

# Actions to Reduce Emissions and Boost the Resilience of Freight Transport and Global Supply Chains

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## SLOCAT Guidelines for NDCs

Freight transport accounted for around 40% of global transport emissions in 2019 and freight emissions are projected to nearly triple between 2015 and 2050. In order to meet Paris Agreement targets and keep the rise in average global temperature below 1.5°C, transport emissions must drop two-thirds below 2019 levels by 2050. Yet **freight measures on decarbonisation and resilience are not proportionally reflected among policy priorities and remain overlooked in Nationally Determined Contributions (NDCs)**. Only a third of all second-generation NDCs include explicit, freight-related actions.

On the adaptation front, **transport systems must stay operational during disasters, extreme weather events and other shocks**. In addition, the way in which transport systems are planned and operationalised must limit or reverse creation of new risks, and reduce existing ones. Critical value chains should be identified and dependency on single transport modes and access points, like a single road, must be eliminated. National and cross-border coordination must work towards ensuring connectivity of critical value chains and functionality of infrastructure and services.

In all, **freight transport is closely linked to economic activity, as logistics costs can account for between 6% and 25% of a country's GDP and create high economic returns**. The good news is that 90% of the global economy is already committed to becoming net zero, according to [Oxford Net Zero](#). Out of the 128 countries committed to net zero, 104 aim to achieve it between 2040 and 2050. The key now lies in delivering net zero and adaptation targets with actions on the ground. Climate strategies and policy priorities need to quickly implement solutions on decarbonisation and resilience of freight transport.



To secure their place in the future net zero economy, countries can use their NDCs to set their freight transport and logistics systems on track to become net zero and resilient. Some key elements of a NDC that enables impactful action on decarbonisation and resilience of freight transport and global supply chains include:



### Freight transport targets

A NDC that enables action on transport includes a transport-related GHG mitigation target in addition to the common economy-wide emissions mitigation target. Any ambition to reduce transport GHG emissions will have to tackle GHG emissions from freight as well.

Robust freight transport targets seek, for instance:

- To reduce freight transport emissions;
- To ensure that a certain share of goods is transported via rail or waterways;
- To mandate a share of fuels for trucks supported by renewable energy, CO<sub>2</sub> emission standards for trucks and eventually phasing out fossil fuel-powered trucks;
- To transform infrastructure.



### Mitigation actions for freight transport

NDCs should include mitigation actions for freight transport structured by the *Avoid-Shift-Improve* framework.

Actions across trucks, urban freight, railways, inland waterways, as well as domestic and international aviation and maritime transport are examples of how NDCs can address the mitigation of freight transport emissions.



#### Avoid and reduce the need for motorised travel

Streamline material use and storage, as well as manufacturing processes to reduce tonne-km.

Design for less use of material in business models, products and packaging.

Extend produce lifespans.

Increase recycling and reuse of materials.

Use CO<sub>2</sub> labelling for services and products.



#### Shift to more sustainable modes

Expand and improve intermodal facilities and services.

Expand rail infrastructure.

Promote the use of cargo bikes for urban freight.

Implement 'polluter pays' user fees, as well as road charging/tolls.

Support green public procurement, multimodal liability and information systems.



#### Improve transport modes

Improve logistics efficiency (e.g. improve load factors, route optimisation).

Promote and support the use of clean trucks, alternative fuels to power trucks (e.g. electrification, green hydrogen etc.) and ecodriving (or truck driver education).

Implement zero emission (freight) zones in cities.

Implement vehicle import and scrappage regulations.

Support shipping improvements (e.g. increase efficiency) and port infrastructure modernisation.

Pursue public-private partnerships to increase efficiency and improve operations.

For more information on the Avoid-Shift-Framework, visit [www.slocat.net/vnr](http://www.slocat.net/vnr)

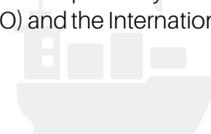
## Adaptation actions for freight transport

NDCs can address the adaptation of freight transport with measures that improve the resilience of infrastructure, including:

- All-weather roads and general flood-protection;
- Ports that account for sea level rise and extreme weather events;
- Early warning systems;
- Multiple and shorter supply chains, as well as local production (in case of global supply chain disruptions);
- Plans for alternative freight transport (in case roads are flooded).

## International maritime transport and aviation

As well as outlining targets and measures for improving and expanding domestic maritime transport, NDCs should feature actions to achieve more ambitious international maritime and aviation transport targets and measures respectively in the International Maritime Organisation (IMO) and the International Civil Aviation Organisation (ICAO).



## The Good, the Bad and the Ugly in second-generation NDCs with regards to freight transport



[slocat.net/ndcs-hall-of-fame](https://slocat.net/ndcs-hall-of-fame)  
#TransportinNDCs #COP27

### The Good

One-third of all second-generation NDCs include explicit freight-related actions.

This is a positive trend, given that freight transport is seen as one of the most hard-to-abate sectors of transport.

### The Ugly

Two-thirds of second-generation NDCs fail to include plans to reduce freight emissions, despite the sector's overall significant and growing contributions to GHG emissions.

Freight transport currently accounts for 40% of greenhouse gas emissions in transport.

### The Bad

Comprehensive freight decarbonisation solutions - such as introducing zero-emission trucks, improving efficiency and shifting freight transport from road to railways or waterways - are still largely missing from NDCs.

### Moving Forward

Countries should include specific targets and actions to reduce emissions from freight transport in their NDCs.

These actions often involve different stakeholders and require different strategies, compared to the actions aimed at reducing passenger transport emissions.

Some examples of freight transport measures in second-generation NDCs:

### Freight transport targets



**Albania:** Increase the share of freight (roads, railways and waterways). By 2030, 30% of the road transport of over 300 km shall be shifted to other transport modalities (e.g. rail) and by 2050, the target is 50%.



**Nepal:** By 2030, develop 200 km of the electric rail network to support public commuting and mass transportation of goods.



**Nigeria:** By 2030, 25% of trucks will use compressed natural gas (CNG).



**Zimbabwe:** Fuel efficiency improvement of 2.5% per year for heavy-duty vehicles between 2025 and 2030.

### Mitigation actions for freight transport



**Chile:** The use of hydrogen produced from renewable energy sources for cargo transportation might play a crucial role.



**European Union:** CO<sub>2</sub> emissions per kilometre from new large lorries must be reduced on average by 30% from 2019/2020 reference period levels.



**Malawi:** Modal shift of freight from road to rail under the National Transport Master Plan, resulting in reduced diesel consumptions and GHG emissions from road freight transport.



**United Arab Emirates:** Complete rail network linking to major ports and trading centres.

