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Partnership on Sustainable, Low Carbon Transport

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Transport, Climate and Sustainability Global Status Report - 3rd edition

Module 2 Regional Trends in Transport Demand and Emissions, and Policy Developments

Key Insights

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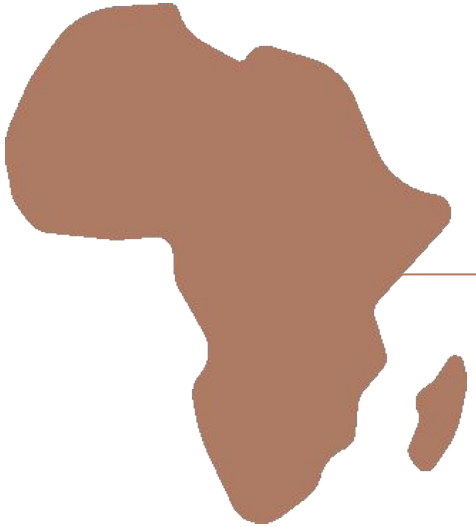

Africa

24%

of Africa's total CO_2 emissions come from transport

The lowest per capita transport CO_2 emissions among all regions, though with a fast growing trajectory.

→ Only 5.4% of global transport CO_2 emissions in 2021.*

Africa experienced the second highest regional growth of transport emissions after Asia.

→ Transport CO_2 emissions increased by 34% between 2010 and 2021.

*Excluding international aviation and shipping

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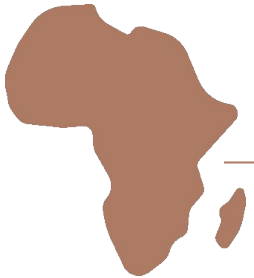

Africa

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Momentum in goals to tackle transport emissions

Africa accounted for **43% of the countries that set time-bound** transport emissions targets in **Nationally Determined Contributions** submitted to the Paris Agreement.

Dangerous levels of air pollution

Africa's **particulate matter 2.5 emissions** (mainly from road transport and power generation) are **97.41 µg/m^3** in 2019, **above the world average of 82.3 µg/m^3**.

Soaring road traffic fatalities

93% of Africa's roads fail to provide an acceptable level of service for pedestrians and cyclists. 53% of road fatalities are pedestrians, bicyclists and motorcyclists.

Africa

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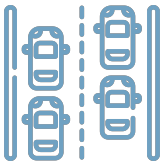


Lowest car ownership rate

Between 2016 and 2020, **Africa's motorisation rate was 43 vehicles per 1,000 people,** around **4.6 times below the global average.**

High dependency on used vehicles

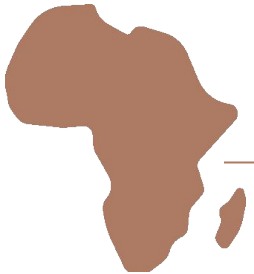
Africa accounts for less than 1% of global vehicle production. Africa imported the largest share (40%) of used vehicles among all regions from 2015 to 2018.

In most African countries, used vehicles account for 85-100% of fleets.

Walking and cycling, the primary means of transport

Africans spend **56 minutes per day on walking or cycling**.

Around 59% of people walking and cycling in Africa were supported by a walking and cycling policy.



Africa

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Lack of affordable mobility for urban poor

Urban transport expenses can cost up to 20% of household income (10% in smaller cities). Affordable mobility options are key to alleviate urban poverty.

Limited access to public transport, prevailing use of informal transport

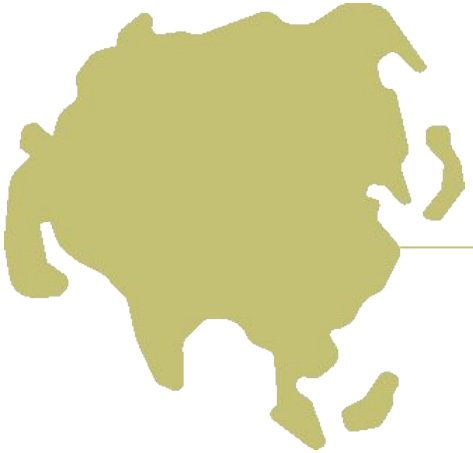
Only 32% of population was able to access public transport within a walking distance of 500-1,000 metres in 2020, **well below the global average of 56%.**

Informal transport can account for **40% to 98% of trips** by collective and shared transport in some African countries.

Road freight dominance

Road freight carries at least 80% of goods in Africa.

Ports, rail and air freight remain limited due to lack of capacity, technology and high costs.



Asia

11%

of Asia's total CO_2 emissions come from transport

The highest regional transport CO_2 emitter among all regions since 2011.

→ 39% of global transport CO_2 emissions in 2021.*

Asia experienced the fastest growth of transport CO_2 emissions compared to other regions over the last decade.

→ 36% growth from 2010 to 2021.

*Excluding international aviation and shipping

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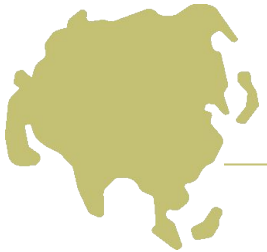

Asia

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Air pollution: a fatal crisis in Asia

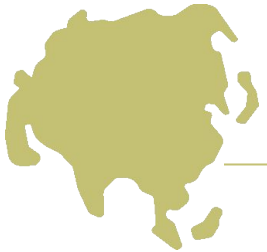
Air pollution contributed to 6.5 million deaths globally in 2019, with **70% of the deaths occurring in the Asia-Pacific region**.

Emissions trajectory not reaching the net zero pathway

Asia's transport CO_2 emissions positively deviated from pre-2015 projections. However, at its growth rate of 2021, **transport CO_2 emissions would not peak before 2050,** while strong declines are needed to to achieve the Paris Agreement target.

Soaring private vehicle ownership

Asia recorded **soaring motorisation growth with increases of more than 200%** in some countries during 2010-2019 – as well as significant growth in two- and three-wheelers.



Asia

Growing momentum towards a net zero future

As of 2022, **at least 14 Asian countries had made economy-wide pledges towards net zero emissions** in addition to transport targets (which mostly aimed at electric mobility).

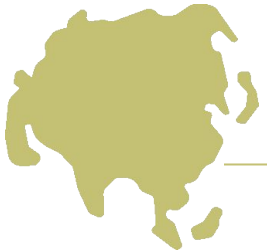
Global leader of electric mobility

In 2021, Asia was home to **95% of the global electric road vehicles fleet**.

92% of the electric vehicles in Asia were **two-wheelers**.

Surge in public transport services

Number of cities with **bus rapid transit increased by 36%** and cities with **metros and light-rail transit increased by 49%** from 2015 to 2021.



Asia

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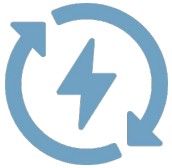
Rising demand for bike sharing

Asia is the world's largest bike sharing market. As of 2021, **nearly 800 bike sharing schemes were operating across Asia.**

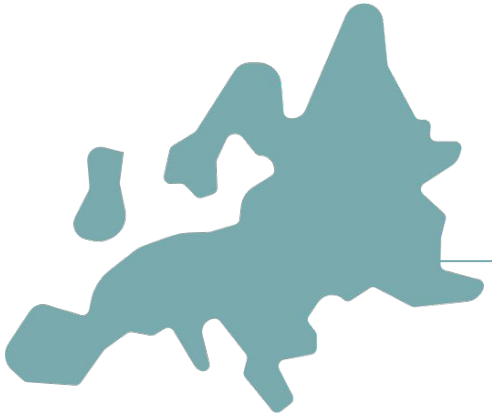
Increasing decarbonisation efforts for shipping

Some countries (Japan and Singapore) and ports (Shanghai) have pledged to **decarbonise the sector and implement green shipping corridors.**



Rapid renewables uptake in transport

Use of renewables in transport **increased annually by 14%** from 2010 to 2019, **the fastest annual growth among all regions**.



Europe

22%

of Europe's total CO_2 emissions come from transport

The third highest transport CO_2 emitter among regions.

→ 18% of global transport CO_2 emissions in 2021.*

→ 2% growth of transport emissions between 2010 and 2019.

Transport CO_2 emissions remain below pre-pandemic levels.

→ Dropped by 12.6% in 2020, rebounded by 5.9% in 2021.

*Excluding international aviation and shipping

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Europe

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Continuing dominance of cars

Passenger cars accounted for 86% of the travel activity in the EU in 2020.

Nearly all countries rely heavily on fossil-fuelled vehicles.

Surge in fuel prices due to the Russian war on Ukraine

Between February and July 2022, **natural gas wholesale prices in Europe rose 115%** and **electricity prices rose 237%**.

Phasing out fossil fuel cars by 2035

Approval of EU ban on sales of internal combustion engine (ICE) vehicles as of 2035.

At least 9 European countries had adopted either a target for 100% electric vehicles or a ban on ICE vehicles.

Europe

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Slow public transport ridership recovery

Public transport use plummeted due to the pandemic and **remained below 2019 levels in several countries** as of 2022.

Exponential increase in electric vehicles

Europe is the world's **second largest electric car market** after China.

However, **only 2.4% of passenger cars were electric** as of 2022.

Emerging active mobility trends

Active travel increased. Several cities **reconfigured streets** to enable greater walking and cycling. **Cycling particularly boomed** due to **increased funding for bike lanes and infrastructure**.

Europe

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Global leader in renewables in transport

18% of the global demand for renewables for transport in 2019.

EU 2020 target of 10% renewables in transport achieved, with nearly **half of the EU surpassing the target**.

Minor shocks for freight activities in pandemic

Minor decreases in the share of maritime, rail and inland waterway transport while the **share of road freight increased slightly** from 2011 to 2021.

Ambitious freight decarbonisation

Shipping emissions **will be included in the EU Emissions Trading System.**

FuelEU Maritime aims to **reduce 80% of GHG emission intensity of shipping fuels by 2050.**

Latin America and the Caribbean

33%

of LAC region's total CO_2 emissions come from transport

Despite high motorisation levels, LAC has relatively small impact on global transport CO_2 emissions.

- **8.5% of global transport CO_2 emissions in 2021.***
- **3% growth of transport CO_2 emissions between 2010 and 2021.**

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Latin America and the Caribbean

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High car ownership rate

267 vehicles per 1,000 people (data years from 2016 to 2020).

1.35 times above the global average.

Limited access to public transport remains a challenge

In two-thirds of 218 cities surveyed in the region, just half or less of the population had convenient access to public transport in 2021.

Emerging public transport systems despite ridership loss

New systems operational in 2022 in **Bolivia, Ecuador, Mexico and Panama**.

Latin America and the Caribbean

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Growing priority for cycling in major cities

Major cities like Bogotá, Lima, Mexico City and Rio de Janeiro are **prioritising investments to expand cycle lanes, bicycle parking and shared systems.**

Sustained momentum for integrated transport planning

Sustainable Urban Mobility Plans (**SUMPs**) **continued to expand** in Brazil, Chile, Cuba, Ecuador and Peru.

Rapidly deployment electric bus fleets

Electric buses fleet doubled between 2020 and 2023, operating **in 30 cities across 11 countries** and accounting for **nearly 5% of the regional urban bus fleet**.

Latin America and the Caribbean

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Prevailing development of climate strategies

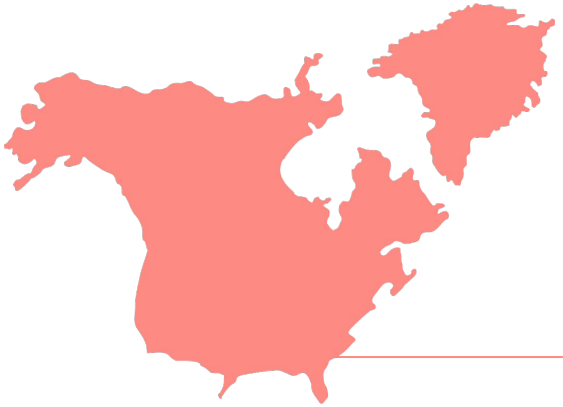
90+% LAC countries submitted second-generation Nationally Determined Contributions; **four include transport emission targets (Belize, Dominica, El Salvador and Grenada)**.

A long way for modal modal shift in freight

Road transport carries **85% of national freight in South America** and **almost 100% of freight in Central America.**

Country efforts to decarbonise freight

Argentina, Brazil, Chile and Mexico launched programmes to improve energy efficiency and decarbonise freight.



North America

34%

of North America's total CO_2 emissions come from transport

Second highest transport CO_2 emitter among regions after Asia.

→ 28% of global transport CO_2 emissions in 2021.

The pandemic changed its overall CO_2 emissions trajectory.

→ 5% increase in transport CO_2 emissions between 2010 and 2019.
→ 7% decline in transport CO_2 emissions between 2019 and 2021.

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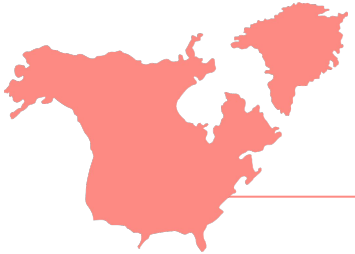

North America

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Soaring road traffic fatalities

Total traffic deaths in the USA significantly increased by 18% from 2019 to 2021. Pedestrian fatalities reached an all-time high.

Around **20% of the people killed in road traffic crashes** in 2021 **were pedestrians or cyclists.**

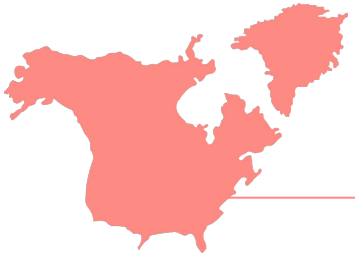
Significant shifts in commuting patterns

In the USA, the number of people **working from home increased three-fold** between 2019 and 2021 induced by the pandemic.

Public transport usage fell at least 30% nationwide in 2021.

Car ownership rate remained at an all-time high

4 times the global average motorisation rate and **18 times higher than Africa's**.



North America

Declining vehicle sales, increasing EV demand

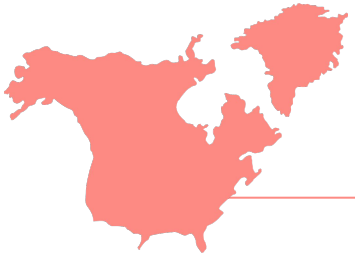
Overall vehicle sales declined in 2022 due to **inflation, energy prices and supply chain issues**.

Battery electric vehicle sales in Canada and USA tripled to account for **more than 6% of total vehicle sales in 2022.**

Public transport ridership rebounding slowly

Biggest drop in metro ridership among world regions in 2020, with passenger numbers **plummeting by 64%**.

In 2022, ridership increased in several USA public transport systems, though it remained **well below pre-pandemic levels.**



North America

Russian war on Ukraine imposed challenges in production

Major bottlenecks for key materials used in industries **in the USA, including transport.**

Source of key materials for electric vehicle batteries: 90% of semiconductor-grade neon, 35% of palladium and 20% of nickel were obtained from Russia.

Transport emissions shifting from passenger to freight transport

USA: Share of emissions from light-duty vehicles fell from 60% to 57% from 2015 to 2020, while that from **medium- and heavy-duty trucks grew from 23% to 26%**.

Canada: **Road transport** was the **major contributor to emission growth until 2019**, but it experienced the **greatest decline in 2020**.

Oceania.

25%

of Oceania's total CO_2 emissions come from transport

The lowest emitter of transport CO_2 emissions among all regions.

→ Less than 2% of global transport CO_2 emissions in 2021.

→ 14% growth of transport CO_2 emissions between 2010 and 2019.

*Excluding international aviation and shipping

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Oceania

Dominance of private vehicles despite high access to public transport

In **Australia**, 87% of **work commutes** in 2021 were by drivers or passengers of a car, motorcycle, or truck. **Only 5% were by walking or cycling and 7% by public transport.**

Australia and New Zealand had the **world's highest share of the urban population with access to public transport** in 2021 (**82.8%**), compared to the global average of 56%.

Rapid growth in car ownership

Largest growth in **Fiji and Micronesia**, with **increases near or above 40%** from 2010 to 2019.

Australia and New Zealand maintained the region's **highest motorisation levels**, **4 times of global average.**

Oceania

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Net zero pledges for maritime sector

Marshall Islands: reduce domestic shipping emissions 40% by 2030; fully decarbonise by 2050.

Pacific Blue Shipping Partnership: to decarbonise shipping and achieve net zero carbon by 2050 (**Fiji, the Marshall Islands, Samoa, Solomon Islands, Tuvalu and Vanuatu**).

Strengthening transport resilience in small-island states

There are **growing investments** to support resilient transport systems in **Fiji, Kiribati, Papua New Guinea, Samoa, Tonga, Tuvalu and Vanuatu**.

Oceania's electric vehicle uptake still lags behind other regions

Although EV sales have grown exponentially in Australia, **Australia and New Zealand's electric passenger cars accounted for less than 1% of global stock.**

Oceania

Severe revenue losses in exports and tourism due to the pandemic

Collapsed tourism was devastating for already vulnerable economies of Pacific islands (e.g. Fiji, Palau, Samoa and Tonga).

Passenger maritime transport fell 18% in the first half of 2020.

Russia's war on Ukraine further threatens the economic recovery as disruptions **affected shipping and freight corridors** for the Pacific islands.

High coverage of public transport in some Small-island states, but some struggle

More than 60% of residents in **Suva (Fuji)** live within 500 metres of a bus route with 20-minute service frequency. In 2015, trips by bus accounted for 46%, much higher than by cars (34%).

Only 20 of **Vanuatu**'s 45 islands have airstrips, and some islands have no road network at all.

Check out other key insights at www.tcc-gsr.com/key-insights

Module 1
Transport Pathways to Reach Global Climate and Sustainability Goals

Module 2
Regional Trends in Transport Demand and Emissions, and Policy Developments

Module 3
Climate and Sustainability Responses in Transport Sub-Sectors and Modes

Module 4
Transport and Energy

Module 5
Enabling Climate and Sustainability Action in Transport: Finance, Capacity and Institutional Support

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5 Modules

- Transport Pathways to Reach Global Climate and Sustainability Goals
- Regional Trends
- Responses in Transport Sub-Sectors and Modes
- Transport and Energy
- Finance, Capacity and Institutional Support

12 Transport Areas

- Integrated transport planning
- Walking
- Cycling
- Public Transport
- Informal Transport
- App-Driven Shared Transport
- Rail
- Road Transport
- Aviation
- Shipping
- Transport Energy Sources
- Vehicle Technologies

5 Spotlights on cross-cutting issues

Global Supply Chains

Health

Small Island Developing States

Capacity Building

Engagement in UNFCCC

30

Country Fact Sheets

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