Oceania Regional Overview

Demographics

Population size:	Population growth:	Urban population share:	Urban population growth:	GDP per capita:	Urban population growth:
41 million	+16%	68%	+16%	USD 40,428	+27%
(2020)	(2010-2020)	(2020)	(2010-2020)	(2019)	(2010-2019)

Sources: See endnote 1 for this section.

Key findings

Demand trends

- Car ownership rates in Australia and New Zealand exceeded the global average by more than four times in 2015, while growth in car ownership in New Zealand between 2005 and 2015 was four times greater than in Australia.
- Between 2005 and 2015, passenger cars accounted for roughly two-thirds of passenger transport activity in the region, while bus and rail accounted for less than 10%. During this period, road freight activity increased 25%, while rail freight activity more than doubled, and coastal shipping fell 10%.
- Electric vehicle uptake has progressed unevenly across Oceania, with the market share of the vehicles lagging behind peer countries and regions.
- For shipping, container port activity fell 2.2% in Oceania in 2019 due to a slowdown in the Australian economy and declining consumer confidence.

Emission trends

- Transport carbon dioxide (CO_2) emissions grew strongly in Oceania in 2019, but overall the region contributes just 2% of global transport emissions.
- Countries in the region showed large variations in transport CO_2 emission trends, with several recording significant increases and others significant reductions.
- Currently 75% of the fossil fuels imported into the Pacific region are for land and maritime transport, underscoring challenges to decarbonising these sub-sectors.

Policy measures

- Major cities in the Oceania region are prioritising renewed investments in urban transport systems.
- Adaptation and resilience measures are increasingly important for transport planning and policy making due to the region's climate vulnerabilities, which range from extreme heat, flooding and high winds in Australia to sea-level rise in small island developing states (SIDS) and other countries.
- Some countries have set ambitious decarbonisation targets in their Long-Term Strategies and Nationally Determined Contributions to implement the Paris Agreement, while other plans remain insufficient.
- In 2019, energy and transport ministers from the Pacific region committed to boosting renewable energy use and decreasing reliance on fossil fuels.
- Six SIDS established the Pacific Blue Shipping Partnership in 2019, setting targets to reduce emissions from shipping 40% by 2030 and to reach full decarbonisation by 2050.
- New walking and cycling measures were adopted and implemented in the region as non-motorised transport activities increased; for example, cycling activity in Auckland, New Zealand grew 8.9% in 2019.

Impacts of the COVID-19 pandemic

- In April 2020, **Australia** reported an 80% decline in daily usage of public transport compared to January of that year.
- Container shipping in the region was hit hard as demand dropped more than 10% in the first half of 2020 due to the pandemic, a sharper decline than in many global regions.

Overview

Oceania's contribution to global transport demand and transport emission growth has remained low compared to other regions.[2] Aviation and shipping are important drivers of transport demand and emissions because the region comprises many dispersed small island nations; as a result, it has been heavily dependent on fossil fuels and is taking steps to reduce this reliance.

Small island developing states (SIDS) across the Pacific region have experienced increasing climate impacts to infrastructure due to rising emissions, with transport assets being among the most valuable and vulnerable. Strategies to decarbonise transport in Oceania involve expanding sustainable aviation and shipping solutions and scaling up electric mobility, with high potential to be powered by ample renewable energy resources.

The COVID-19 pandemic has had severe socio-economic impacts on Oceania. Australia saw strong declines in public transport ridership in the early months of 2020, and SIDS suffered greatly from the collapse of fisheries and tourism *(see Box 1)*.[3]

Demand trends

Car ownership rates in Australia and New Zealand exceeded the global average by more than four times in 2015, while growth in car ownership in New Zealand between 2005 and 2015 was four times greater than in Australia *(see Figures 1 and 2)*.[4]

Following 28% growth in car ownership within a decade, **New Zealand** in 2015 had the second-highest rate of car ownership in the world (after the United States), with cars outnumbering adults.[5] New car sales in **Australia** experienced 31 consecutive months of decline (through August 2020) and were down 18.8% from January to October 2020, compared with 2019.[6]

New vehicle sales

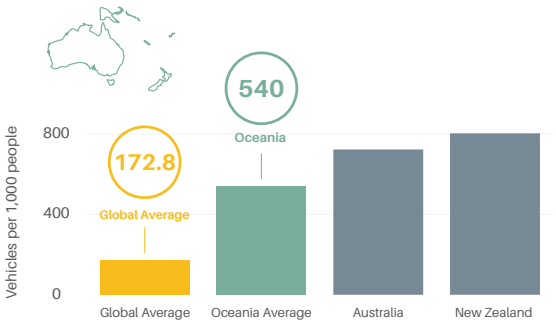
- **6% increase** in total new vehicle sales (2010-2019)
- **2% increase** in new passenger car sales (2010-2019)
- **0.9 million** new passenger cars sold (2019)
- **24% increase** in new commercial vehicle sales (2010-2019)
- **285,000** new commercial vehicles sold (2019)

Sources: See endnote 7 for this section.

Between 2005 and 2015, passenger cars accounted for roughly two-thirds of passenger transport activity in the region, while bus and rail accounted for less than 10%.[8] During this period, road freight activity increased by 25%, while rail freight activity more than doubled, and coastal shipping fell 10%.[9]

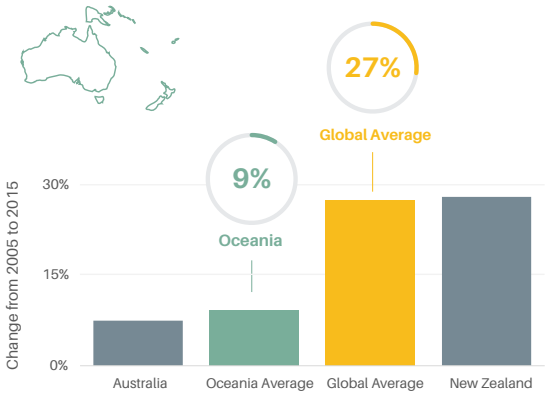
- Passenger transport activity in Australia: up 12% during 2010-2017, to 452.65 billion passenger-kilometres[10]
- Freight transport activity in Australia: up 28% during 2010-2015, to 727.7 billion tonne-kilometres[11]

Figure 1. Car ownership rates per 1,000 people in Oceania, 2015



Source: See endnote 4 for this section.

Figure 2. Growth in car ownership in Oceania, 2005-2015



Source: See endnote 4 for this section.

Electric vehicle uptake has progressed unevenly across Oceania, with the market share of the vehicles lagging behind peer countries and regions. Electrification of transport is at an early stage in the region, and only initial projects and incentives have been introduced. **Pacific Island nations** remain dependent on fossil fuel vehicles but have high potential for rapid electric vehicle uptake due to falling technology costs and growing renewable energy generation.[12]

- Electric vehicle sales in **Australia** tripled in 2019 despite a lack of policy support; however, electric vehicles still only accounted for 0.6% of new vehicle sales that year (compared to a global average of 4.2%), due to a lack of vehicle emission standards and a delayed national electric vehicle policy.[13]
- In **New Zealand**, electric vehicles represented 2.1% of all light-duty vehicle registrations in December 2019, a substantial improvement from just 0.03% in 2013.[14]
- In **Australia**, the first electric buses started operating in Canberra in 2019, as part of a plan to transition the Transport Canberra bus fleet to 100% zero-emission vehicles by 2040.[15]

For shipping, container port activity fell 2.2% in Oceania in 2019 due to a slowdown in the Australian economy and declining consumer confidence.[16] The liner shipping connectivity index (assessing the maritime connectivity for container shipping) also experienced a moderate decline prior to COVID-19.[17]

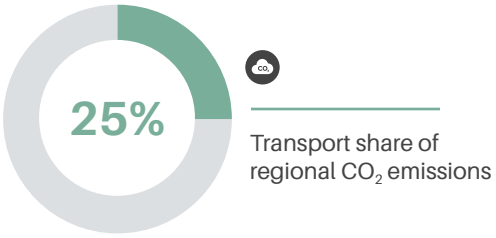
Emission trends

Transport CO_2 emissions grew strongly in Oceania in 2019, but overall the region contributes just 2% of global transport emissions.[18] Oceania has the lowest transport emissions of any global region, although its emissions share is nearly four times greater than its share of the global population (0.54%).[19] This is due in part to high rates of car ownership and use and to an abundance of larger vehicles with low fuel efficiency. In **New Zealand**, emissions of imported vehicles average 180 grams of CO_2 per kilometre, or 50% higher than European counterparts, driven in part by the lack of a national fuel efficiency standard.[20]

Countries in the region showed large variations in transport CO_2 emissions trends, with several recording significant increases and others significant reductions. In 2019, transport CO_2 emission increases in **Australia** and **New Zealand** were on par with the global average, but per capita transport CO_2 emissions in these countries were roughly three to four times the global average *(see Figures 3 and 4)*.[21] In **Papua New Guinea**, per capita transport CO_2 emissions were less than 25% of the global average in 2019, but during 2010-2019 overall transport CO_2 emissions increased at more than three times the global average.[22] Several SIDS (e.g., Kiribati, Solomon Islands, Vanuatu) decreased their transport emissions roughly 20-30% from already low baselines.[23]

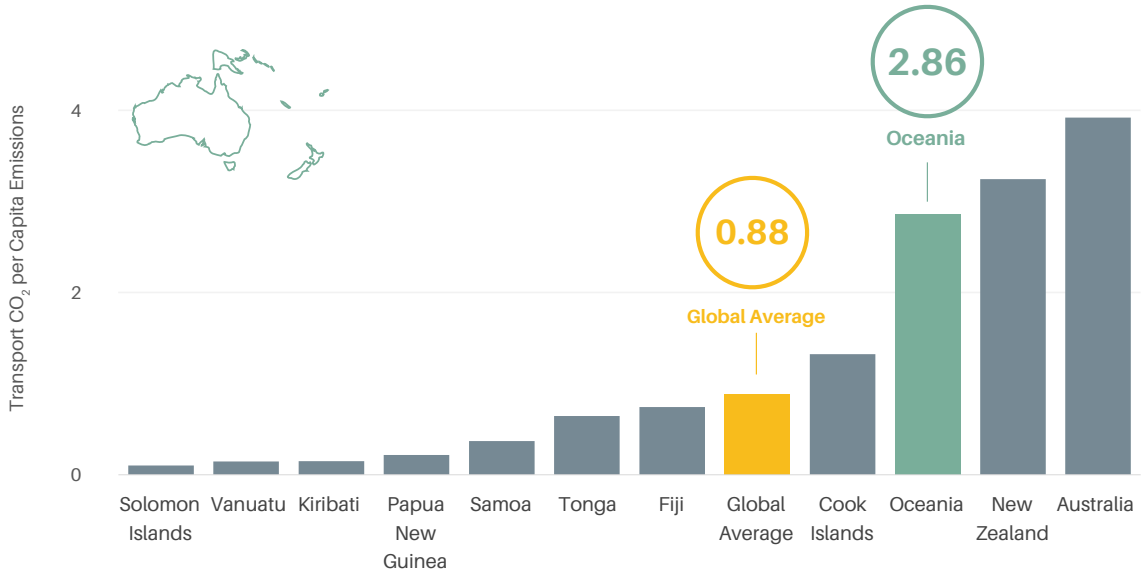
Regional CO_2 trends

- Total transport CO_2 emissions (2019): **117.9 million tonnes**
- Share of global transport CO_2 emissions (2019): **2%**
- Per capita transport CO_2 emissions (2019): **2.86 tonnes**
- Transport CO_2 emissions per USD 10,000 GDP (2019): **0.71 tonnes**



Source: See endnote 24 for this section.

Figure 3. Per capita transport CO_2 emissions in Oceania, 2019



Source: See endnote 21 for this section.

Currently 75% of the fossil fuels imported into the Pacific region are for land and maritime transport, underscoring challenges to decarbonising these sub-sectors.[25] A statement from regional energy and transport ministers in September 2019 affirmed a commitment to 100% renewable energy generation in the Pacific Islands to help counter this prevailing trend, aimed at including measures such as carbon pricing and creating a just transition from fossil fuels.[26]

Policy measures

Although transport emissions in Oceania are the lowest globally, the region's vast geography and multitude of island nations has created a high reliance on aviation and shipping for connectivity, which has translated to high transport costs and decarbonisation challenges. Transport policy measures in Oceania have focused on improving public transport, boosting resilience to climate change, and making shipping more sustainable, and are supported by ambitious emission reduction targets.

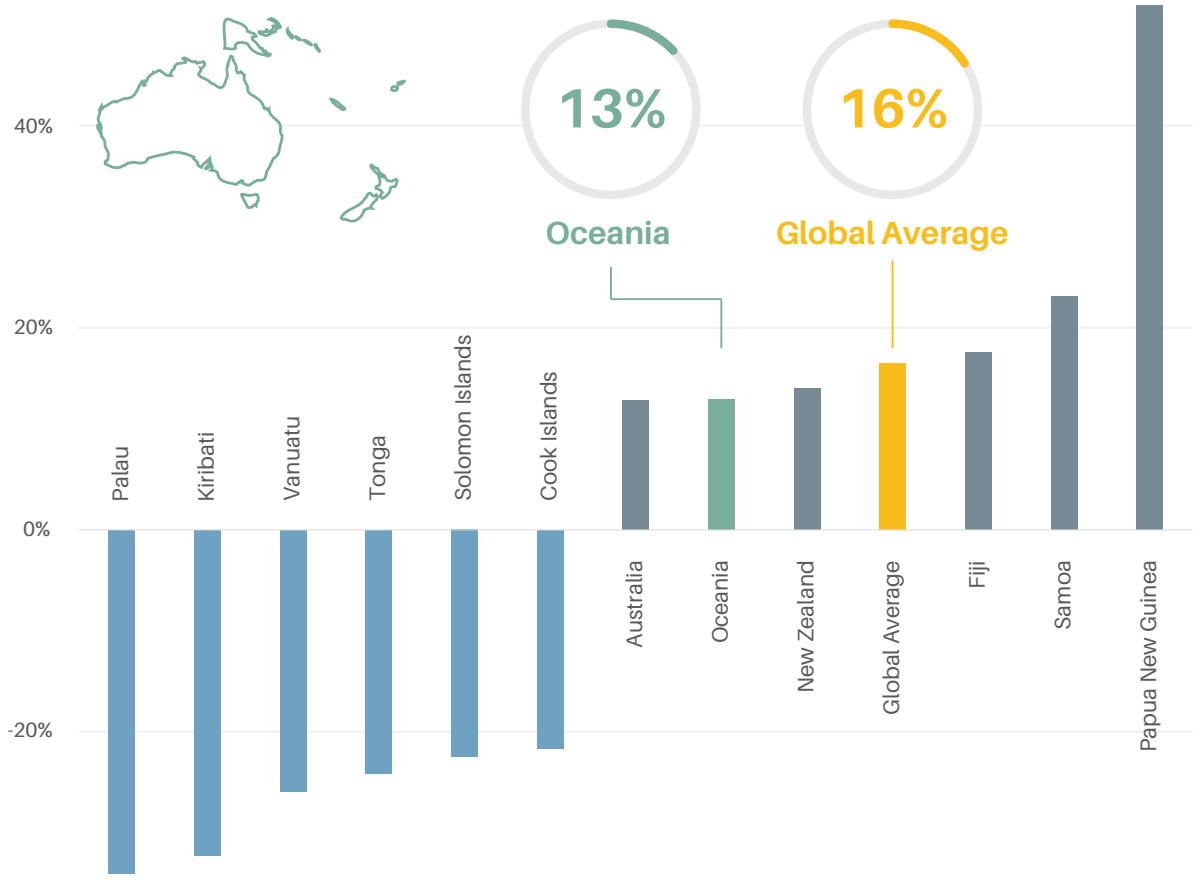
Major cities in the region have prioritised renewed investments in urban transport systems. Cities continued to pursue light rail systems and expand their bus services. **Australia** and **New Zealand** are the only countries in the region with extensive railway infrastructure. Brisbane, Melbourne and Sydney have made historic investments in public transport infrastructure to increase capacity in these metro areas.

- The first underground subway system in Oceania opened in **Sydney** in May 2019, and more lines are under construction, totalling USD 20.8 billion in investments.[27]
- In **Melbourne**, a proposed underground airport rail link would cost an estimated USD 15 billion.[28]
- In 2018, **New Zealand** announced a plan to invest NZD 16.9 billion (USD 12.2 billion) in land transport over three years, with the bulk of the funding marked for road construction, maintenance, and safety projects, and only a quarter dedicated to urban public transport and walking/cycling improvements.[29]

Adaption and resilience measures are increasingly important for transport planning and policy making due to the region's climate vulnerabilities, which range from extreme heat, flooding and high winds in Australia to sea-level rise in SIDS and other countries. The region is working simultaneously to increase the resilience of transport infrastructure while reducing emissions, as many transport networks have experienced disruptions due to storm damage and other impacts.

- In 2019, the World Bank launched the Pacific Climate-Resilient Transport Program, a series of projects focused on building resilient transport infrastructure; the programme focuses on four countries – **Samoa**, **Tonga**, **Tuvalu** and **Vanuatu** – with more expected to join in a second phase.[30]
- The **Asian Development Bank** has invested more than USD 2 billion in Pacific Islands, focusing on resilient transport.[31]

Figure 4. Change in transport CO_2 emissions in Oceania, 2010-2019



Source: See endnote 21 for this section.

Some countries have set ambitious decarbonisation targets in their Long-Term Strategies and Nationally Determined Contributions (NDCs) to implement the Paris Agreement, while other plans remain insufficient. In 2014, the **Marshall Islands** founded the High Ambition Coalition to ensure achievement of the Paris Agreement and has defined a long-term strategy for decarbonisation.[32] **New Zealand**'s target to achieve carbon neutrality by 2050 set the bar higher for the region, but early ambitions were slowed by the COVID-19 pandemic, and the country's NDC (along with that of Australia) has been rated "insufficient" to achieve Paris Agreement targets.[33]

- In 2018, **Fiji** published the Greater Suva Transportation Strategy 2015-2030, which aims to establish a comprehensive and integrated sustainable transport system.[34]
- **New Zealand's** Climate Change Response (Zero Carbon) Amendment Act, adopted in November 2019, established a new national emission reduction target for 2050; in December 2019, the country established an independent Climate Change Commission to monitor progress towards the 2050 target and emission budget.[35]
- The **Marshall Islands** was the only country to explicitly include a target to reduce shipping emissions in its first NDC; in its second NDC, submitted in December 2020, the country raised this target from 27% to 40% by 2030 (below 2010 levels).[36]

In 2019, energy and transport ministers from the Pacific region committed to boosting renewable energy use and decreasing reliance on fossil fuels.[37] Currently countries in Oceania are heavily reliant on imported fossil fuels. There are ample opportunities to increase the use of solar, wind and wave energy to power transport systems, and barriers to uptake are more institutional than technological.[38] However, total renewable power generation represents just 1% of the overall potential.[39]

- **Australia's** first public hydrogen station for charging fuel cell electric vehicles was installed in Canberra in June 2020, with additional stations planned for Melbourne in 2021 as part of the national hydrogen strategy.[40]
- The **Marshall Islands** set a target to reduce transport fuel use 20% by 2020 but did not reach the goal due in part to the lack of a dedicated regulatory body.[41] Overall, 13 SIDS have pledged to reduce transport fuel use 25% by 2033, although the commitment does not differentiate among transport sub-sectors (land, air, maritime).[42]

Six SIDS established the Pacific Blue Shipping Partnership (PBSP) in 2019, setting targets to reduce emissions from shipping 40% by 2030 and to reach full decarbonisation by 2050.[43] Maritime shipping is essential in the region for economic activity and to distribute goods, due to long distances between countries. The Oceania region is central to emerging efforts to reduce shipping impacts.

- Through the PBSP, the governments of **Fiji**, **Marshall Islands**, **Samoa**, **Solomon Islands**, **Tuvalu** and **Vanuatu** have joined forces to call for USD 500 million to increase the sustainable development of maritime transport.[44]
- **Nauru** aims to build a climate-resilient wharf that is expected to decrease wait times for vessels and reduce CO_2 emissions by an estimated 11,000 tonnes annually.[45]
- Several Pacific countries have submitted position papers to the International Maritime Organization to increase ambition in tackling carbon from the shipping sector.[46]

New walking and cycling measures were adopted and implemented in the region as non-motorised transport activities increased; for example, cycling activity in Auckland, New Zealand grew 8.9% in 2019.[47] Prioritisation of walking and cycling in national and city transport plans is facilitating a shift to active transport.

Austroads updated the Pedestrian Planning and Design Guidance for **Australia** and **New Zealand** in 2020 to align with national and international good practices.[48]

In 2019, technical guidelines for cycling infrastructure were adopted in **New Zealand**, and **Queensland**, Australia planned a state cycling network.[49]

Melbourne, Australia adopted restrictions or bans on cars in key streets or city centres to improve walking and cycling.[50]

Box 1. Impacts of the COVID-19 pandemic on transport in Oceania

Major COVID-19 impacts:

- 62% decrease in trips to public transport stations (at lowest point in 2020 versus January 2020 average)
- 42% decline in freight transport activity (below 2019 levels)

The pandemic caused a dramatic reduction in passenger transport demand in Oceania. **In April 2020, Australia reported an 80% decline in daily usage of public transport compared to January of that year.** In response to the pandemic, **Melbourne** fast-tracked 40 kilometres of cycling lanes, and **Sydney** and **Adelaide** disabled pedestrian push buttons and introduced automated pedestrian phases. By June 2020, **New Zealand** announced a full re-opening, including unrestricted public transport and travel across the country.

SIDS were at high risk of socio-economic impacts from the decline in travel and tourism, and they shifted the focus of their recovery efforts to resilience measures. Although road passenger rates had returned to pre-COVID levels as of early 2021, public transport growth is expected to take a number of years to return to previous levels.

Container shipping in the region was hit hard as demand dropped more than 10% in the first half of 2020 due to the pandemic, a sharper decline than in many global regions. Major ports in Oceania such as Melbourne and Sydney experienced more pronounced COVID-19 impacts than many Asian ports. From January to June 2020, global container ship calls were down 5.8% compared to 2019, and declines in Australasia (Australia, New Zealand and some neighbouring islands) and Oceania (down 12.4%) were exceeded only by those in Sub-Saharan Africa (down 12.7%). Passenger ship calls in Australasia and Oceania dropped 7% in the first quarter of 2020, and by the second quarter demand had fallen more than 35% in the region.

Source: See endnote 3 for this section.

In Practice: Additional Policy Responses

Shift measures

Public transport

- In 2019, **Sydney**, Australia added new light rail transit lines and extensions to its public transport service, and Canberra launched a 12-kilometre light rail line.[51]
- A new bus rapid transit system was launched in 2019 in Noumea, **New Caledonia** with a single 13.3-kilometre corridor.[52]

Railways

- In its 2020 budget, the **New Zealand** government allocated NZD 1.2 billion (USD 718 million) to rail in an effort to ease the recession brought by COVID-19; funding includes investment in new freight wagons and locomotives, track and support infrastructure, and portside infrastructure.[53]

Walking and cycling

- **Melbourne**, Australia implemented the pedestrianisation of two blocks in 2019 in an effort to curb cars in the city centre.[54]
- The Asian Development Bank is financing several road improvement projects – including a focus on increasing pedestrian and road passenger safety – in **Fiji**, **Papua New Guinea**, **Samoa**, **Solomon Islands**, **Timor-Leste**, **Tonga** and **Vanuatu**.[55]

Improve measures

E-mobility

- In 2019, **New Zealand** announced subsidies and CO_2 tariffs in support of electric vehicles, to come into effect in 2021.[56]
- **Wellington**, New Zealand planned to expand its fleet of electric buses from 10 in 2020 to 108 by 2023.[57]
- In 2018, the Productivity Commission of **New Zealand** recommended a scheme in which vehicle importers would pay a fee or receive a rebate depending on the emission intensity of the vehicle.[58] The country also announced an exemption of electric vehicle owners from road user charges to support its electric vehicle target.[59]

Fuel economy

- The **New Zealand** Transport Ministry's proposed Clean Car Standard, introduced in 2021, is designed to lower the price of electric and other efficient vehicles, while raising fuel efficiency requirements for imported vehicles.[60]

Annex: Methodological Note

Data usage

Time period for data:
The report strives to utilise the most recent publicly available data and information just prior to the time of publication (as of 31 May 2021). The figures in the report were developed between September and December 2020 using the most recent data available.

Secondary data:
SLOCAT relies on secondary data and information collected and provided by SLOCAT partners and other entities and does not make use of any internal modelling tools.

Data on sustainable mobility: A call to action

The report benefits directly from data collected by a wide range of stakeholders working in different areas of transport.

Data are important for providing a comprehensive picture of the status of sustainable, low carbon transport and are essential for both policy and investment decision making. In these times of change, it is critical to upgrade data and policy collection and interpretation capacities to better understand progress and the hurdles that must be addressed.

The data limitations mentioned below are not new. Obtaining regular, reliable and public data across regions and transport modes remains an outstanding issue. When an increasing number of stakeholders are collecting data and policy information, more and better open-access data and capacity building efforts for data interpretation are supported by many multi-stakeholder partnerships in the sustainable, low carbon movement.

If you share our passion for open-access data and knowledge towards greater impact on policy and investment decision making worldwide and/or would like to contribute data or knowledge to our collective efforts on this report, **please reach out to the research team in the SLOCAT Secretariat at tcc-gsr@slocatpartnership.org**.

Specific data used in this report

Data on emissions

The data in this edition of the report point to the direct carbon emissions from transport activity; they do not cover the indirect emissions and land-use impacts associated with certain modes of transport. The report primarily utilises CO_2 emission data compiled in the Emissions Database for Global Atmospheric Research (EDGAR) from the Joint Research Centre of the European Commission, as this represents the most recent, comprehensive dataset on transport CO_2 emissions. However, this global dataset does not convey in full detail the unique situations of individual countries.

EDGAR provides estimates for fossil CO_2 emissions from all anthropogenic activities with the exception of land use, land-use change, forestry and the large-scale burning of biomass. The main activities covered are CO_2 emissions emitted by the power sector (i.e., power and heat genertion plants), by other industrial combustion (i.e., combustion for industrial manufacturing and fuel production) and by buildings and other activities such as industrial process emissions, agricultural soils and waste. Transport activities covered within EDGAR include road transport, non-road transport, domestic aviation, and inland waterways on a country level, as well as international aviation and shipping.[1]

For the world, regions and countries, the CO_2 emission data (provided by EDGAR) span through 2019. In a few places in the report, CO_2 data for 2020 are shown to illustrate the impact of the COVID-19 pandemic; however, these data are based on a different methodology than the EDGAR dataset and should not be compared directly with the data from previous years.

The latest CO_2 emission data for individual transport modes are for 2018 and have been compiled only at the global level. For passenger and freight transport, the data on global CO_2 emissions are for 2017, as this is the latest year with robust data. Data on passenger activity (passenger-kilometres) and freight activity (tonne-kilometres) – provided mainly in the country fact sheets – are based on the latest available year, as indicated in the report analysis.

Information on greenhouse gas emissions – provided in CO_2 equivalent (CO_{2eq}) – include not only CO_2 but also methane, nitrous oxide, and industrial gases such as hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride.[2] These data are less up-to-date. As of 31 May 2021, data on greenhouse gas emissions were not readily available for the period 2019-2020. In some cases, additional data sources were used to provide detailed information about other climate pollutants besides CO_2.

All data on CO_2 and other greenhouse gas emissions, as well as CO_{2eq}, are provided in metric tonnes.

Data on car ownership

Information on car ownership rates is based on a global dataset from the International Organization of Motor Vehicle Manufacturers (OICA), with the latest release (as of 31 May 2021) dating from 2015.[3] Although newer information is available for some individual countries, using these data would hinder accurate global comparisons. Data on passenger and commercial vehicle sales were available only up to 2019.

Policy landscape data

The policy-related information presented in this report is not intended to be comprehensive. The data for the policy landscape indicators provided in Section 3 were gathered through desk research unless otherwise indicated. Barriers to accessing such information include language and limited availability of information through online media (e.g., websites, press releases and news articles).

Data in country fact sheets

Information in the fact sheets is based on desk research and on contributions from the national focal points. The data were collected to the best of the authors' knowledge and based on data availability, and thus may not be complete or show the most recent status. When no information was available for a given indicator, the term "Not available" is used.

Data gaps

Major data gaps exist in areas where there is no globally accepted data collection methodology. For example, the mapping of cycling and walking infrastructure is not currently done in all regions. Also, the modal share can be surveyed through different methods, leading to inconsistencies in available data. In addition, data on paratransit (informal transport), a predominant form of transport in many parts of the world, are largely lacking. This results in an incomplete picture of the impact of transport on climate change and sustainable development.

Methodological approach

Countries and regions

The report follows the M49 Standard of the United Nations Statistics Division.[4] In total, 196 countries have official United Nations membership and are also party to the United Nations Framework Convention on Climate Change. The available data have been put in a common structure for the United Nations member countries, regions and income groups to enable a consistent assessment. Income groups are based on the World Bank's classification of 2019.[5]

Economic calculations

The per capita and gross domestic product (GDP) calculations are based on the United Nations World Population Prospects 2019 and on World Bank GDP data using constant 2010 USD.[6]

Spatial and temporal scales

The geographic scale (global, national, city-level, etc.) as well as time scale (annual, monthly, daily) used in this report depends largely on the available dataset, as noted in the relevant figures and text. The detailed data forming the basis of the calculations and analysis are provided in the SLOCAT Transport Knowledge Base.[7]

Criteria for selection

The report covers policies, targets, emission reductions (achieved or envisioned) and market measures. To merit inclusion in the analysis, the policies, projects and trends must have been announced or completed between 2018 and 2020. Significant developments from January through May 2021 were included when deemed relevant, with the understanding that the next edition of the *Transport and Climate Change Global Status Report* will cover a period starting in 2021.

Pre- and post-COVID-19 pandemic trends

The year 2020 was pivotal for the world, and the COVID-19 pandemic has had substantial impacts on many of the transport trends monitored in this report. This edition attempts to differentiate between long-term trends and impacts due to the pandemic. To the extent possible, the analysis notes "pre-pandemic" (up to the end of 2019 or latest by February 2020) and "during pandemic" trends (starting in March 2020 until the end of 2020), as in some cases the pandemic led to reversals in long-term trends, at least for a specific period of time. In each section, a box describes the impacts that the pandemic has had on specific regions and sub-sectors.

Assembling the report

Global Strategy Team

This edition of the report was guided by a global strategy team consisting of 20 experts in the field who provided inputs over the span of six meetings between September 2019 and October 2020. Additionally, small group consultations were organised in February 2021, following the peer review process.

Authors and contributors

The report was collaboratively drafted by 22 authors and contributors from 16 organisations, led by the SLOCAT Secretariat. This includes additions and high-level inputs from the copy editor and from the special advisor who also co-authored the Executive Summary. Authors researched and compiled relevant facts and figures for the five sections of the report, including the Focus Features, with supporting review and inputs from several other organisations.

Peer review: A peer review process was carried out from 18 December 2020 to 20 January 2021 with 1,700 comments received from 74 reviewers. Each comment was individually reviewed by the SLOCAT Secretariat and considered in finalising the report.

National focal points: The report benefited from the contributions of voluntary national focal points, or experts from various regions and countries who have been essential to overcome language and information barriers. A public call for participation to provide information on policies and data resulted in several hundred initial registrations. Out of these registrations, 78 national focal points provided inputs through a first survey from 24 January to 3 February 2020; and through a second survey (focused on the country fact sheets) from 6 to 30 August 2020. All national focal points that contributed to the surveys are listed in the Acknowledgements.

Endnotes

1.7 Oceania Regional Overview

1 United Nations (UN) (2019), "2019 Revision of World Population Prospects", https://population.un.org/wpp (accessed 28 September 2020); UN (2018), "World Urbanization Prospects 2018", https://population.un.org/wup (accessed 28 September 2020); GDP growth is in constant 2010 USD, from World Bank, "GDP (constant 2010 US$)", https://data.worldbank.org/indicator/NY.GDP.MKTP.KD (accessed 28 September 2020).

2 M. Crippa et al. (2020), *Fossil CO2 Emissions of All World Countries, JRC Science for Policy Report,* Publications Office of the European Union, Luxembourg, https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/fossil-co2-emissions-all-world-countries-2020-report.

3 Box based on the following sources: 62% decrease, compared to average mobility between 3 January and 6 February 2020, calculated from Google (2021), "COVID-19 Community Mobility Reports", https://www.google.com/covid19/mobility (accessed 27 April 2021); International Transport Forum (2020), *How Badly Will the Coronavirus Crisis Hit Global Freight?* OECD Publishing, Paris, https://www.itf-oecd.org/sites/default/files/global-freight-covid-19.pdf; Australia from WSP (2020), "COVID-19 & public transport: From response to recovery", 28 April, https://www.wsp.com/en-AU/insights/covid-19-and-public-transport-from-response-to-recovery; Wikipedia (2021), "Sydney Metro", https://en.wikipedia.org/wiki/Sydney_Metro (accessed 28 April 2021); International Civil Aviation Organization, "Economic impacts of COVID-19 on civil aviation", https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx (accessed 27 April 2021); City of Melbourne, "Fast-tracking 40 kilometres of new bike lanes in Melbourne", 15 June, https://www.melbourne.vic.gov.au/news-and-media/Pages/Fast-tracking-40-kilometres-of-new-bike-lanes-in-Melbourne.aspx; POLIS (2020), "Australia launches automated pedestrian crossings to reduce virus spread", 4 January, https://www.polisnetwork.eu/article/australia-launches-automated-pedestrian-crossings-to-reduce-virus-spread; D. Cave (2020), "New Zealand declares coronavirus eliminated, lifting lockdown", *New York Times*, 8 June, https://www.nytimes.com/2020/06/08/world/australia/new-zealand-coronavirus-ardern.html; A. Chastanet, T. Déau and T. Toyota (2020), "How small island developing states can survive the pandemic", World Economic Forum, 21 May, https://www.weforum.org/agenda/2020/05/small-island-developing-states-sids-saint-lucia-covid-19-coronavirus-pandemic-development-finance-country-roadmaps; A. A. Pallis and S. N. Sirimanne (2020), *COVID-19 and maritime transport: Impact and responses,* United Nations Conference on Trade and Development (UNCTAD), Geneva, https://unctad.org/system/files/official-document/dtltlbinf2020d1_en.pdf.

4 Figures 1 and 2 from SLOCAT Partnership on Sustainable Low Carbon Transport calculations, based on International Organization of Motor Vehicle Manufacturers (OICA) (2020), "Vehicles in use", https://www.oica.net/category/vehicles-in-use (accessed 27 April 2021), and on UN (2019), op. cit. note 1.

5 SLOCAT calculations based on OICA, op. cit. note 4; R. McLachlan (2019), "New Zealand poised to introduce clean car standards and incentives to cut emissions", The Conversation, 31 July, https://theconversation.com/new-zealand-poised-to-introduce-clean-car-standards-and-incentives-to-cut-emissions-120896.

6 G. Bulmer (2020), "November new car sales reverses 31-month downwards trend", Ravo Living, 11 December, https://www.racq.com.au/Living/Articles/November-new-car-sales-reverses-31-month-downwards-trend.

7 SLOCAT calculations based on OICA (2020), "Global sales statistics 2019-2020", https://www.oica.net/category/sales-statistics (accessed 15 April 2021).

8 B. Lee et al. (2019), *Australian Infrastructure Statistics Yearbook 2019,* Commonwealth of Australia, Canberra, https://www.bitre.gov.au/sites/default/files/documents/BITRE_2019_YEARBOOK.pdf.

9 Ibid.

10 Ibid.

11 Ibid.

12 APEC Energy Working Group (2020), *Roadmap for the Integration of Sustainable Energy and Transport in Small Islands,* SD Strategies GmbH, Berlin, https://www.apec.org/-/media/APEC/Publications/2020/11/Roadmap-for-the-Integration-of-Sustainable-Energy-and-Transport-in-Small-Islands/220_EWG_Roadmap-for-the-Integration-of-Sustainable-Energy-Transport-in-Small-Islands.pdf.

13 G. Readfearn (2020), "Electric vehicle sales triple in Australia despite lack of government support", *The Guardian* (UK), 19 August, https://www.theguardian.com/environment/2020/aug/19/electric-vehicle-sales-triple-in-australia-despite-lack-of-government-support; P. Mehra (2021), "Electric car revolution fails to spark for Australia consumers", Nikkei Asia, 28 February, https://asia.nikkei.com/Business/Automobiles/Electric-car-revolution-fails-to-spark-for-Australia-consumers.

14 International Energy Agency (2020), *Global EV Outlook 2020,* Paris, https://www.iea.org/reports/global-ev-outlook-2020.

15 B. Schmidt (2019), "ACT introduces first electric bus on path to zero transport emissions", The Driven, 12 November, https://thedriven.io/2019/11/12/act-introduces-first-electric-bus-on-path-to-zero-transport-emissions.

16 W. J. R. Asariotis et al. (2020), *Review of Maritime Transport 2020,* UNCTAD, Geneva, https://unctad.org/system/files/official-document/rmt2020_en.pdf.

17 UNCTAD (2020), "UNCTAD's Review of Maritime Transport 2020: Highlights and figures on Asia and the Pacific", 12 November, https://unctad.org/press-material/unctads-review-maritime-transport-2020-highlights-and-figures-asia-and-pacific.

18 SLOCAT calculations based on Crippa et al., op. cit. note 2

19 Ibid.

20 McLachlan, op. cit. note 5.

21 Figure 3 from SLOCAT calculations based on Crippa et al., op. cit. note 2, and on UN (2019), op. cit. note 1. Figure 4 from SLOCAT calculations based on Crippa et al., op. cit. note 2.

22 Ibid.

23 Ibid.

24 SLOCAT calculations based on Crippa et al., op. cit. note 2.

25 The Pacific Community (2019), "Pacific Energy and Transport Ministers' commit to renewables and shift away from fossil fuels", 25 September, https://www.spc.int/updates/news/media-release/2019/09/pacific-energy-and-transport-ministers-commit-to-renewables-and.

26 The Pacific Community (2019), *Fourth Pacific Regional Energy and Transport Minister's Meeting,* Apia, https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/a9/a9cb5b2fbed4b66a9f2ac346ef1b8876.pdf.

27 Wikipedia, op. cit. note 3; Australia and New Zealand Infrastructure Pipeline, "Project: Sydney Metro", https://infrastructurepipeline.org/project/sydney-metro (accessed 28 April 2021).

28 L. Cheng (2018), "Private sector proposal for $15 billion Melbourne airport rail link", Architecture AU, 18 September, https://architectureau.com/articles/private-sector-proposal-for-15-billion-melbourne-airport-rail-link.

29 Radio New Zealand (2018), "Government to invest $16.9 billion in transport over next three years", Radio New Zealand, 31 August, https://www.rnz.co.nz/news/political/365384/government-to-invest-16-point-9-billion-in-transport-over-next-three-years.

30 C. Ashleigh (2019), "In small island states, resilient transport is providing a lifeline against disasters", World Bank, 11 June, https://www.worldbank.org/en/news/feature/2019/06/11/in-small-island-states-resilient-transport-is-providing-a-lifeline-against-disasters.

31 Radio New Zealand (2020), "ADB to spend $US2b on Pacific energy and transport projects", 28 January, https://www.rnz.co.nz/international/pacific-news/408324/adb-to-spend-us2b-on-pacific-energy-and-transport-projects.

32 United Nations Framework Convention on Climate Change (UNFCCC), "Communication of long-term strategies ", https://unfccc.int/process/the-paris-agreement/long-term-strategies (accessed 28 April 2021).

33 D. Hall (2020), "New Zealand's COVID-19 budget delivers on one crisis, but largely leaves climate change for another day", Down to Earth, 18 May, https://www.downtoearth.org.in/blog/governance/new-zealand-s-covid-19-budget-delivers-on-one-crisis-but-largely-leaves-climate-change-for-another-day-71201; Climate Action Tracker (2020), "New Zealand", 30 July, https://climateactiontracker.org/countries/new-zealand; Climate Action Tracker (2020), "Australia", 22 September, https://climateactiontracker.org/countries/australia.

34 Fiji Roads Authority (2014), *Greater Suva Transportation Strategy,* Suva, https://www.fijiroads.org/wp-content/uploads/2018/11/GSTS-REPORT-2015-2030.pdf.

35 Ministry for the Environment, New Zealand (2021), "Climate Change Response (Zero Carbon) Amendment Act 2019", April, https://environment.govt.nz/acts-and-regulations/acts/climate-change-response-amendment-act-2019; Ministry for the Environment, New Zealand, "Climate change", https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change (accessed 28 April 2021).

36 UNFCCC (2020), *Update Communication on the Marshall Islands Paris Agreement NDC,* Bonn, https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Marshall%20Islands%20Second/RMI%20NDC-UpdateUPDATED_01.20.2021.pdf.

37 The Pacific Community (2019), op. cit. note 25.

38 P. Nuttall et al. (2014), "A review of sustainable sea-transport for Oceania: Providing context for renewable energy shipping for the Pacific", *Marine Policy,* Vol. 43, Pergamon, pp. 283-87, https://www.sciencedirect.com/science/article/abs/pii/S0308597X13001358.

39 International Renewable Energy Agency (2020), *Energy Transformation Oceania,* Abu Dhabi, https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Apr/IRENA_GRO_R09_Oceania.pdf.

40 J. Sampson (2020), "Australia's first public hydrogen station nears completion", H2 View, 8 June, https://www.h2-view.com/story/australias-first-public-hydrogen-station-nears-completion; Australian Renewable Energy Agency (2020), "Melbourne's first hydrogen refuelling station takes shape", 2 November, https://arena.gov.au/blog/melbournes-first-hydrogen-refuelling-station-takes-shape; COAG Energy Council (2019), *Australia's National Hydrogen Strategy,* Commonwealth of Australia, https://www.industry.gov.au/sites/default/files/2019-11/australias-national-hydrogen-strategy.pdf.

41 F. Mersmann et al. (2018), *Implementation of Nationally Determined Contributions – Republic of Marshall Islands Country Report,* Environmental Research of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2018-11-01_climate-change_27-2018_country-report-marshall-islands.pdf.

42 Nuttall et al., op. cit. note 38.

43 B. Doherty (2019), "Pacific islands seek $500m to make ocean's shipping zero carbon", *The Guardian* (UK), 24 September, https://www.theguardian.com/environment/2019/sep/24/pacific-islands-seek-500m-ocean-shipping-zero-carbon.

44 Ibid.

45 Asian Development Bank (ADB) (2019), *Pacific Transport Update 2019*, Manila, https://www.adb.org/sites/default/files/institutional-document/543681/pacific-transport-2019.pdf.

46 Y. Wang (2017), "Pacific leads High Ambition Coalition for shipping emission reduction", SLOCAT, 2 May, https://slocat.net/1830-2.

47 B. Flahive (2019), "Auckland cycling numbers grow by 8.9 per cent in a year", Stuff Limited, 20 July, https://www.stuff.co.nz/national/health/114385864/auckland-cycling-numbers-grow-by-89-per-cent-in-a-year.

48 J. Ward et al. (2020), *Updating Austroads Pedestrian Planning and Design Guidance in Line with International Best Practice*, Austroads Ltd, Sydney, https://austroads.com.au/publications/active-travel/ap-r639-20/media/AP-R639-20_Updating_Austroads_Pedestrian_Planning_and_Design_Guidance_in_line_with_International_Best_Practice.pdf.

49 Waka Kotahi NZ Transport Agency, "Designing a cycling facility", https://www.nzta.govt.nz/walking-cycling-and-public-transport/cycling/cycling-standards-and-guidance/cycling-network-guidance/designing-a-cycle-facility (accessed 27 April 2021); Queensland Department of Transport and Main Roads (2020), "Principal Cycle Network Plans", 24 November, https://www.tmr.qld.gov.au/Travel-and-transport/Cycling/Principal-Cycle-Network-Plans.

50 C. Wahlquist (2019), "Walking into the future: Melbourne backs plan to curb cars in the CBD", *The Guardian* (UK), 22 May, https://www.theguardian.com/australia-news/2019/may/22/walking-into-the-future-melbourne-backs-plan-to-curb-cars-in-the-cbd.

51 M. Carter (2019), "Sydney CBD and South East light rail opens", International Railway Journal, 16 December, https://www.railjournal.com/news/sydney-cbd-and-south-east-light-rail-opens; G. Hitch (2019), "Canberra light rail finally opens its doors to the public", *ABC*, 19 April, https://www.abc.net.au/news/2019-04-20/canberra-light-rail-goes-live/11033076.

52 Global BRT Data, "Nouméa", https://brtdata.org/location/oceania/new_caledonia/noumea (accessed 27 April 2021).

53 D. Burroughs (2020), "New Zealand allocates $NZ 1.2bn for rail development", International Railway Journal, 14 May, https://www.railjournal.com/financial/new-zealand-allocates-nz-1-2bn-for-rail-development.

54 Wahlquist, op. cit. note 50.

55 ADB, op. cit. note 45.

56 Electrive.com (2019), "New Zealand plans BEV subsidies & CO2 tariffs", 9 July, https://www.electrive.com/2019/07/09/new-zealand-plans-bev-subsidies-co2-tariffs.

57 Sustainable Bus (2020), "Wellington (NZ) bus fleet to reach a 22% EV share. 98 e-buses ordered", 6 July, https://www.sustainable-bus.com/news/wellington-electric-buses-new-zealand-metlink.

58 H. Cooke (2018), "Productivity Commission suggests 'feebate' for all cars and even more trees to fight climate change", Stuff, 4 September, https://www.stuff.co.nz/national/politics/106793383/productivity-commission-suggests-feebate-for-all-cars-and-even-more-trees-to-fight-climate-change.

59 G. Parkinson (2019), "New Zealand tipped to reach 100% electric vehicle sales by 2030", The Driven, 12 April, https://thedriven.io/2019/04/12/new-zealand-tipped-to-reach-100-electric-vehicle-sales-by-2030.

60 New Zealand Ministry of Transport (2021), *The Clean Car Standard*, Auckland, https://www.transport.govt.nz/assets/Uploads/Cabinet/TheCleanCarStandard.pdf; J. Ardern, M. Wood and J. Shaw (2021), "Government moves on climate promises", New Zealand Government, 28 January https://www.beehive.govt.nz/release/government-moves-climate-promises.

Annex: Methodological Note

1 M. Crippa et al. (2020), *Fossil CO2 Emissions of All World Countries, JRC Science for Policy Report*, Publications Office of the European Union, Luxembourg, https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/fossil-co2-emissions-all-world-countries-2020-report.

2 US Energy Information Administration (2020), "Energy and the environment explained: Greenhouse gases," https://www.eia.gov/energyexplained/energy-and-the-environment/greenhouse-gases.php (accessed 14 April 2021).

3 International Organization of Motor Vehicle Manufacturers (OICA), "Definitions", https://www.oica.net/wp-content/uploads/DEFINITIONS-VEHICLE-IN-USE1.pdf (accessed 20 May 2021).

4 United Nations Statistics Division, "Standard country or area codes for statistical use (M49)", https://unstats.un.org/unsd/methodology/m49 (accessed 20 May 2021).

5 World Bank (2021), "World Bank Country and Lending Groups", https://datahelpdesk.worldbank.org/knowledgebase/articles/906519 (accessed 20 May 2021).

6 United Nations (2019), "World Population Prospects 2019", https://population.un.org/wpp (accessed 20 May 2021); World Bank, "GDP (constant 2010 US$)", http://data.worldbank.org/indicator/NY.GDP.MKTP.KD (accessed 20 May 2021).

7 SLOCAT (2021), "Transport Knowledge Base", https://slocat.net/our-work/knowledge-and-research/trakb (accessed 20 May 2021).

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