A three-point turn for climate ambition in transport

Did climate talks in Glasgow steer the world towards a paradigm shift?

COP26, Climate Change, Glasgow, NDC

The 26th Conference of the Parties to the UNFCCC (COP26) in Glasgow showed a number of new climate initiatives in the transport sector. In the run-up to COP26, a large number of countries made net-zero pledges, promising to reduce emissions to zero. However, a recent analysis of climate pledges by GIZ shows that key states continue to fall short in their mid-term transport sector goals. Though more countries have set sector targets, large emitters such as China, the US and India have yet to follow suit. 2022 is a crucial year for countries around the world to ramp up their climate ambition in transport.

Daniel Bongardt, Marion Vieweg, Nadja Taeger

On 13 November 2021, 197 countries signed the Glasgow Climate Pact at the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26). In his closing speech, UN Secretary General António Guterres emphasised that current efforts are not enough, though he did note the presence of some "building blocks for progress" [1]. The Glasgow Climate Pact reaffirms that limiting global warming to 1.5 °C requires rapid, deep and sustained reductions in global greenhouse gas emissions. The world must lower global carbon dioxide emissions by 45 per cent by 2030 relative to 2010 levels and to net zero by around mid-century. Achieving those goals, he stressed, is a matter of life and death. Below we look at Guterres's 'building blocks for progress' in the transport sector and argue that Glasgow just was the first step in a three-point turn.

Overall national climate ambition is increasing, though it still falls short overall

In the run-up to COP26, a large number of countries, subnational governments and companies made net-zero pledges, promising to reduce emissions to zero or fully compensate for remaining emissions by a specific date. The US and EU aim to hit net zero by 2050, China announced plans for carbon neutrality by 2060, and India declared its pledge to achieve net zero by 2070 during the UN climate talks. A total of 50 countries officially submitted their carbon neutrality targets to the UNFCCC in their long-term strategies (LTS) or as part of their new or updated 'second generation' nationally determined contributions (NDCs), as illustrated in *figure 1*. Another 26 countries announced net-zero targets in other ways, either at the COP26 Climate Ambition Summit or through national strategy documents and national legislation.

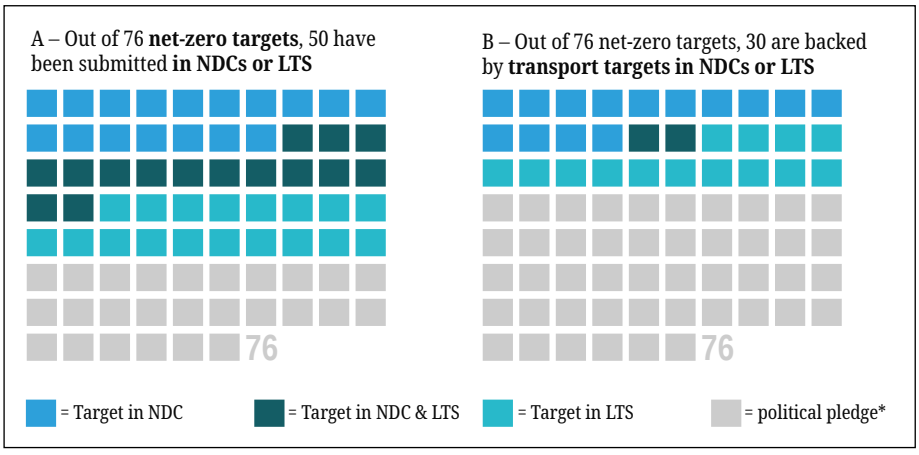

Figure 1: Net-zero pledges and transport targets in NDCs, LTS or elsewhere Source: Authors

The transport sector continues to lag behind

Transport remains one of the fastest growing sectors in terms of GHG emissions, with an increase of 17.2% between 2010 and 2019 globally [2]. At the current rate, the global carbon budget for the transport sector will be exhausted by the early 2030s, as shown in a recent study by the University of Technology in Sydney [3]. The sector is covered by economy-wide targets in many NDCs, but most are not yet supported by sectoral targets. Only 11 of the countries with net-zero targets have submitted transport sector targets for 2050 in their LTS or second generation NDCs. Most set mid-term targets for 2030. 30 net-zero targets are supported by transport targets, as shown in *figure 1*.

Setting ambitious long- and medium-term sector targets is essential to guide policy-making and to ensure the accountability of institutions and individuals. Setting targets can enable a wider public discussion about what needs to happen to decarbonise the sector, how this can help improve existing – and often disappointing – transport systems and what needs to be done to mitigate the adverse effects of climate measures.

More transport sector targets, yet none from big emitters

By 25 November 2021, 18 countries had set quantitative GHG emission targets for the transport sector. This equals 38 % of all second generation NDCs [4]. But those countries cover merely 3.6 % of global transport CO_2 emissions (2019). This is due to the fact that many of the countries that have set GHG emission targets for the transport sector in their second generation NDCs are very small, such as The Gambia, Belize and the Seychelles, and most are middle- or low-income countries. Though this is an improvement over the first round of NDCs, where only 21 % of NDCs contained GHG targets for the sector, it is far from enough.

34 countries set non-GHG emission targets for the sector in their second generation NDCs. These targets included specific goals for increasing the share of electric and other zero-emission vehicles, improving vehicle efficiency and enhancing the use of biofuels and other forms of renewable energy in transport. Such targets can be very useful, as they provide clear guidance for action. However, they fall short of enabling a comprehensive transformation of the sector. Most focus on improving vehicles instead of addressing the need to avoid travel and shift to more efficient modes of transport, such as public passenger transport or rail freight.

So far, none of the large emitters have set GHG emission targets for the transport sector in their NDCs or LTS. Among them are countries with net-zero targets, like China, the EU, India and the US, which together represent 57 % of global transport CO_2 emissions. Japan, which represented around 2.8 % of global emissions from the sector in 2019, is an exception. Overall, 30 countries support their net-zero targets with mid-term transport targets in their NDCs or with medium- and long-term transport targets in their LTS. Eight of these are EU member states.

Existing transport targets mostly fall short of what is needed

Current transport sector targets in LTS and second generation NDCs cover a wide range of ambition levels. Fiji, for example, aims to reduce domestic maritime emissions by 40 % by 2030, which represented around 6 % of the country's total transport sector emissions in 2011, the most recent inventory year. Others, such as Bangladesh and Mauritius, have absolute emission targets or reduction targets that are below the baseline but that would still result in a continued substantial increase of emissions up to 2030 relative to current levels. Only a few mid-term targets deliver actual reductions compared with current emission levels. For example, Japan aims to limit transport sector emissions to 146 Mt CO2e by 2030, a 35 % reduction below its transport emissions in 2013.

However, it is essential that countries move from marginal reductions to systemic change and peak emissions in the sector as close as possible to 2030 if they are to achieve the stated carbon neutrality goals and objectives of the Paris Agreement. Doing so will require targets that trigger change and enable innovation and the redirection of funds towards cleaner and more sustainable transport solutions.

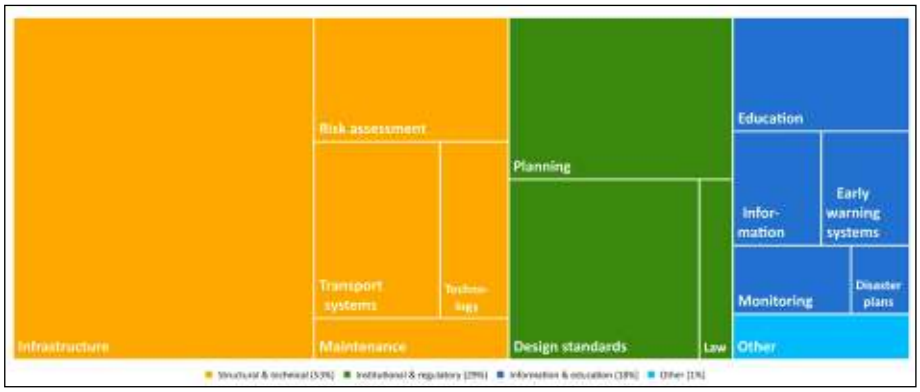

Figure 2: Adaptation measures in NDCs Source: Authors

More NDCs are reporting on adaptation in the transport sector

The lack of effort to mitigate climate change will require enhanced adaptation efforts in the transport sector. Even with the enhanced reduction of greenhouse gases starting today, the current irrevocable temperature increase will require the adaptation of existing transport systems. The latest IPCC Assessment Report (AR6 6, 2021) underscores the urgency to act [5]. Current targets will product global heating with severe consequences. Extreme weather events are expected to increase in frequency and intensity as a consequence of climate change. Sea level rise, increasing temperatures and changes in rainfall patterns will pose a variety of challenges to transport systems, material and equipment and are likely to hit marginalised and vulnerable groups hardest.

42% of submitted NDCs now mention adaptation measures for the transport sector, compared with only 22% in the first generation and only 15% in submitted long-term strategies. Notably, 58% of second generation NDCs from low-income countries spell out adaptation measures for the transport sector, a sign of their vulnerability to climate change.

Adaptation remains focused on transport infrastructure measures

Around half of the adaptation areas mentioned in NDCs address infrastructure, especially roads, and technical solutions, such as improved flood protection and maintenance. 29% refer to the much-needed mainstreaming of adaptation in institutional and regulatory instruments, including setting the right legal frameworks, incorporating climate impacts and adaptation in planning and defining design standards that include adaptation needs.

Many measures relating to infrastructure and transport systems state a desired outcome instead of a strategy for its achievement, as illustrated in *figure 3*. Goals such as "enhancing the resilience and climate-proofing of critical infrastructure" or "climate proofing transport infrastructure" neglect to mention the legal frameworks, planning tools and design standards needed for their realisation and the risks and solutions that their planners must be aware of.

It is essential that countries build resilient transport systems that will continue to function under increasing climate change pressures. Planners must be aware of the problems and have the tools and knowledge to address the challenges. National governments can support the work by collecting and distributing relevant information and by creating legislative frameworks that require the assessment of climate risks and adaptation solutions. Climate-smart transport planning today will save enormous costs from climate-change impacts tomorrow.

Do the climate talks in Glasgow give reason for hope?

More and more countries have announced net-zero emission targets. While these are essential for transport in the mid-term, the world has seen three important developments that are relevant for transport now. Together, they make up a three-point turn needed to transform the sector.

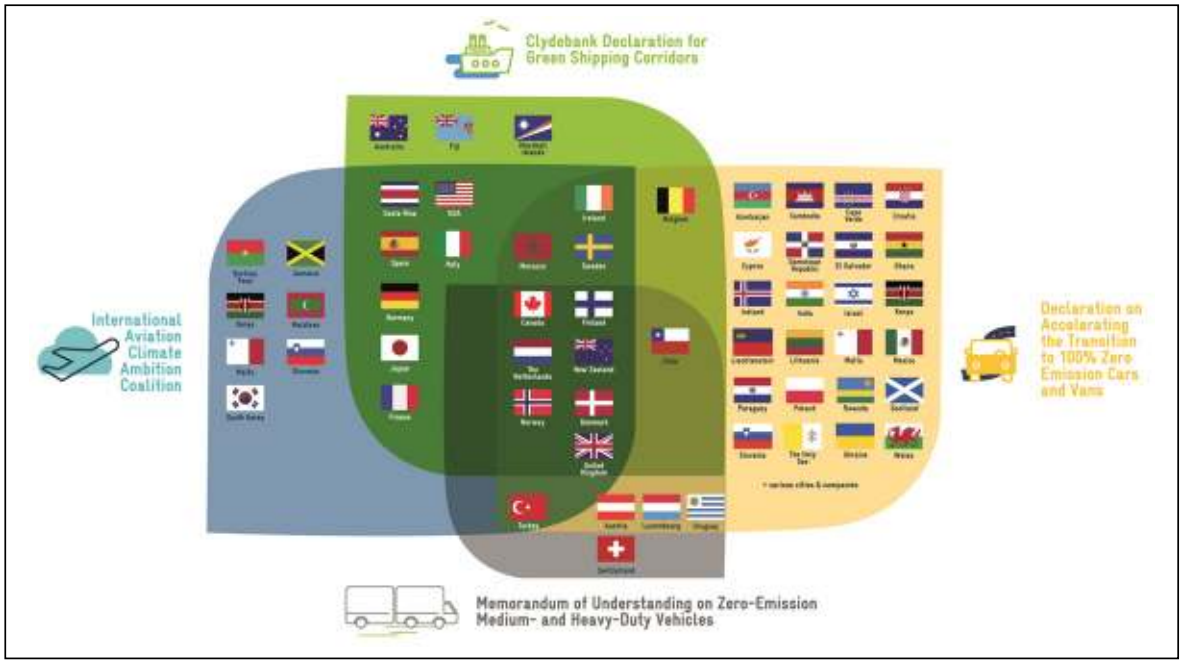

Figure 3: COP26 statements and declarations on climate action in transport
Source: GIZ

New international transport initiatives to accelerate decarbonisation

First, the UK COP26 Presidency has urged countries to enact voluntary commitments and coalitions of the willing. Fortunately, some countries have already pledged to take the lead and move faster to initiate change in the sector. After initiatives on deforestation and the phase-out of coal were launched in the first week of COP26, Transport Day (November 10th) saw the announcement of four ambitious transport coalitions:

a. the Clydebank Declaration for Green Shipping Corridors,
b. the International Aviation Climate Ambition Coalition,
c. the Memorandum of Understanding on Zero-Emission Medium- and Heavy-Duty Vehicles, and
d. the Declaration on Accelerating the Transition to 100% Zero-Emission Cars and Vans.

Figure 3 shows the members of the above initiatives.

Request for updated climate pledges by the end of 2022

Second, the Glasgow Climate Pact has responded to the current urgency by requesting that its signatories revisit and strengthen the 2030 targets in their NDCs by the end of 2022. Ramping up the ambition of national climate pledges before the next "official" cycle in 2025 is necessary so as not to lose valuable time.

Updating the NDCs is a great opportunity to strengthen climate ambition in transport. China, for example, could outline transport emission peaking and reductions in its upcoming sectoral climate plans. At GIZ, we will track these pledges and continue to update our NDC and LTS database, the Tracker of Climate Strategies for Transport (https://changing-transport.org/tracker/).

A growing need for resilient transport systems

Third, after hotly debating funding for creating more resilient infrastructure and services and for handling climate impacts, the Parties finally agreed to double the financial resources for adaptation and to start work on activities to avert, minimise and address loss and damage.

These issues are essential for transport systems, which have already seen millions of euros worth of damage in extreme weather events such as flooding and storms.

Transforming the transport sector cannot wait for COP27

Though Glasgow was not the big success that some had hoped for, it represents a starting point for more ambitious and accelerated climate action in transport. Right now, the transport sector is no longer moving in the wrong direction. But it has yet to turn itself around. More ambitious action is needed for both mitigation and adaptation. In the best case, Glasgow marks the start of a wider process of reform. Guterres concluded his speech with a famous saying by the Scottish writer Robert Louis Stevenson: "Don't judge each day by the harvest you reap, but by the seeds that you plant."

We need a real paradigm shift in how we get from place to place. That is, we need transport systems for people, not vehicles. This requires the cessation of funding for high-carbon transport and a shift of investments to sustainable modes of transport and the phasing-out of internal combustion engines. It is imperative that the new German government take the lead and not only start transforming its own transport sector but also partner with other countries in a collective effort to achieve net-zero mobility. ■

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Daniel Bongardt
Programme Director Sustainable Transport and PtX, G310 – Energie, Wasser, Verkehr, GIZ, Bonn (DE)
daniel.bongardt@giz.de

Marion Vieweg
Consultant, Current Future, Berlin (DE)
marion.vieweg@current-future.org

Nadja Taeger
Advisor, G310 – Energie, Wasser, Verkehr, GIZ, Bonn (DE)
nadja.taeger@giz.de