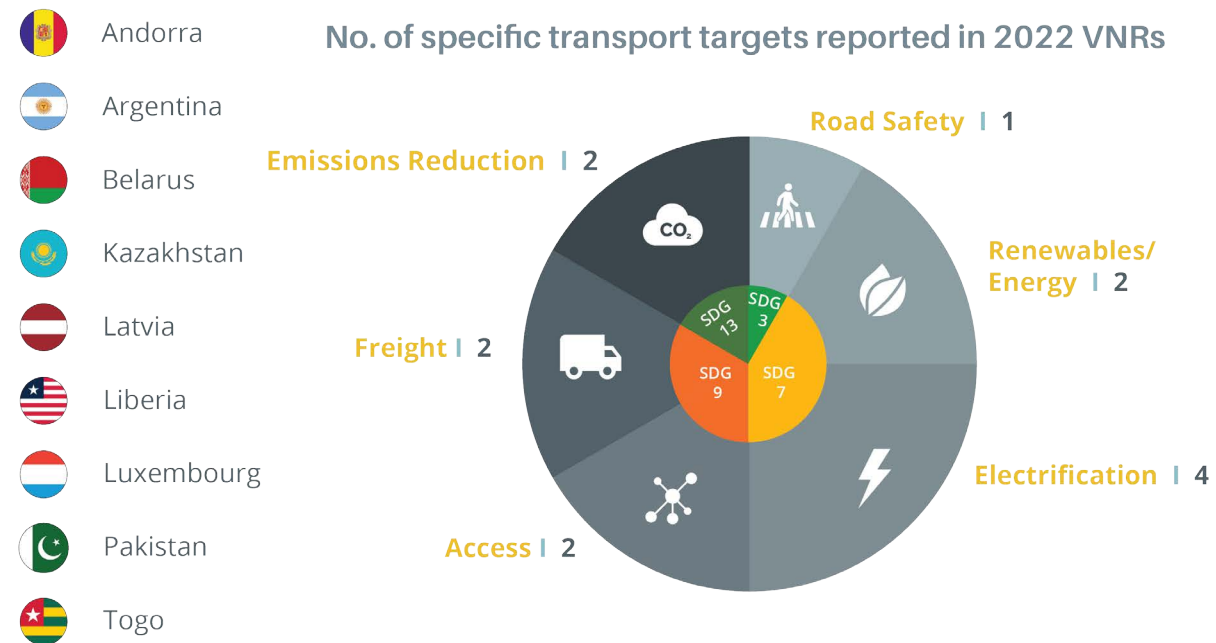
A successful implementation of sustainable transport measures in the context of the Paris Agreement and the 2030 Agenda must involve concerted and co-ordinated efforts to more closely link the processes of developing, implementing and tracking progress towards both Nationally Determined Contributions and Voluntary National Reviews. Such alignment is required both in the governance of the processes themselves and in the co-ordination among the national and sub-national actors that are formulating and putting them into practice.

In response to this identified need, in 2020 the Islamic Development Bank and the SLOCAT Secretariat proposed guidance to support the implementation of NDCs and SDGs for the transport sector at the national level. The guidance presents a set of eight components for mainstreaming the 2030 Agenda and the Paris Agreement objectives within the transport sector, to support convergence between climate action and sustainable development.

**Source:** See endnote 60 for this section.

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

Source: See endnote 66 for this section.



In 2022, 21% of the VNRs (9 out of 42 VNRs) mentioned specific transport targets, up from 20% (9 out of 40) in 2021 and 17% (8 out of 47) in 2020 (see Figure 3).<sup>66</sup> Targets were focused on, among others, electrification, freight, road safety and renewable energy (see Table 5).<sup>67</sup>

In the 2022 VNRs, the majority of the mentions focused on developing transport infrastructure in the context of passenger and freight activities (SDG 9 on industry, innovation (SDG 9 on industry, innovation and infrastructure), all-season rural roads (SDG 9) and public transport systems (SDG 11 on sustainable cities and communities). Significant attention was also given to reducing traffic fatalities and injuries (SDG 3 on good health and well-being) and increasing renewable energy; reducing final energy consumption in the transport sector (SDG 7 on affordable and clean energy) and curbing mobile-source greenhouse gas emissions (SDG 13 on climate action).<sup>68</sup> Compared to previous years, there was a slight increase in mentions of gender-sensitive transport policies (SDG 5), possibly because SDG 5 was a focus of the 2022 High-Level Political Forum. Relatively fewer of the VNRs mentioned measures to phase out fossil fuel subsidies (SDG 12) and curb mobile-source greenhouse gas emissions (SDG 13), despite 40% of the VNRs spelling out connections with SDG 13.<sup>69</sup>

The 2022 VNRs gave ample attention to urban transport measures, based on the transport-relevant indicator 11.2.1 (public transport), although there were very few references to rural access (indicator 9.1.1). Whereas in the 2020 VNRs, both

urban and rural transport received similar levels of attention, this gap widened in the 2022 VNRs.<sup>70</sup>

A number of the 2022 VNRs (such as Andorra, Greece, Japan, Jordan, Kazakhstan, Luxembourg, Pakistan and the Philippines) highlighted sustainable transport actions in the context of pandemic recovery efforts and the need to urgently transition to renewables from fossil fuels. However, **most of the 2022 VNRs described only the adverse impacts of global issues, without presenting concrete policy measures; when they did, the measures did not fully address the urgent systemic transformations necessary to enable equitable access to transport and mobility for all.**<sup>71</sup>













## Impacts of global shocks



**Global shocks since 2020 - such as the COVID-19 pandemic and the Russian Federation’s invasion of Ukraine - have put at increased risk any overall progress towards the SDGs and the Paris Agreement goals.**<sup>72</sup> In 2022, the UN released briefs on the global impact of the Russian invasion on food, energy, and finance systems, including the ongoing cost-of-living crisis expanding worldwide.<sup>73</sup>

Research revealed that the invasion affected the biodiversity-focused SDGs (SDG 6 on clean water and sanitation, SDG 13 on climate action, SDG 14 on life below water and SDG 15 on life on

**TABLE 5.** Specific transport targets reported in 2022 Voluntary National Reviews

Source: See endnote 67 for this section.

Countries	Focus	Targets
Andorra		Increase the electric vehicle share to 20% by 2030 and become one of the top five European countries in the share of electric vehicle sales
Argentina		Increase the share of freight transported by rail to 9% by 2025 and 11% by 2030
		Reduce the rate of road fatalities per 100,000 inhabitants to 8.2% by 2030
Belarus		Have 100% of the rural population living within two kilometres of a year-round road by 2021 (already met)
Kazakhstan		Upgrade 100% of national roads to normal conditions and improve up to 95% of local roads by 2025
		Switch all urban passenger transport to environmentally friendly fuels by 2030
Latvia		Increase the share of renewable energy systems in the transport sector to 7% by 2030
Liberia		Reduce transport CO <sub>2</sub> emissions 15% by 2030
Luxembourg		Increase the share of electric and plug-in hybrid cars to 49% by 2030
		Reduce transport CO <sub>2</sub> emissions 57% by 2030
Pakistan		Achieve a 30% shift to electric vehicles by 2030
Togo		Increase the share of electric vehicles in newly sold vehicles to 3% by 2025

Focus	
	Electrification
	Freight
	Road safety
	Access
	Renewables/Energy
	CO <sub>2</sub> emissions

land); society-focused SDGs (SDG 1 on no poverty, SDG 2 on zero hunger, SDG 3 on good health and wellbeing, SDG 4 on quality education, SDG 5 on gender equality, SDG 7 on affordable and clean energy, SDG 11 on sustainable cities and communities, and SDG 16 on peace, justice and strong institutions) at the local and global level, as well as the economic SDGs (SDG 8 on decent work and economic growth, SDG 9 on industry, innovation and infrastructure, SDG 10 on reduced inequalities and SDG 12 on responsible consumption and production).<sup>74</sup> To overcome the multiple global shocks, the UN Secretary-General has proposed the SDG Stimulus, which calls for tackling the high cost of debt and the rising risks of debt distress, massively scaling up affordable long-term financing for development, and expanding contingency financing to countries in need.<sup>75</sup>

**The COVID-19 pandemic induced long-lasting negative impacts on urban mobility, land use and transport systems across low-, middle- and high-income countries.**<sup>76</sup> The Sustainable Development Solutions Network analysed progress towards the SDGs and concluded that the pandemic, coupled with geopolitical conflicts, has led to significant setbacks in SDG 2 (zero hunger) and SDG 7 (affordable and clean energy). The report found a slight decrease in national performance on SDG 1 (no poverty) and SDG 8 (decent work and economic growth). Particularly poor was the national performance on SDG 11 (sustainable cities and communities), SDG 12 (responsible consumption and production), SDG 13 (climate action), SDG 14 (life below water) and SDG 15 (life on land).

## 1.3.1

## TRANSPORT IN NATIONAL CLIMATE AND SUSTAINABILITY STRATEGIES TO ACHIEVE THE TARGETS OF THE PARIS AGREEMENT AND SDGS

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