The Pacific Baseline:

Transport and the Decade of Sustainable Transport

Asian Transport Observatory

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The Pacific Baseline: Transport and the Decade of Sustainable Transport

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Contributors: Sudhir Gota, Alvin Mejia, Mel Eden, Adwait Limaye, Benjamin Soco, Aaron Salang

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Executive Summary

Transport is fundamental to survival in the Pacific region. The fourteen island nations examined in this report are dispersed across an ocean larger than any continent. The majority of goods are delivered by ship, with only limited flight connectivity. Road networks facilitate the remaining transport needs. Transport disruptions have significant social and economic penalties.

For much of the implementation of the Sustainable Development Goals, transport was not assigned its own goal. While it supports many of the seventeen goals, the lack of a dedicated goal has led to less funding, coordination, and accountability in the sector. In 2023, the United Nations General Assembly responded by announcing a Decade of Sustainable Transport from 2026 to 2035. This initiative is especially important for Small Island Developing States.

This report establishes a baseline for the Decade of Sustainable Transport in the Pacific. It monitors over 40 indicators across seven key areas and, where feasible, compares the 14 countries with Asia-Pacific and global averages. The region shows considerable diversity; Papua New Guinea accounts for more than 79% of the population, while several countries have populations below 200,000. Kiribati, Solomon Islands, and Tuvalu are classified as Least Developed Countries.

Conventional transport metrics often assume dense road networks, large cities, and growing vehicle fleets. In the Pacific, maritime and air transport are more important. This report uses standard indicators where suitable and substitutes Pacific-relevant metrics where necessary. In many cases, data gaps themselves are a key finding. The following sections examine each dimension of the baseline and synthesize the principal findings.

Ensure access to sustainable transport for all

Transport access in the Pacific is highly variable and, in some cases, severely constrained. The Rural Access Index measures the proportion of rural residents living within two kilometers of an all-season road. In the Pacific, this figure ranges from 41 to 97%, averaging 69%, compared to 84% in the rest of Asia-Pacific. Tonga achieves 97%, placing it among the top performers relative to its income level. In contrast, Papua New Guinea, at 41%, is at the lower end of the spectrum. Given Papua New Guinea's substantial rural population, this means millions of individuals lack reliable access to all-weather roads.

Access to urban transport is even more limited. Across nine cities, the proportion of residents with access ranges from 4 to 64%, with an average of 23%. Suva demonstrates the highest level of access at nearly 64%, attributable to its dense city form and bus network. However, the registered bus fleet declined from 751 vehicles in 2019 to 608 in 2025. Access to essential services follows a similar trend. On average, 57% of residents live within five kilometers of a school. In contrast, in Papua New Guinea, this proportion is nearly zero.

Geography is a structural driver, while policy, financing, maintenance, and service delivery determine how far the gap can be narrowed. In Solomon Islands and Vanuatu, more than 70% of the population resides outside the main island. Honiara possesses the most fragmented street network in the Asia-Pacific region. Dispersed settlements increase the cost of connectivity and preclude the economies of scale available to larger countries. This pattern recurs throughout the report.

Enhance efficiency and promote sustainable connectivity and logistics

The Pacific region is distinct in terms of connectivity, with structural distance posing a constant challenge. On the Liner Shipping Connectivity Index, Pacific countries score between 15 and 50, compared to an Asia-Pacific average of 246. No Pacific port ranks within the global top 200; Port Moresby, the highest, is ranked 248. Several countries have experienced declining scores over the past decade, with Solomon Islands decreasing from 38 to 31 and Fiji from 49 to 42. Limited trade volumes result in fewer direct shipping services, increased dependence on transshipment hubs, and less predictable transit times.

Freight performance exhibits similar constraints. On the Sustainable Freight Transport Index, economic gaps are pronounced, and higher income does not necessarily correspond to better performance. Environmentally, all countries cluster near the lower end of the index, constrained by dependence on fossil fuels and limited modal options.

The major bottleneck occurs not at sea but at the port. In Vanuatu, vessel turnaround time is approximately 1 day, whereas imported cargo remains in port for about 7 days. The primary cause of delay is administrative, involving customs, clearance, and inter-agency coordination rather than shipping itself. In Fiji and the Solomon Islands, cargo waits about 3 days, and in Papua New Guinea, about 2.5 days. These delays add to higher costs for fuel, food, and construction materials, which are necessary for island households.

Air connectivity has not rebounded. The number of trips per person declined from 0.68 in 2019 to 0.59 in 2024, despite a recovery in the rest of Asia-Pacific. Projections indicate demand will reach only 0.95 trips per person by 2034, compared to 1.65 for the wider region. Low passenger volumes limit the viability of many routes, and a single canceled flight can isolate critical services such as clinics. In small-island contexts, transport reliability functions as a key social indicator.

Advance low- or zero-carbon, resilient, and environmentally sound transport systems

The Pacific's situation is particularly distinctive and vulnerable with respect to emissions. Transport accounts for approximately 25% of national greenhouse gas emissions across the region, compared with 8 to 10% in the rest of Asia-Pacific. In most Pacific countries, transport is the largest single source of emissions and is almost entirely dependent on imported oil. In the Solomon Islands, oil products account for all transport energy and about 38% of total national energy use. Transport energy demand nearly doubled between 2000 and 2023, while the fuel mix remained unchanged.

Trends in efficiency are positive. Transport emissions intensity decreased from 104 grams of CO_2 per dollar of GDP in 2010 to 47 in 2023, representing an annual reduction of approximately 6% —the fastest improvement among Asia-Pacific subregions. Economic output more than tripled during this period, while both air pollution and black carbon emissions declined. However, this progress remains fragile and is largely attributable to improvements at the vehicle level. Disaggregated data show divergent trends: Fiji reduced its intensity from approximately 115 to 48, Papua New Guinea from 80 to 41, whereas Vanuatu's intensity increased from 80 to 117.

Two opposing trends are evident. While transport energy efficiency has improved, the electricity grids intended to power them are becoming more carbon-intensive. Average grid emission factors are increasing by approximately 0.8% annually. In contrast, the rest of the region improves by 0.5%, while the global average improves by 0.6%. Papua New Guinea's grid emissions rose from 466 to 514 grams per kilowatt-hour in less than a decade.

Electrification of transport remains limited and inconsistent. In Samoa, electric vehicles accounted for 10.4% of the value of road-vehicle imports in 2024. Still, in most other Pacific states, the figure is below 2%. Vehicle fleets are predominantly replenished through used imports from wealthier countries, meaning that vehicle age, emissions, and safety standards are determined by export market trends rather than local preferences.

Aviation presents a significant but often overlooked challenge. While its share of total transport energy seems stable, absolute aviation energy consumption is increasing by approximately 7% annually—about twice the rate of growth observed in road and shipping sectors. Aviation is the fastest-growing source of transport energy in the region. Yet, it receives minimal attention in mitigation measures, which primarily focus on shipping and road transport.

Resilience considerations complicate the narrative on carbon emissions. Roads account for 33-89% of climate-exposed transport assets in these countries, with ports contributing an additional 36%. Vanuatu incurs annual disaster-related transport losses equivalent to approximately 0.14% of GDP, substantially surpassing the global average of 0.04%. Most Pacific road networks rank in the lower half globally for vulnerability. Under mid-century climate projections, all roads in Palau, about half in Samoa, and nearly half in Fiji are exposed to precipitation-related hazards. Limited maintenance budgets mean that short disruptions to a single road can result in disproportionately high costs.

Shape people-centred urban mobility and liveable cities

Urbanization in the Pacific is increasing from a relatively low baseline. The urban population share rose by approximately 4% between 2015 and 2025, from around 42%, compared with a much higher and more stable 83% in the rest of Asia-Pacific. Papua New Guinea's urban population nearly doubled within a generation, from approximately 700,000 to 1.3 million. Urban mobility remains heavily reliant on buses and walking; in Suva, buses account for nearly 46% of trips, while walking accounts for almost 20% in Honiara.

However, the proliferation of private vehicles is outpacing both road infrastructure expansion and urban planning. In Fiji, vehicle ownership increased from 68 to 167 vehicles per thousand people between 2000 and 2024, with private cars comprising three-quarters of the total. Samoa's vehicle fleet expanded by nearly 50% in a decade. The car fleet in Solomon Islands is projected to grow by approximately 192%, compared with a 48% increase in population. Investment in bus services is inconsistent; regional bus imports declined by 38% over the past decade, although some countries, including Papua New Guinea, expanded their fleets. Current street layouts will influence mobility for the next thirty to fifty years, and several Pacific cities are expanding into coastal and mountainous areas that are particularly difficult and expensive to serve.

The transport sector's investments remain limited and inconsistent. Private funding is nearly absent, and there have been no significant public-private partnerships in the region. Aid is often provided in large, project-specific amounts, causing significant fluctuations in modal investment over successive five-year periods. Concessional funding has increased over time—from around $100 million annually in the early 2000s to about $590 million in the early 2020s—but this variability highlights structural issues rather than strategic planning. Fuel taxes still contribute 9 to 10% of government revenue in Fiji and Papua New Guinea. However, this source is expected to decline as more vehicle fleets transition to electric vehicles.

Reading the trends together

No single number carries the story. Read side by side, the indicators point in a few consistent directions.

Distance and population dispersion are the primary determinants of transport access. Geographic factors, rather than policy, create the access gap and increase the cost of addressing it. As a result, the region has one of the widest rural access disparities globally.

Imported petroleum fuels nearly all vehicles, most vessels, and almost all aircraft across the fourteen states. Energy consumption nearly doubled between 2000 and 2023, while the fuel mix changed little. Consequently, a single price shock has immediate and broad economic effects.

The relative decoupling of emissions is real but uneven. Aviation is a largely unaddressed and rapidly expanding sector. Fleet composition is determined externally. Climate-related and accident-related losses disproportionately damage roads and ports, which remain essential to regional connectivity. While most countries have established nationally determined contributions, infrastructure plans, and sector roadmaps, progress is hindered by limited financing, institutional capacity, data availability, maintenance backlogs, and the built-in constraints of small markets.

That arithmetic points to the one move no country can make alone. No single state has the population or the trade to pull dense shipping, strong air links, or a vehicle market of its own. Regional bodies — the Pacific Community, Secretariat of the Pacific Regional Environment Programme, the Pacific Regional Infrastructure Facility — already exist. The case for pooling their efforts is hard to miss.

This report establishes the baseline for the Decade of Sustainable Transport. Future editions will document subsequent progress and areas of stagnation.

This report establishes a baseline for the Decade of Sustainable Transport in the Pacific.

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List of Abbreviations

AAGR	Average annual growth rate
ADB	Asian Development Bank
AIIB	Asian Infrastructure Investment Bank
ATO	Asian Transport Observatory
BC	Black carbon
BRT	Bus rapid transit
CAGR	Compound Annual Growth Rate
CAREC	Central Asia Regional Economic Cooperation
CDRI	Coalition for Disaster Resilient Infrastructure
CIESIN	Center for International Earth Science Information Network
CO2	Carbon dioxide
COP	Conference of the Parties
COPD	Chronic obstructive pulmonary disease
COVID	Coronavirus disease
CRS	Creditor Reporting System
DMC	Domestic material consumption
EDGAR	Emissions Database for Global Atmospheric Research
EM-DAT	Emergency Events Database
EV	Electric vehicle
FSM	Federated States of Micronesia
gCO2/kWh	grams of carbon dioxide per kilowatt-hour
GDP	Gross domestic product
GHG	Greenhouse Gases
GHS	Global Human Settlement
Gt	Gigaton
GVA	Gross value added
HCMC	Ho Chi Minh City
HSR	High-speed rail
IEA	International Energy Agency
ILO	International Labour Organization
IMF	International Monetary Fund
iRAP	International Road Assessment Programme
IRENA	International Renewable Energy Agency
ITF	International Transport Forum
ITU	International Telecommunication Union
km	kilometer
KPI	Key performance indicator
LDV	Light-duty vehicle
LGU	Local government unit
LLDC	Landlocked Developing Countries
LPI	Logistics Performance Index
LRT	Light rail transit
LSCI	Liner Shipping Connectivity Index
MJ	Megajoule
NBS	Nature-based solutions
NDC	Nationally Determined Contributions
NOx	Nitrogen oxides
NRVI	National Road Vulnerability Index
O&M	Operations and maintenance
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PICs	Pacific Island Countries
PM 2.5	Particulate matter 2.5
PNG	Papua New Guinea
PPP	Public-Private Partnership
PRIF	Pacific Regional Infrastructure Facility
RAI	Rural Access Index
RMI	Republic of the Marshall Islands
SDG	Sustainable Development Goal
SFT	Sustainable Freight Transport Index
SIDS	Small Island Developing States
SNDi	Street Network Disconnectedness Index
SOx	Sulfur oxides
SPREP	Secretariat of the Pacific Regional Environment Programme
SUV	Sport utility vehicle
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
USD/ $	United States Dollars
VOC	Volatile organic compounds
WHO	World Health Organization

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Background

Transport was absent from the Sustainable Development Goals as a standalone goal. Yet it underpins the majority of the 17 SDGs. That absence mattered because it left the sector without dedicated financing, coordination, and accountability mechanisms that come with explicit global recognition. In 2023, the United Nations General Assembly corrected this by declaring the United Nations Decade of Sustainable Transport (2026–2035) (UN 2025a). The United Nations Department of Economic and Social Affairs (UNDESA) developed an implementation plan. The plan aims to improve coordination and collaboration among member states and stakeholders, mobilize resources for sustainable transport projects at all levels, and raise awareness while building capacity for sustainable transport practices.

The next decade is especially important for the Pacific. For Small Island Developing States, transport isn't just development infrastructure; it's survival infrastructure. The Decade provides this argument with international institutional support.

The Pacific region possesses distinctive geographic characteristics. Fourteen Pacific Island Countries (PICs) occupy an ocean territory larger than any continent.[1] Population density remains low, with Papua New Guinea alone accounting for over 79% of the region's population, while many other nations have fewer than 200,000 residents.

Geographic factors fundamentally influence all transport outcomes in the region. Road density is structurally limited by island size and terrain. Maritime transport serves as the primary mode rather than an alternative to roads. For many inter-island connections, aviation is the only viable option. Transport costs are high, and alternatives are limited. Economic vulnerability and geographic remoteness exacerbate these constraints. Three PICs (Kiribati, Solomon Islands, and Tuvalu) are classified as Least Developed Countries. High external debt, limited fiscal capacity, and near-total dependence on imported fossil fuels lead to transport-system shocks with widespread economic impacts.

Achieving sustainable transport involves more than just switching technologies or modes. It is a complex, multi-faceted challenge influenced by environmental, social, economic, technological, policy, and behavioral factors. This is especially true in PICs with remote geography, varying socio-economic development, an expanding transport sector, and growing demand for passenger and freight services.

Thus, this report offers an essential comparative quantitative analysis to provide a regional perspective on progress towards sustainable transport. We consider 14 PICs. We examine progress against regional and global benchmarks, demonstrating that advances in sustainable transport practices are indeed measurable. We employ a unique methodology with a comprehensive set of 40+ indicators (See Annex 1 for Indicator definitions). We benchmark performance against regional and global standards through seven interconnected diagnostic frameworks aligned with the UN Decade of Sustainable Transport (UN 2025a): ensuring access for everyone to sustainable transport; improving sustainable connectivity and freight; enhancing transport safety and security; promoting people-centered

For Small Island Developing States, transport isn't just development infrastructure; it's survival infrastructure.

[1] Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Niue, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu

urban mobility; deploying low-carbon, resilient, and environmentally friendly transport systems; and utilizing science, technology, and innovation for sustainable transport progress. A cross-sector analysis explores the sector's economic contributions, employment trends, and gender disparities (Figure 1).

Interpreting results for the Pacific requires careful consideration. Conventional transport indicators typically assume large economies with dense road networks, substantial urban populations, and expanding vehicle fleets. However, in the Pacific, the primary transport modes are often maritime and aviation. In this context, the key metric is not just vehicle throughput but access and connectivity — whether people can access a doctor, a market, or a school. Where standard indicators apply, this report uses them. Where they do not, it supplements or replaces them with Pacific-relevant metrics. Data gaps are flagged throughout. In many cases, the absence of data is itself a major finding.

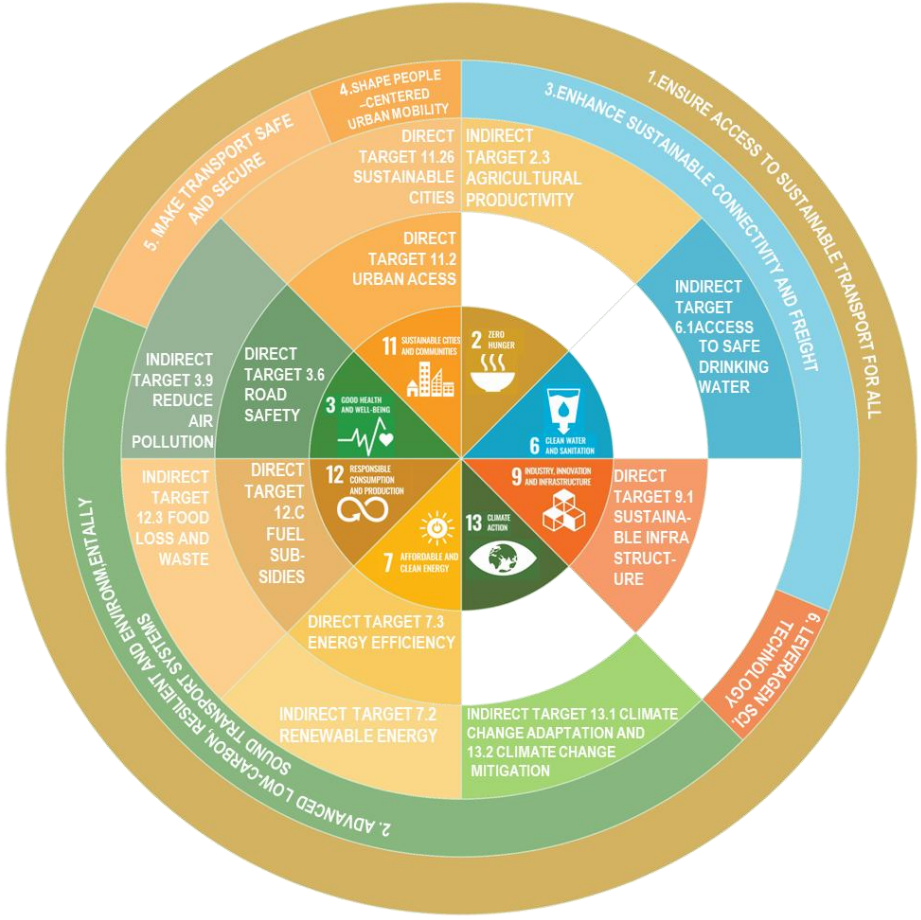


Figure 1. Sustainable Transport Assessment Framework
Source: ATO (2025a)

Ensure Access to Sustainable Transport for All

1. Rural Access

Rural access reveals unfinished connectivity across Pacific SIDS. The Rural Access Index (RAI) shows the percentage of rural people within 2 km of an all-season road. In 2023, about 20% of rural people worldwide lacked this access (Center for International Earth Science Information Network 2023). For Pacific SIDS, access rates range from 41% to 97%, averaging 69%. In comparison, the Asia-Pacific region's RAI is 84% (Figure 2).

Tonga stands out as a positive regional outlier, with a rural access index of about 97%, placing it among the better-performing middle-income countries globally at its income level. Papua New Guinea is the most acute case in the region, with a rural access index of 41% despite a GDP per capita of around $4,700. This means less than half of PNG's rural population lives within reach of an all-season road. Since PNG has by far the largest rural population among Pacific SIDS, the human scale of this connectivity deficit is substantial.

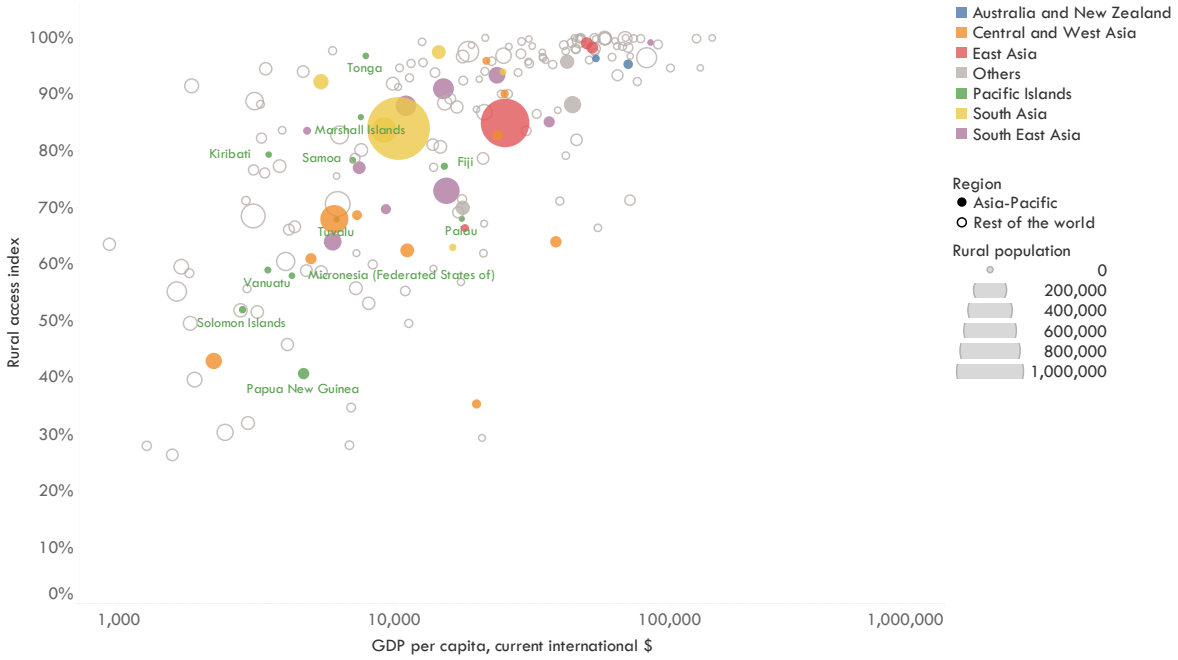


Figure 2. Rural Access Index
Source: Center for International Earth Science Information Network (2023)

Beyond providing access to essential services and livelihoods, rural connectivity influences tourism and resilience in Pacific SIDS. Reliable all-season roads enhance access to tourism routes and local economic activities. At the same time, resilient networks are crucial for maintaining access during extreme weather and aiding emergency response and recovery efforts.

Reaching the SDG rural access target demands ongoing investment in building, maintaining, and upgrading infrastructure. However, current efforts are still inadequate. Challenges such as limited funding, competing priorities, and the high costs of serving dispersed areas hinder progress, which may further widen existing gaps in connectivity and resilience.

Box no. 1. Country examples

Papua New Guinea's National Transport Strategy (Government of Papua New Guinea 2013) aims for 95% of the population to have access to all-weather transportation — whether by road, water, or air — depending on economic feasibility. The Development Strategic Plan 2010–2030 (Government of Papua New Guinea 2010) plans to expand the road network threefold, reaching 25,000 km by 2030. Connect PNG (Papua New Guinea DoWH 2026), the key 2020–2040 initiative, proposes 16,000 km of national highways and missing links, designed to connect 1.7 million currently disconnected people to the main network.

The Solomon Islands' National Development Strategy 2016–2035 (Government of the Solomon Islands 2016a) emphasizes expanding the road network to enhance access for inland communities connecting to coastal roads and maritime routes. The plan's targets include ensuring that, by 2020, at least 30% of rural Solomon Islanders can access essential services through rehabilitated infrastructure, increasing to at least 40% by 2035. This will be achieved through upgraded and newly constructed roads, bridges, and wharves that provide direct access to vital services.

The Fiji National Infrastructure Investment Plan 2023-2034 (Government of Fiji 2023b) emphasizes building footpaths and streetlights in densely populated rural areas. It also involves reviewing bus routes, schedules, fares, and staging to expand service coverage in rural regions and enhance rural–urban connections. (Government of Fiji 2017a)

2. Urban Access

SDG Urban access indicator is defined as the proportion of city residents living within 500 meters of a bus stop or within 1 km of a rapid transit station. We find that urban access remains limited across the Pacific. In the Asia-Pacific region, the situation is particularly difficult, with approximately 1.4 billion urban residents lacking adequate access to public transport as of 2023 (ATO 2024). In 9 Pacific cities, we find access rates ranging from 4% to 64%, with an average of 23%. Overall, dispersed settlement patterns, lower densities, and infrastructure constraints appear to limit service coverage (Figure 3).

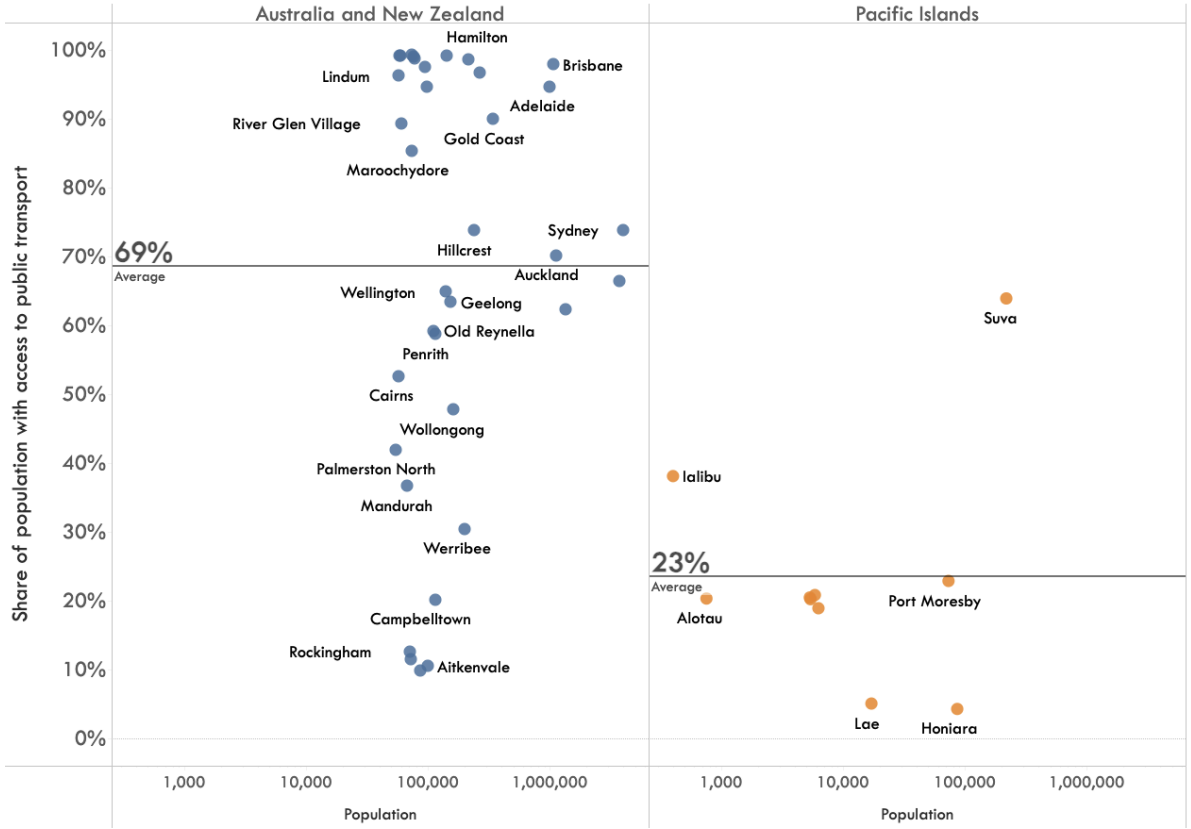


Figure 3. Share of Population with Access to Public Transport
Source: CIESIN (2023)

Box no. 2. Urban Access and Public Transport Systems in Suva

Suva represents one of the stronger urban transport performers among Pacific cities. Around 64% of its urban population had convenient access to public transport in 2023 (CIESIN 2023) , substantially above the Pacific city average of 23%, supported by its relatively compact urban form and bus-based mobility system. Bus services accounted for approximately 46% of trips in 2015 (UNESCAP 2018), although the registered bus fleet declined from 751 vehicles in 2019 to 608 in 2025 (ATO 2026b), suggesting emerging pressures on service provision despite continued demand along key corridors.

3. Access to facilities

Access to essential services across Pacific SIDS reveals a deeply uneven landscape, significantly influenced by geography, dispersion, and income. Regionally, about 70% of the population can reach a hospital within 60 minutes (by car), though there is significant variation. Fiji leads at 87%, with Tonga and Samoa also well-served at 96% and 92%, respectively. Conversely, the Marshall Islands and FSM record 52% and 56%. Access to primary healthcare within 60 minutes by car is more mixed, with an average of 60%. Fiji, Palau, and Samoa perform well at 81-83%, but the Marshall Islands drops sharply to 12%. School access within 5 km averages 57%, with Tonga at 87%, and Samoa at 81%. Overall, while access figures seem reasonable, disaggregated data reveal persistent gaps—especially for women, the elderly, and rural communities—primarily due to fragmented, unreliable, or seasonally impassable road networks that hinder access to hospitals, primary care, and schools (Figure 4).

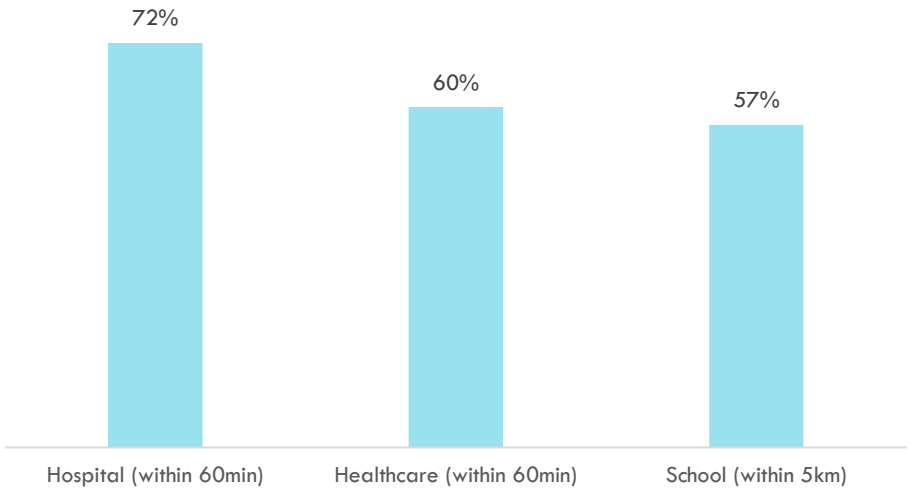


Figure 4. Average share of population with access
Source: Heidelberg Institute for Geoinformation Technology (2025)

4. Street Sprawl and Urban Form

The development pattern of an urban road network is as important as its size. Street sprawl changes slowly. It locks in 30 to 50 years of mobility patterns. The Street-Network Disconnectedness Index (SNDi) measures connectivity using factors like dead ends, intersection density, and circuity. A higher SNDi score means poorer connectivity. Disconnected street networks can shape mobility patterns in the long-term through increasing vehicle dependence, reducing the effectiveness of public transport, and raising the cost of infrastructure provision.

In Asia and the Pacific, the Solomon Islands has the highest SNDi score at 7.9 (2020), making Honiara the most disconnected urban road network in the region (Barrington-Leigh and Millard-Ball 2025) (Figure 5).

Urban road disconnection has declined worldwide since the early 2010s at an annual rate of 3.3%, though Asia-Pacific lags at 1.5%. Most Pacific SIDS do not show a downward trend. This is a structural warning. Urban areas with sprawl and disconnected roads tend to increase vehicle dependence, reduce public transport effectiveness, and raise crash risks for all road users. For example, Suva in Fiji and Port Moresby in PNG both show outward growth into environmentally constrained zones: coastal areas in Fiji and mountainous regions in PNG.

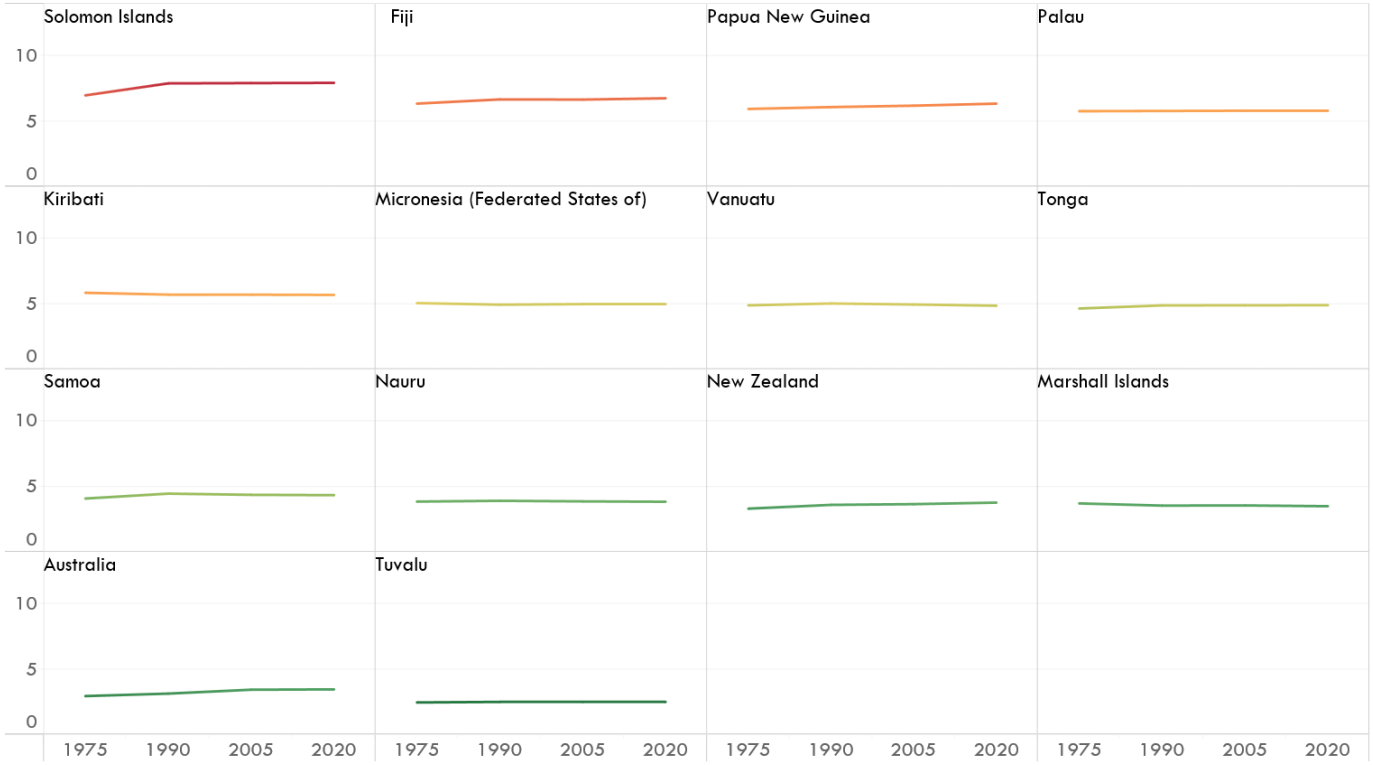


Figure 5. Street-Network Disconnectedness Index (SNDi)
Source: Barrington-Leigh and Millard-Ball (2025)

5. Dispersion Index

Across many PICs, a considerable proportion of the population resides outside the main islands. In countries such as Solomon Islands and Vanuatu, this share exceeds 70%. However, populations across outer islands are often relatively small and vary substantially both within and across countries. For instance, in Tuvalu, the populations of the eight outer islands range from 46 inhabitants on Niulakita to 1,542 on Vaitupu, compared with 5,436 people on Funafuti, the principal island (2012 census). Similarly, in Solomon Islands, Malaita, the most populated island with 137,596 inhabitants, exceeds the population of Guadalcanal, which has 93,613 inhabitants (2009 census). (World Bank 2021b)

Besides differences in population size, Pacific countries also vary in how remote their communities are and how people are spread out. Some settlements are close together, while others are more spread out (see Figure 6). Even though these numbers come from older census data, newer studies (ADB 2021) and assessments (ATO 2026a)[2] show that the pattern remains: some islands have many people living close together, while others have small, remote communities scattered across the Pacific SIDS.

A complementary indicator is dispersion-adjusted population density, which combines geographic dispersion with population size to show the average population density across a spatial area. Two countries may have similar geographic dispersion, but differences in population size can significantly affect settlement patterns and service delivery challenges. For example, although the Marshall Islands and Solomon Islands have broadly comparable geographic dispersion, the Solomon Islands' population is about ten times larger. As a result, the Marshall Islands has a much lower dispersion-adjusted population density.

A lower dispersion-adjusted population density typically means populations are spread across smaller, more isolated communities. This increases costs for transport, infrastructure, and other essential services. These conditions reduce economies of scale and raise unit costs for connectivity and service provision. Among Pacific Island Countries, Fiji has the highest dispersion-adjusted population density due to its relatively large population and lower geographic dispersion (World Bank 2021b). In contrast, countries like the Marshall Islands, Tuvalu, Kiribati, and the Federated States of Micronesia (FSM) combine small populations with high geographic dispersion, resulting in very low dispersion-adjusted population densities and greater connectivity challenges.

Across many PICs, a considerable proportion of the population resides outside the main islands.

[2] ATO Transport in Review Reports (geo-spatial maps) and Strategic Road Network and Population visualizations by ATO

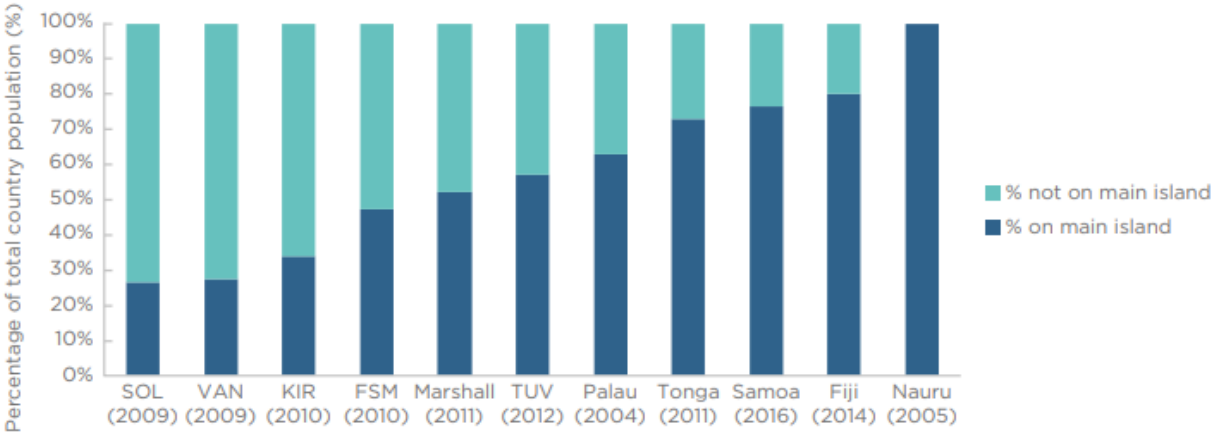


Figure 6. Population distribution between main island and other islands
Note: Main island is defined as the island with the PIC's capital. With the exception of Solomon Islands, this is also each PIC's most populous island
Source: World Bank (2021b)

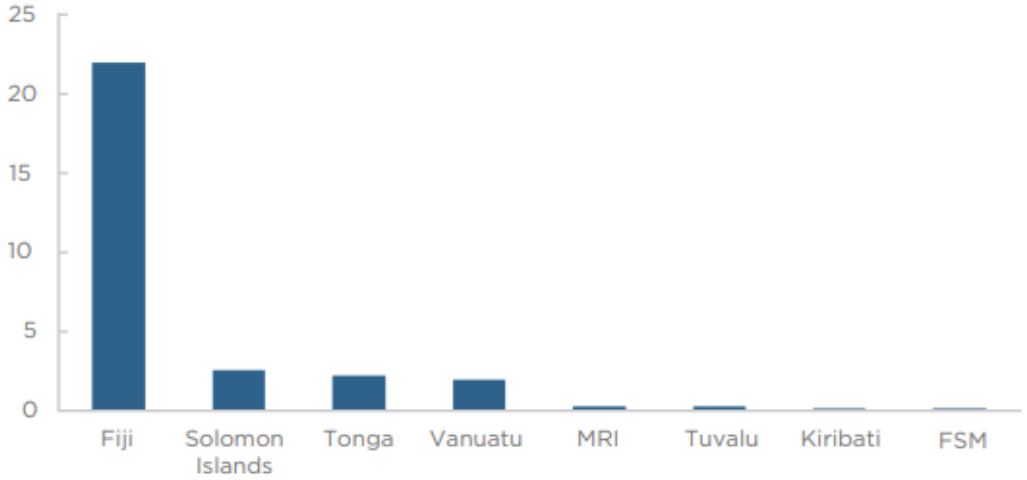


Figure 7. Dispersion adjusted population density (pp/km2)
Source: World Bank (2021b)

Enhance Efficiency and Promote Sustainable Connectivity and Logistics

Connectivity is more than just transport; it drives economic growth and social progress. Movement of people and goods via maritime, aviation, and road networks is crucial for accessing markets, healthcare, education, tourism, and vital services across these remote island systems. Due to their dispersed geographies and reliance on external links, the efficiency, reliability, and sustainability of transport networks significantly influence overall development outcomes and enhance resilience to economic, environmental, and climate shocks.

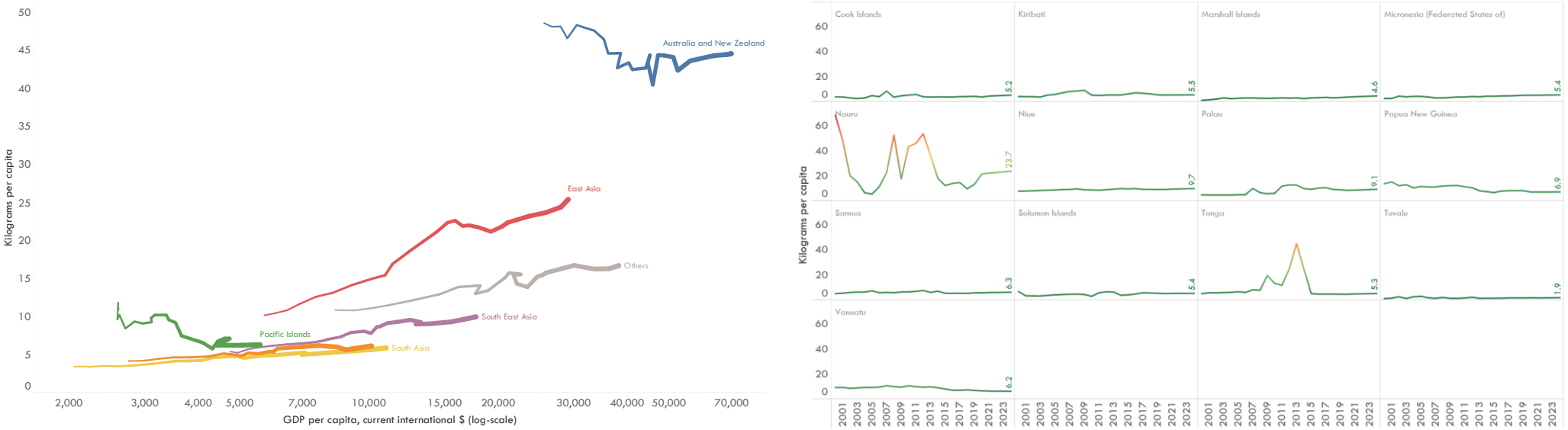
A. Freight and Logistics performance

1. Domestic material consumption

The movement of people and goods relies not only on transport networks but also on the material resources required for their construction, maintenance, and operation. Roads, bridges, ports, airports, vehicles, fuels, and logistics facilities all necessitate significant material inputs. Moreover, material consumption is closely associated with logistics. The handling, storage, and movement of these physical resources require robust freight and supply chain infrastructure.

Domestic material consumption (DMC) plotted against GDP per capita (Figure 8) provides insight into how economies evolve as incomes rise and material use expands. The Pacific SIDS occupy a distinct position, separated from most regional groupings by a substantial gap in absolute material consumption, indicating their unique economic structure and dependence on international freight.

Figure 8. Domestic Material Consumption (2000-2024) (a) at subregional level (b) at country level
Source: UNEP (2024b)



2. Sustainable freight transport (SFT) index

Efficient freight systems are central to improving connectivity, reducing logistics costs, and supporting reliable movement of goods across geographically dispersed island economies. In Pacific SIDS, the combination of small market sizes, long transport distances, and dependence on maritime supply chains creates structural challenges for achieving economically, environmentally, and socially sustainable freight systems. The sustainable freight transport (SFT) index (UNCTAD, n.d.), assessed across economic, environmental, and social dimensions, highlights these constraints and their implications for broader connectivity outcomes across the region (Figure 9).

The widest variation appears in the economic dimension. Tonga and Samoa perform better, ranking 118th and 132nd, respectively. Fiji, despite having the largest economy and a GDP per capita of about $15,000, ranks lower at around 166th. This pattern suggests that higher income levels in Pacific SIDS do not necessarily translate into stronger freight performance, reflecting persistent structural constraints in freight scale, transport costs, and logistics systems.

Performance on the environmental dimension shows a concentrated pattern, with all countries clustering toward weaker global scores. This lower performance suggests challenges linked to fossil fuel dependence and limited modal choice and infrastructure in freight systems. On the social dimension, Tonga, Samoa, and Fiji perform better, ranking between 114 and 119. Solomon Islands and Papua New Guinea record weaker outcomes at 158.

Figure 9. Sustainable Freight Transport (SFT) Index by pillars
Source: UNCTAD (n.d.)

3. Trade facilitation and Port efficiency

Trade facilitation and port efficiency (World Bank 2026) are important dimensions of freight and logistics efficiency, influencing how effectively goods move through ports and supply chains in import-dependent island economies. We consider container import dwell time and port turnaround time. Since Pacific SIDS rely heavily on imports, delays in ports and trade facilitation can directly affect supply chain performance and transport costs.

Port efficiency across Pacific SIDS shows a significant challenge. The difference between vessel turnaround time and container dwell time is important because it points to where delays may occur. In some cases, the constraint may not be ship-side operations, but cargo clearance, documentation, customs processes, or coordination among agencies and logistics actors. Vanuatu highlights this issue most severely, with import container dwell times of about 7 days compared to vessel turnaround of around 1 day, creating one of the largest gaps in the data. Fiji and Solomon Islands have dwell times of around 3 days each, remaining above the levels observed for more efficiently performing ports, though with less pronounced differences. Papua New Guinea, with approximately 2.5 days dwell time, performs similarly to several larger middle-income economies shown in the data. This pattern is important because in import-dependent island economies, long dwell times increase shipment costs. These increased costs eventually impact the prices of fuel, food, construction materials, and vehicles that Pacific communities rely on.

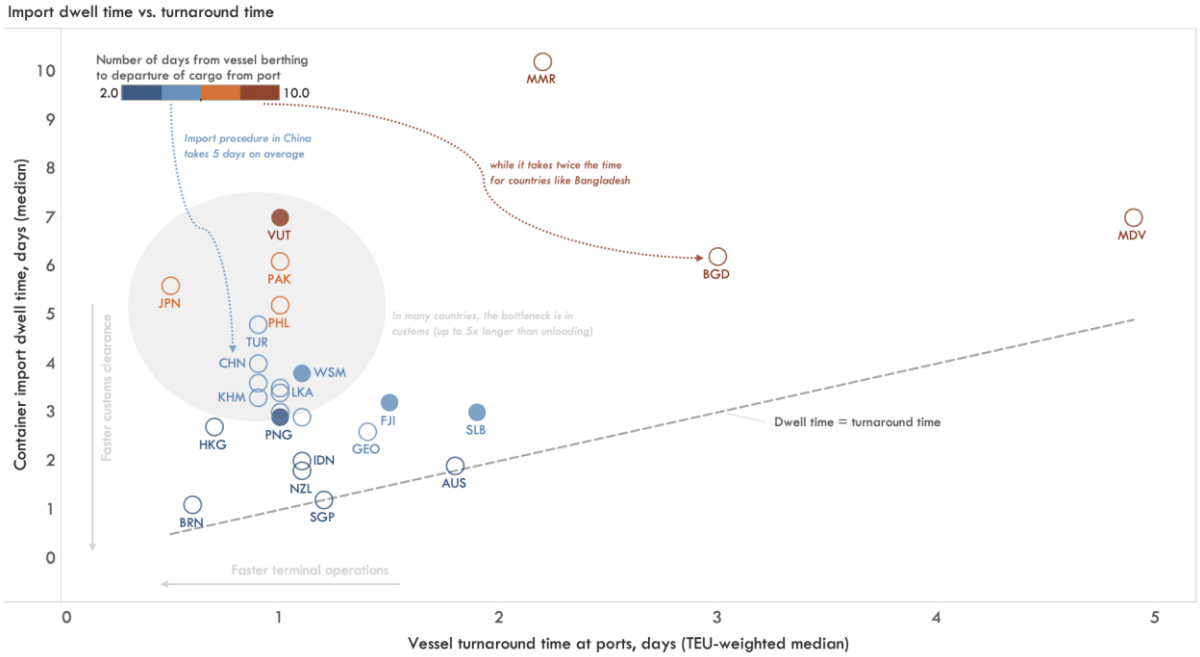


Figure 10. Container Import Dwell Time and Vessel Turnaround Time at Ports

Source: World Bank (2026)

Policies supporting enhanced freight efficiencies

In Pacific SIDS, freight and logistics typically receive less policy focus compared to broader transport infrastructure and connectivity issues. Often, freight-related policies are integrated into broader transport or economic development plans rather than addressed through dedicated logistics strategies. Current policies mainly aim to enhance logistics efficiency, cargo handling, and multimodal connectivity to facilitate trade, tourism, and access to remote islands (Papua New Guinea - Government of Papua New Guinea 2013; Tuvalu - Government of Tuvalu 2022a; Tonga - Government of Tonga 2022b). Newer initiatives are also prioritizing better coordination among freight stakeholders and increasing the efficiency and resilience of transport and logistics systems (Fiji - Government of Fiji 2015; Kiribati - Government of Kiribati 2019).

B. Regional and National Connectivity

1. Remoteness Index

The index measures how far a country is from its trading partners, weighted by actual trade and adjusted for factors such as landlockedness. Scores range from 0 to 100, with higher scores indicating greater remoteness. UNCTAD (2025b) breaks the headline value into four parts: geographic distance from markets, transport connectivity, digital connectivity, and cultural-political linkages.

Pacific Island economies consistently score high on indicators related to distance from markets, financing sources, and cultural or political centers. Several countries, such as Tuvalu, Tonga, Samoa, and Vanuatu, appear in the 83–86 range on the overall remoteness index, with higher scores indicating greater remoteness. Transport connectivity appears comparatively stronger for some Pacific countries like Nauru and Palau. However, broader economic and geographic isolation remains substantially higher than in many other Asia-Pacific subregions. Figure 11 shows that transport challenges in Pacific SIDS go beyond physical connectivity and are closely linked to wider constraints related to market access, financing, and geographic dispersion.

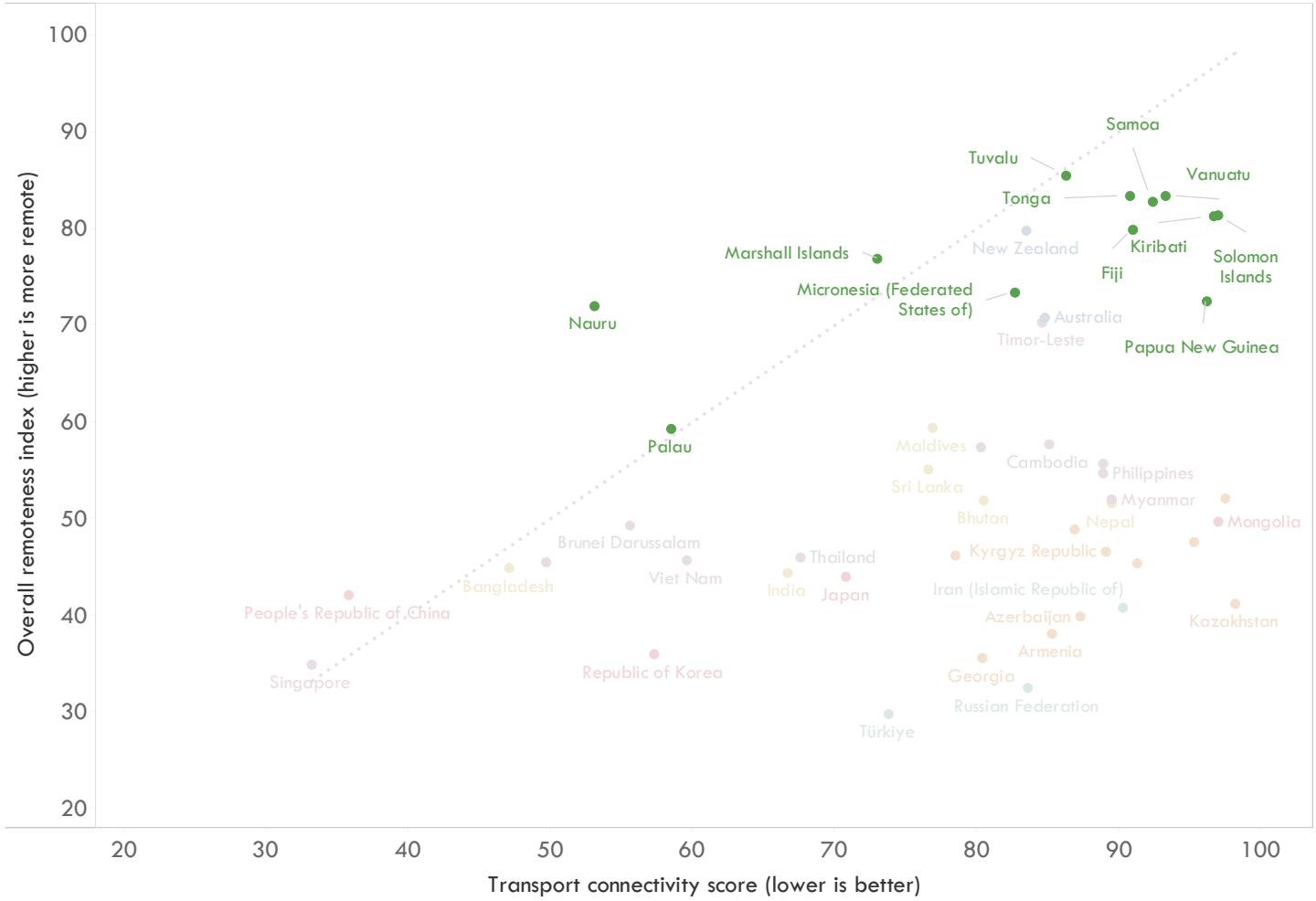


Figure 11. Remoteness Index
Source: UNCTAD (2025b)

2. Maritime Connectivity

The UNCTAD Liner Shipping Connectivity Index (UNCTAD 2025a) assesses a country's integration into global container networks. The Asia-Pacific average is 246. Pacific Island nations score between 15 and 50. Australia and New Zealand, despite having some of the lowest market accessibility worldwide, have the strongest connectivity at that level because their economic weight attracts carriers. In contrast, smaller Pacific nations lack this pull. Limited trade volumes lead to fewer direct services, more reliance on hubs, and less predictable transit. The hub-and-spoke system is cost-effective for carriers and gives remote economies access to global routes. However, it also increases transit times and reduces reliability for importing countries. Pacific countries generally have low scores that sometimes decline.

For example, the Solomon Islands dropped from 38 in 2014 to 31 in 2024, showing a structural decline. Fiji followed a similar path, falling from 49 to 42 in the same period. PNG slightly improved its score from 44 to 50, but still lags behind regional standards. This trend suggests that shipping costs for Pacific exporters may have risen relative to those of other economies, and that fewer carriers serve Pacific ports.

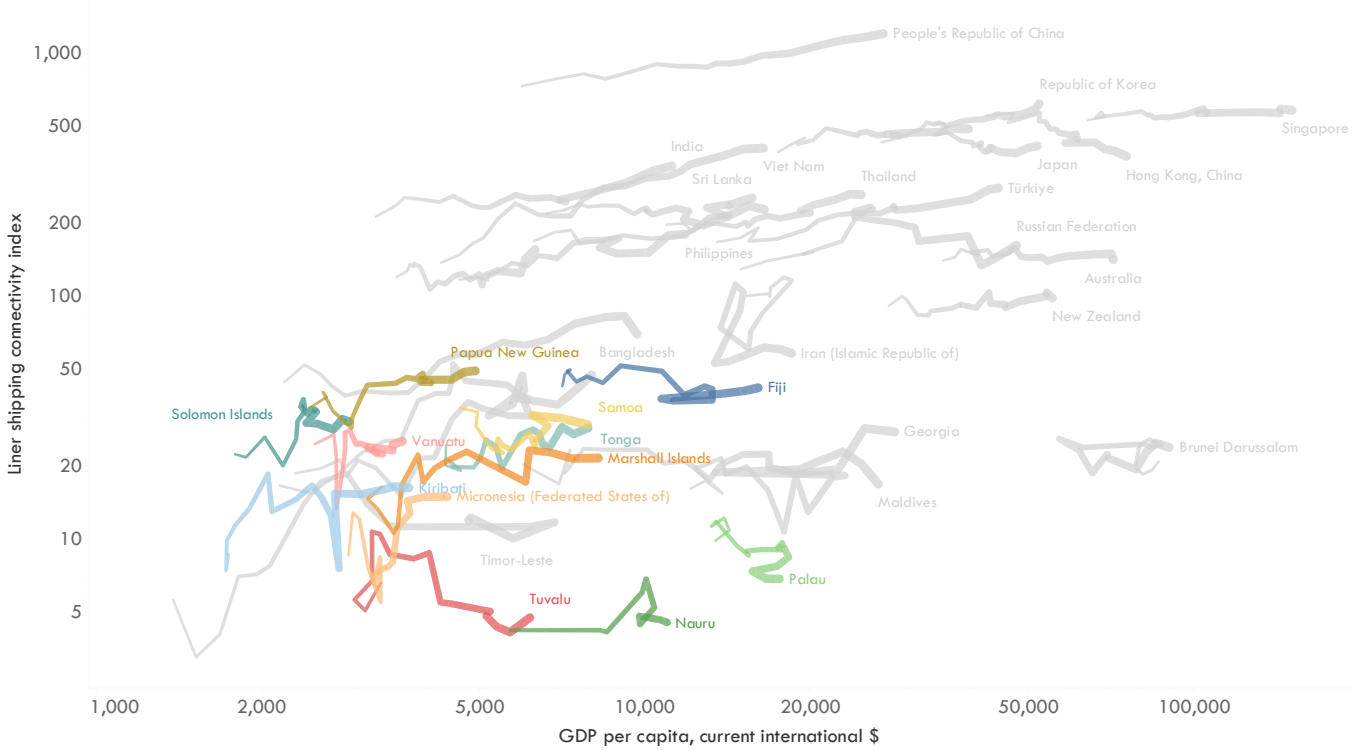


Figure 12. Liner Shipping Connectivity Index (2006-2024)
Source: UNCTAD (2025a)

In Pacific SIDS, limited trade volumes lead to fewer direct services, more reliance on hubs, and less predictable transit

3. Container Port Performance

Out of the top 100 ports worldwide on the Container Port Performance Index (World Bank Group 2025), 54 are located in the Asia-Pacific region, while none are in the Pacific SIDS. The earliest port from the list is 'Port Moresby, PNG,' ranked at 248. Maritime activity in Pacific SIDS is concentrated in a few gateway ports, especially in PNG and Fiji. Port Moresby stands out with about 2 port calls per day and around 4 million tonnes of exports and 1 million tonnes of imports annually. Lae also has 2 port calls per day with lower export and similar import volumes. Most other major ports, such as Honiara, Apia, Nuku'alofa, Port Vila, and Rabaul, receive fewer than one port call per day. Only 3 of the top 10 ports (Port Moresby, Honiara, and Kimbe) have export volumes exceeding imports, indicating that many Pacific ports primarily serve as import gateways rather than balanced trade hubs. This pattern highlights the region's strong dependence on imported goods and a broader structural challenge: trade and connectivity rely on a few ports and limited shipping services, making island economies more vulnerable to disruptions and higher logistics costs (Figure 13). The concentration of maritime activity in a small number of gateway ports increases the importance of these assets. Disruptions at these ports can have wider effects on supply chains, prices, construction materials, fuel availability, and access to essential goods.

Figure 13. Top 10 ports in the Pacific SIDS
Source: World Bank Group (2025)

Maritime Transport Policies

Maritime transport is a key element in Pacific SIDS policy frameworks, functioning not only as a transportation method but also as a vital driver of economic activity, trade, tourism, food security, and connectivity across dispersed islands. The maritime targets set by Pacific SIDS reflect a dual focus on improving connectivity and pursuing decarbonisation. Papua New Guinea aims to expand its maritime capacity by tripling ports, routes, and vessels, and intends to cut handling times at Port Moresby and Lae to one day by 2030 (Government of Papua New Guinea 2010). Kiribati plans to replace 2,010 two-stroke outboard motors with 1,560 four-stroke and 450 electric motors. The Solomon Islands plans to adopt zero-emission vessels and develop supporting charging infrastructure. Vanuatu targets a 10% increase in transport energy efficiency by 2030 (Kiribati - Government of Kiribati 2021; Solomon Islands - Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM) 2023; Vanuatu - Government of Vanuatu 2020, 2022).

These national commitments are reinforced by regional cooperation, particularly through the Pacific Blue Shipping Partnership (PBSP), an open coalition of Pacific Island Countries involving Fiji, Kiribati, the Republic of the Marshall Islands, Solomon Islands, Tonga, Tuvalu, and Vanuatu (MCST 2024). The PBSP frames domestic maritime decarbonisation as a shared regional investment agenda, recognising that individual Pacific SIDS often lack the scale, finance, and market size to transform fleets, ports, and supporting energy systems alone. Its targets include a 40% reduction in greenhouse gas emissions from domestic shipping by 2030 and a fully carbon-free maritime transport sector by 2050, supported by efforts to mobilise large-scale climate finance for vessel retrofits, replacement of ageing domestic vessels, low-carbon technologies, and enabling port and energy infrastructure. This agenda is complemented by wider initiatives such as the Pacific One-Maritime Framework 2026–2050, which provides a broader regional framework for safer, greener, cleaner, more resilient, digital, and inclusive maritime transport (Pacific Community 2026). This agenda is also supported by the Maritime Technology Cooperation Centre for the Pacific.[3] Initially established under the first phase of the network in 2017, under the network's second phase, launched in 2024, which on portside energy efficiency, retrofitting domestic vessels under 5,000 gross tons, capacity building, pilot projects, and sustainable shipping practices in developing countries (GMN 2026). The International Maritime Organization's GreenVoyage2050 programme and related capacity-building support help developing countries, including small island developing States and least developed countries, prepare policies, pilots, and national plans to reduce greenhouse gas emissions from shipping (GreenVoyage2050, n.d.). The Global Green Growth Institute low-carbon maritime transport programme for Fiji, Tonga, and Vanuatu supports national low-carbon maritime transport roadmaps, monitoring, reporting, and verification systems, alternate marine power pilots, institutional capacity, and investment preparation (GGGI 2025).

[3] Hosted by the Pacific Community and the Secretariat of the Pacific Regional Environment Programme under the International Maritime Organization–European Union Global Maritime Technology Cooperation Centres Network

4. Aviation Connectivity

Aviation plays a critical role in the Pacific. For many outer islands, flying is the only practical alternative to long sea journeys. Disruptions to aviation affect healthcare, education, and emergency services. The regional trend shows stagnation or decline. Average flights per capita decreased from about 0.68 in 2019 to 0.59 in 2024, even after the COVID-19 recovery. The Asia-Pacific has slightly recovered from an average of 0.89 annual trips in 2019 to 0.90 in 2024 (Figure 14).

The outlook for future growth in Pacific SIDS is also not encouraging from a demand perspective. Passenger travel demand there is expected to stay well below the regional average, with an estimated 0.95 trips in 2034 compared to 1.65 trips in the broader Asia-Pacific region (Figure 14).

The primary challenge facing Pacific aviation is ensuring viability, as small populations lead to limited traffic that cannot support most routes. Without regional coordination and targeted funding, the connectivity of remote routes is likely to decline further.

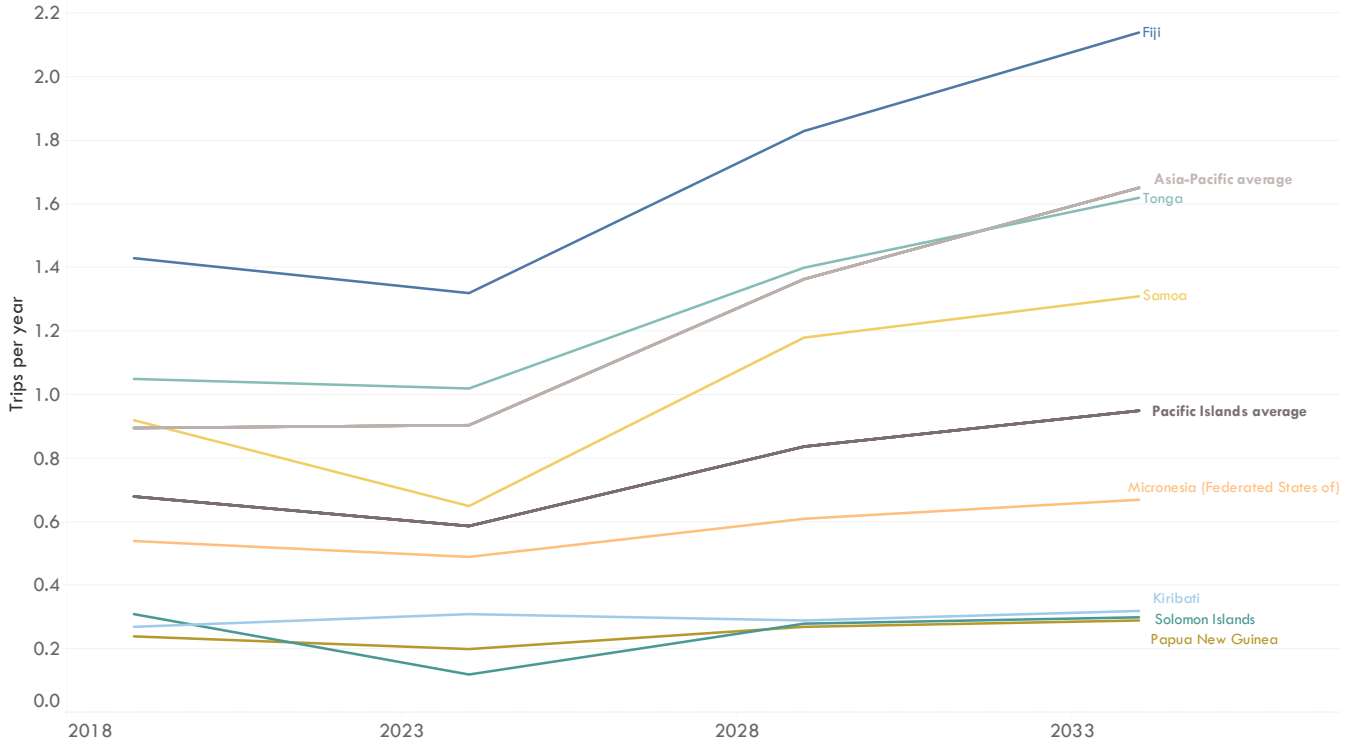


Figure 14. Average Aviation Trips per year
Source: Airbus (2025)

5. Tourism arrivals

Tourism arrivals across Pacific SIDS generally increased until 2019, with Fiji consistently leading at about 500–700 thousand arrivals annually, significantly surpassing other nations. Papua New Guinea, Samoa, and Vanuatu made up a second tier, typically attracting between 30,000 and 300,000 visitors. Smaller island nations like Niue, Tuvalu, and Kiribati recorded fewer than 10–20 thousand arrivals.

Figure 15 also shows the severe impact of COVID-19, with arrivals collapsing almost to zero across most countries during 2020–2021, followed by a gradual recovery. However, recovery has been uneven, with larger tourism markets rebounding faster while several smaller islands remain below pre-pandemic levels, reflecting the sector's continued dependence on external connectivity and air transport capacity.

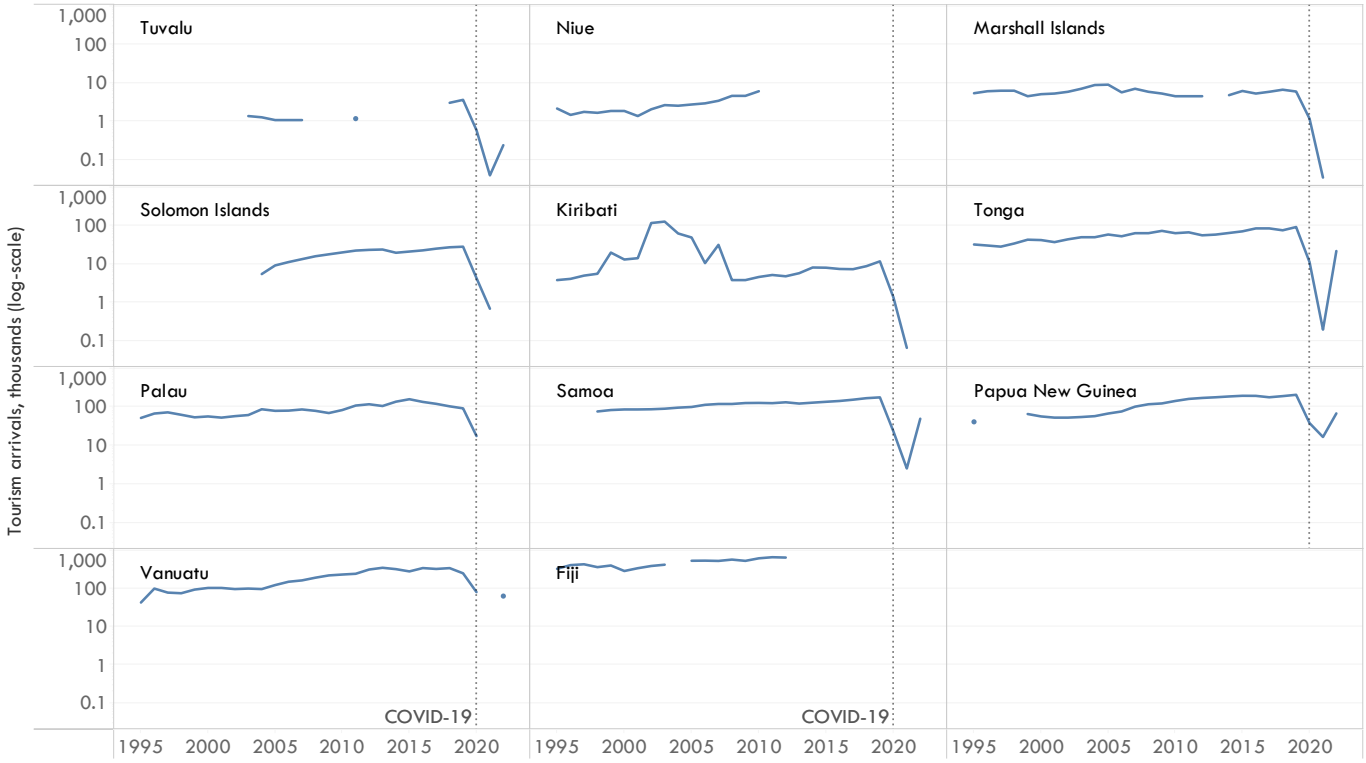


Figure 15. Tourist Arrivals
Source: UN Tourism (2025)

6. Aviation Route Disruptions

In addition to overall traffic volumes and growth trends, the reliability of aviation connectivity constitutes a significant challenge for Pacific SIDS. Figure 16 demonstrates the structural connectivity constraints affecting Pacific aviation systems. Pacific Island countries typically cluster at the lower end of registered carrier departures, with several economies recording fewer than 10,000 departures, yet still experiencing between 2 and 21 annual route disruptions. The Solomon Islands and Vanuatu report relatively modest traffic volumes but encounter notable disruption levels compared to larger Asia-Pacific systems. Among Pacific SIDS, Fiji maintains comparatively lower disruption levels (2) despite higher traffic activity (5,800). This pattern indicates that aviation challenges in Pacific SIDS are shaped not only by traffic volumes but also by dispersed geographies, reliance on a limited number of routes, and network vulnerability. These aviation indicators are not only measures of traffic volume, but also indicators of service continuity. In small island contexts, a route disruption can affect access to health care, education, government services, disaster response, and tourism. This makes aviation reliability a social and economic indicator, not only a transport-sector indicator.

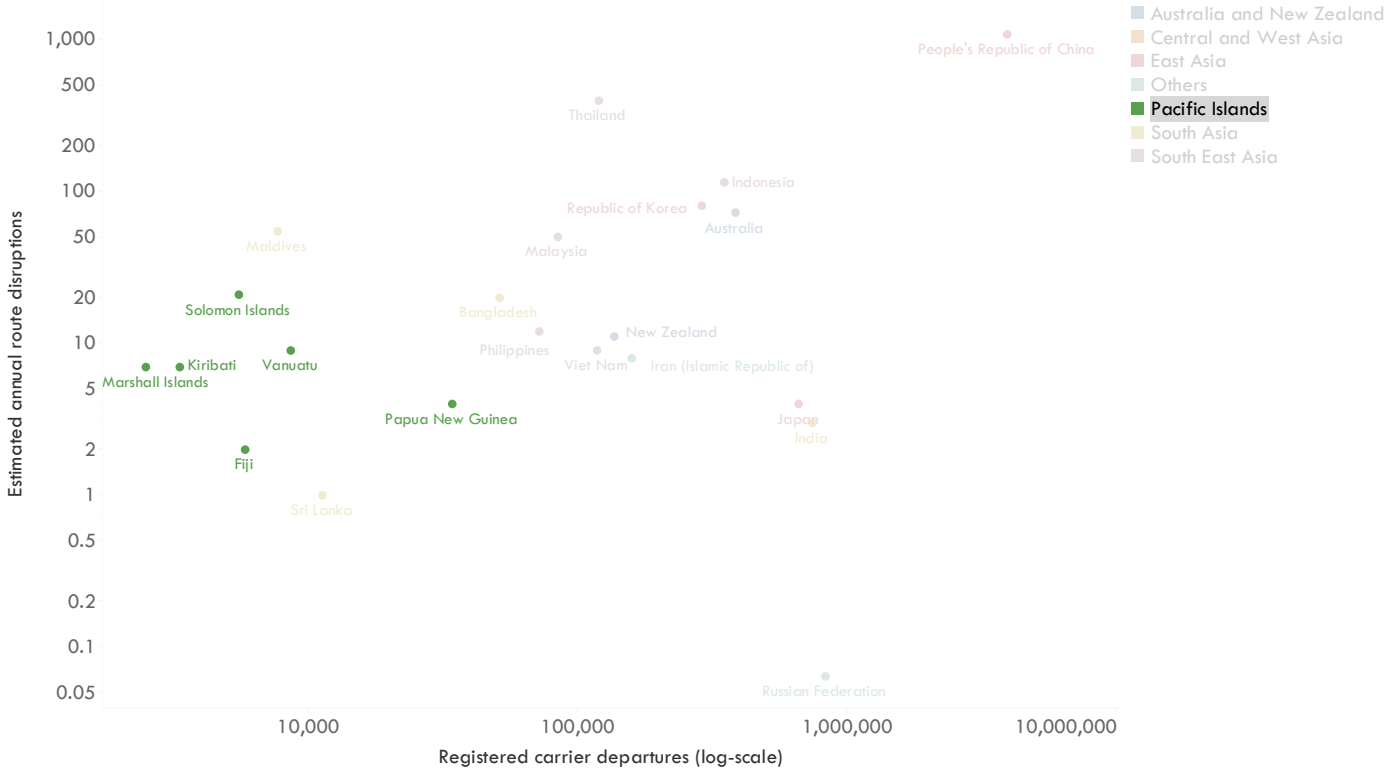


Figure 16. Estimated Annual Aviation Route Disruptions
Source: World Bank (2021a); Yesudian and Dawson (2021)

Aviation Policies

Across Pacific SIDS, national policy measures emphasize strengthening aviation connectivity through airport upgrades, improved domestic and regional air services, and expanded transport infrastructure to support accessibility and economic integration (Papua New Guinea - Government of Papua New Guinea 2023a; Fiji - Government of Fiji 2017a; Tonga - Government of Tonga 2022c). Alongside connectivity improvements, increasing attention is also given to modernization of airport facilities, regulatory strengthening, and improvements in aviation sector management to enhance operational efficiency and service quality (Samoa - Government of Samoa 2023; Solomon Islands - Government of the Solomon Islands 2016b; Vanuatu - Government of Vanuatu 2015). Resilience and sustainability considerations are also becoming more visible within aviation planning through infrastructure resilience measures, disaster-response considerations, and emerging references to lower-carbon transport systems (Kiribati - Government of Kiribati 2019; Tuvalu - Government of Tuvalu 2022b; Palau - Government of Palau 2015).

Aviation targets align with the measures. Fiji's long-term strategy places strong emphasis on low-carbon aviation, targeting the introduction of electric aircraft by 2040 with 20% of passenger activity served by electric planes by 2050, alongside the introduction of biojet fuels from 2030, increasing to 20% of passenger activity by 2040 and 40% by 2050, with a separate target of achieving 10% sustainable aviation fuel (SAF) use by 2030 (Government of Fiji 2018, 2024). Kiribati focuses on improving connectivity by increasing monthly flight schedules to 50 by 2036 (Government of Kiribati 2017b). Papua New Guinea prioritizes aviation infrastructure and safety improvements by rehabilitating up to 50 airstrips, upgrading 10 airports for larger aircraft, and improving compliance with international airport safety standards by 2030 (Government of Papua New Guinea 2010).

7. Road Infrastructure Availability

Road infrastructure availability, including roads, bridges, and tunnels, varies significantly across Pacific SIDS and does not consistently correlate with income levels. Palau (24.2 km per thousand population) stands out with by far the most extensive network among Pacific SIDS, followed by Tonga (12.1 km), Samoa (12.0 km), and Tuvalu (10.0 km). Lower-income nations such as Solomon Islands (4.5 km), Papua New Guinea (4.6 km), and FSM (5.6 km) have the most limited networks. Overall, geography and settlement patterns appear to be just as influential as economic capacity in shaping transport infrastructure development across the region (Figure 17).

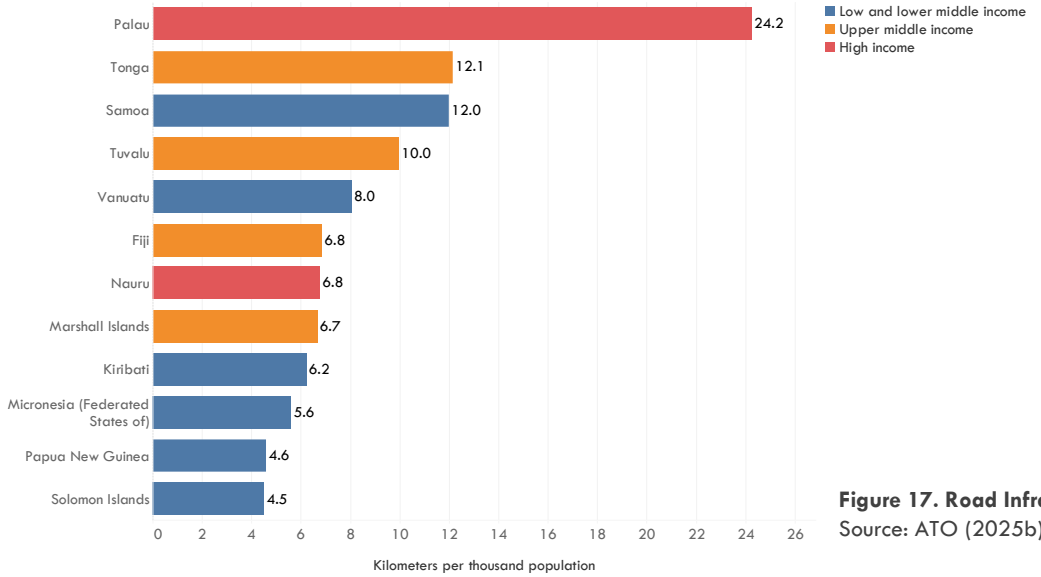


Figure 17. Road Infrastructure Availability
Source: ATO (2025b)

Road infrastructure policies

The road transport policy frameworks in the subregion increasingly emphasize improving connectivity while simultaneously strengthening resilience, safety, and access (Asian Transport Observatory 2025). A first dominant policy direction focuses on strengthening strategic road connectivity to improve access between communities, economic corridors, and key transport nodes through new links, bridges, bypasses, and feeder networks (Papua New Guinea - Government of Papua New Guinea 2023a; Solomon Islands - Government of the Solomon Islands 2016b; Fiji - Government of Fiji 2023b; Tonga - Government of Tonga 2022a). A second theme emphasizes improving infrastructure quality and network efficiency through upgrading, widening, maintenance, and asset management initiatives (Samoa - Government of Samoa 2011; Vanuatu - Government of Vanuatu 2015; Cook Islands - Government of Cook Islands 2021; Solomon Islands - Government of Solomon Islands 2016). A third emerging area integrates resilience, safety, and sustainability into road planning through climate-responsive standards, environmental safeguards, and infrastructure supporting non-motorized users and vulnerable groups (Kiribati - Government of Kiribati 2021; Samoa - Government of Samoa 2023; Papua New Guinea - Government of Papua New Guinea 2023b; Vanuatu - Vanuatu - Department of Foreign Affairs and Trade 2017; Palau - Government of Palau 2015).

Advance Low- or Zero-Carbon, Resilient, and Environmentally Sound Transport Systems

1. Transport Energy Consumption Growth

Transport energy consumption patterns provide insight into how economic activity, infrastructure systems, and mobility demands evolve over time. For Pacific SIDS, understanding the sectoral composition of energy demand is particularly important given the central role of transport in enabling movement across dispersed geographies and the region's continued dependence on imported fuels. Figure 18 compares changes in energy consumption across five sectors in the Pacific Islands and the rest of Asia-Pacific, indexed to 2020 (=100), highlighting how sectoral energy demand patterns have evolved between 2000 and 2023.

The indicator suggests that transport has been the third-fastest-growing source of energy demand in the Pacific Islands over the last two decades. Transport energy consumption almost doubled between 2000 and 2023. Compared with the rest of Asia-Pacific, transport follows a similar trajectory, doubling in the same period. Manufacturing, construction, and mining increased energy demand by much more in the Rest of Asia-Pacific (2.4x) than in Pacific SIDS (1.4x). The lower growth in industrial energy demand reflects structural differences in economic structure, with transport continuing to hold a central position in changing energy use patterns across Pacific Island economies. Over the past decade, transport's share of total energy use in Pacific SIDS has remained quite stable at about 26%. Yearly changes are minimal, staying within a 24% to 27% range. In contrast, the Asia-Pacific region shows a different trend, with transport's energy share gradually decreasing from approximately 20% in 2013 to 18% in 2023, averaging 19%.

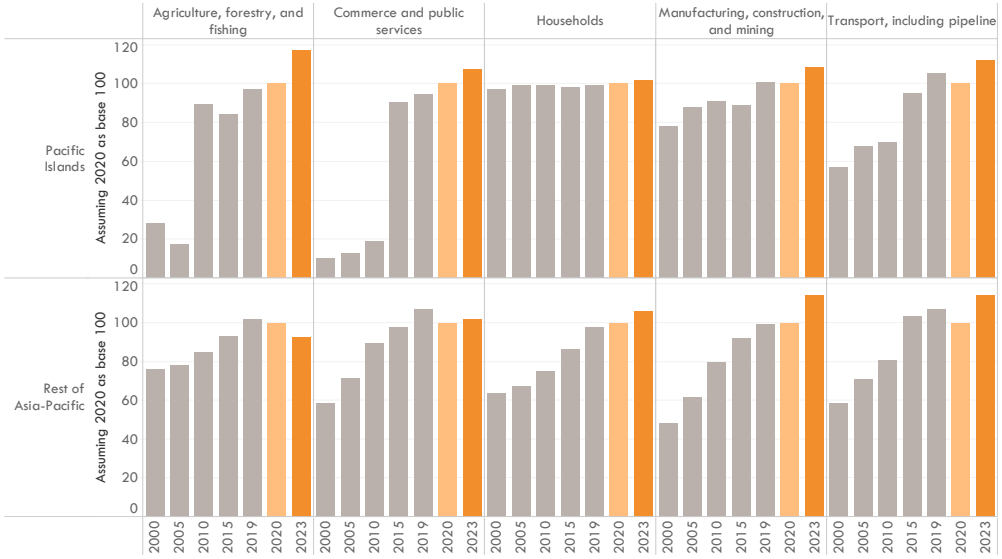


Figure 18. Energy Consumption by Sector
Source: EDGAR (2025)

Within the Pacific SIDS, shipping is arguably the more promising sub-sector for energy efficiency. Its share of total energy consumption dropped from around 12% in the previous decade to approximately 8% more recently. This shift broadly coincides with a period of growing regional maritime agreements, national policy commitments, and targeted interventions aimed at cleaner vessel operations. Domestic aviation is where the picture gets more complicated. Its share has edged down slightly, from around 9% to 8.5%, which on the surface looks unremarkable. But the absolute numbers tell a different story. Aviation energy consumption is growing at an average annual rate of approximately 7%, roughly double the rates of both shipping and road transport, which are around 3% each. In a region where flying is often a practical link between outer islands and basic services, that growth is understandable, but it also means domestic aviation is quietly becoming the mode that will most shape Pacific transport emissions trajectories if left unaddressed (Figure 19).

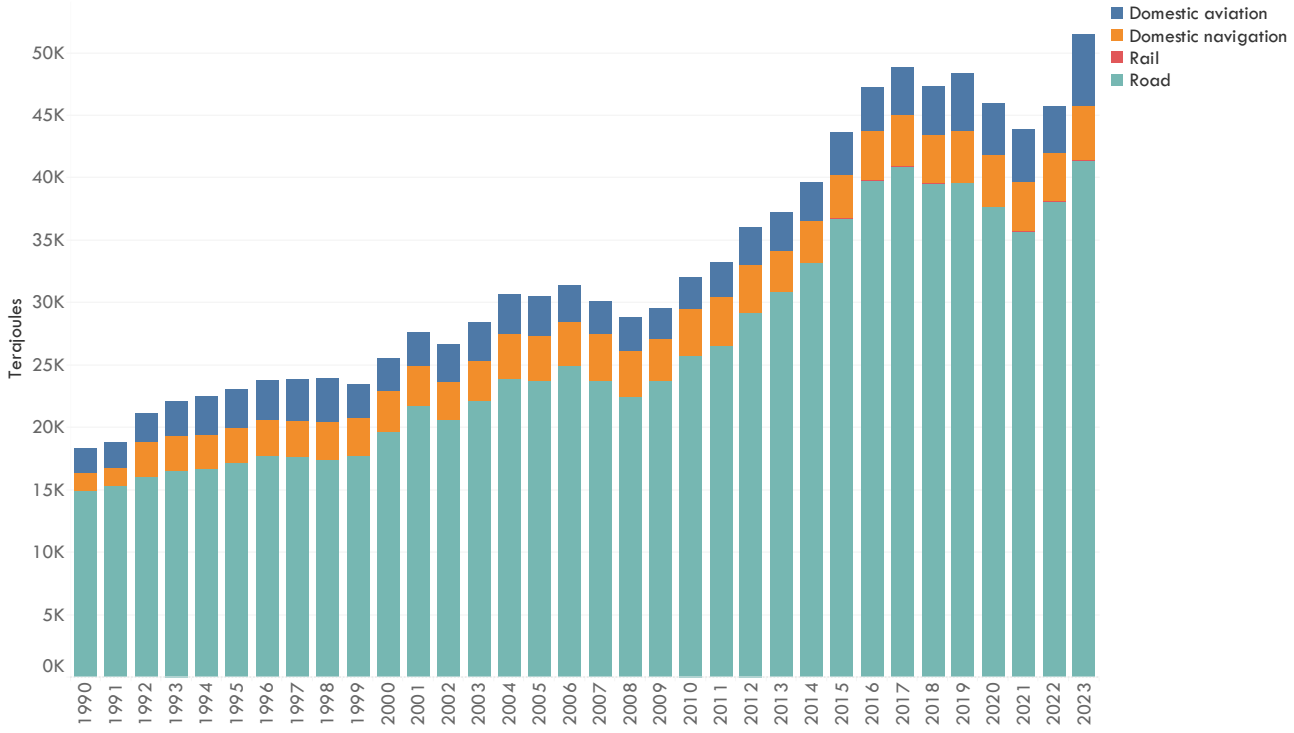


Figure 19. Transport Energy Consumption - by Mode
Source: EDGAR (2025)

2. Transport Energy Consumption Intensity

Transport energy intensity reflects the amount of energy required to support mobility relative to the economy's output. For Pacific SIDS, the indicator is particularly relevant given the region's dispersed geographies and continued dependence on imported fossil fuels, providing insight into how transport systems evolve alongside economic growth and changes in energy efficiency.

Pacific Island economies continue to rely heavily on imported fossil fuels to meet transport energy needs (Figure 20). Since the adoption of the Sustainable Development Goals, transport energy consumption intensity in the Pacific has decreased by approximately 3%, compared to a 6% decline across the broader Asia-Pacific region (Figure 21). Oil products remain the dominant source of transport energy, resulting in both economic and environmental vulnerabilities and complicating long-term decarbonization efforts. In the Solomon Islands, oil products account for all transport energy use and approximately 38% of total national energy consumption. In Kiribati, the transport sector accounts for about one-third of national energy consumption and emissions, and is completely dependent on imported oil. In Papua New Guinea, transport energy demand continues to increase in parallel with overall economic activity.

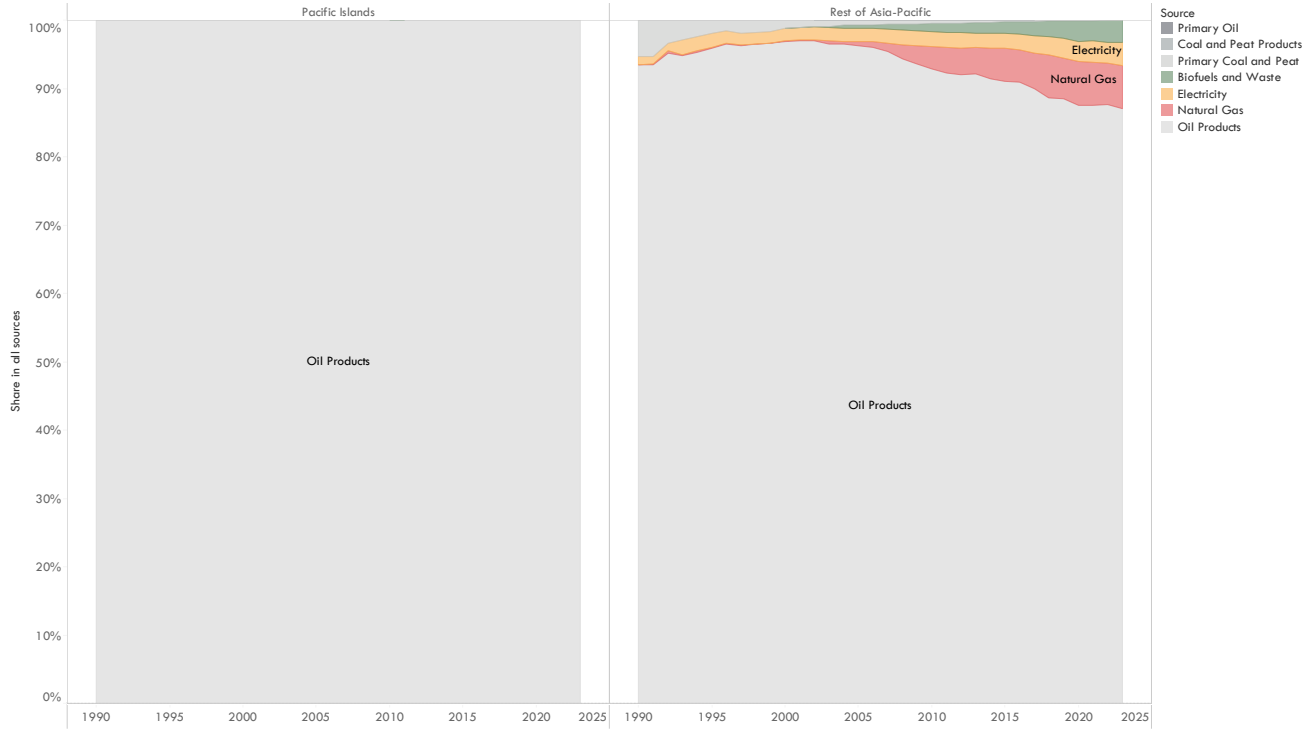


Figure 20. Transport Energy Consumption - Share by Source
Source: United Nations Statistics Division (2024)

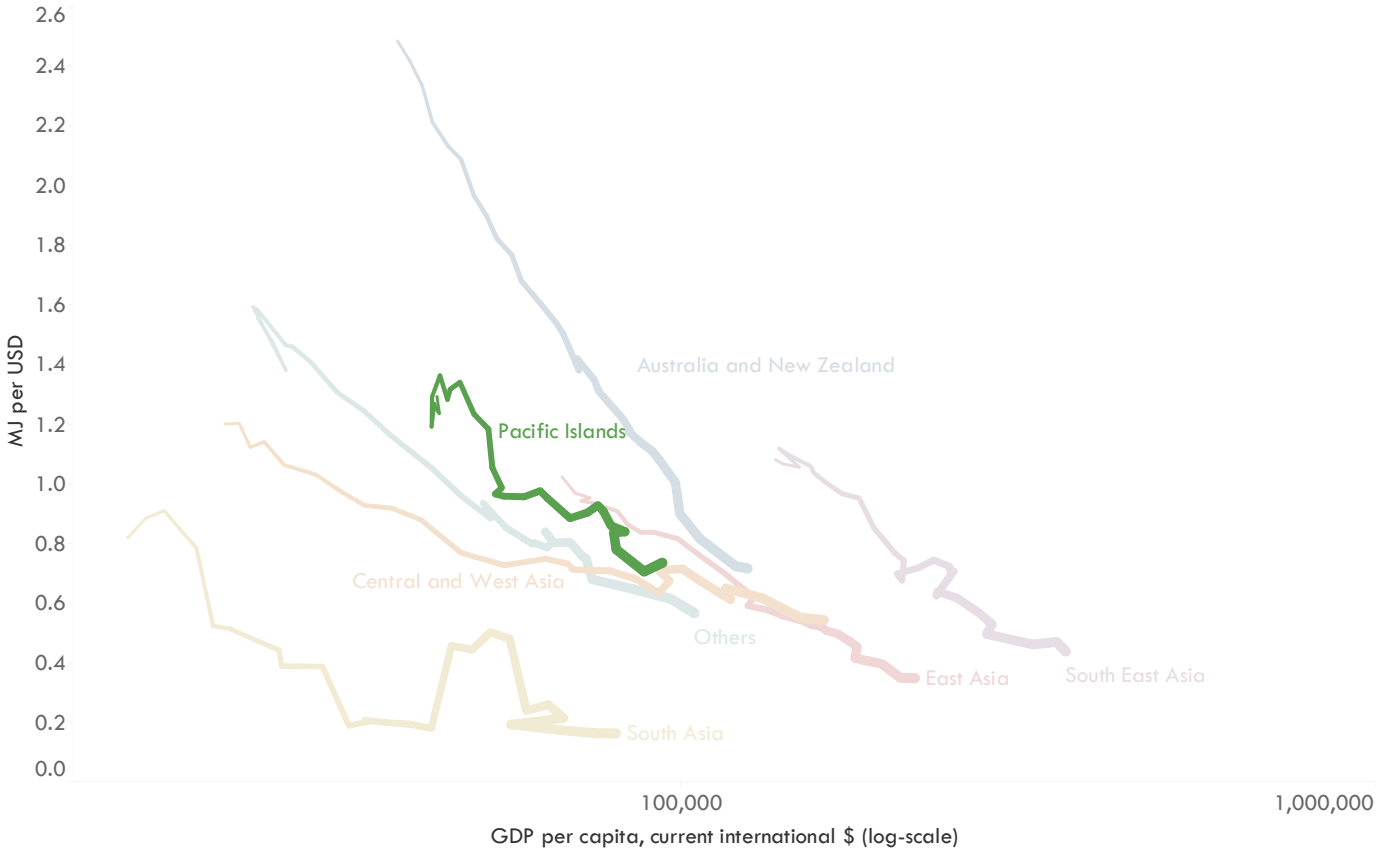


Figure 21. Transport Energy Consumption Intensity for Asia-Pacific Subregions (1995-2023)
Source: United Nations Statistics Division (2024); World Bank (2025)

Figure 22 illustrates transport energy intensity across Pacific SIDS, showing the diverse ways transport energy use changes with economic growth. Palau has relatively high-income levels of about $10,000 - $17,500 GDP per capita and transport energy intensity around 7.6–5.9 MJ per USD from 2000 to 2023. By contrast, Fiji has kept lower intensity levels, dropping from 1.3 to 0.9 MJ per USD in the same period. Papua New Guinea has some of the lowest transport energy intensity values at about 0.5 MJ per USD as of 2023.

Pacific Island economies continue to rely heavily on imported fossil fuels to meet transport energy needs

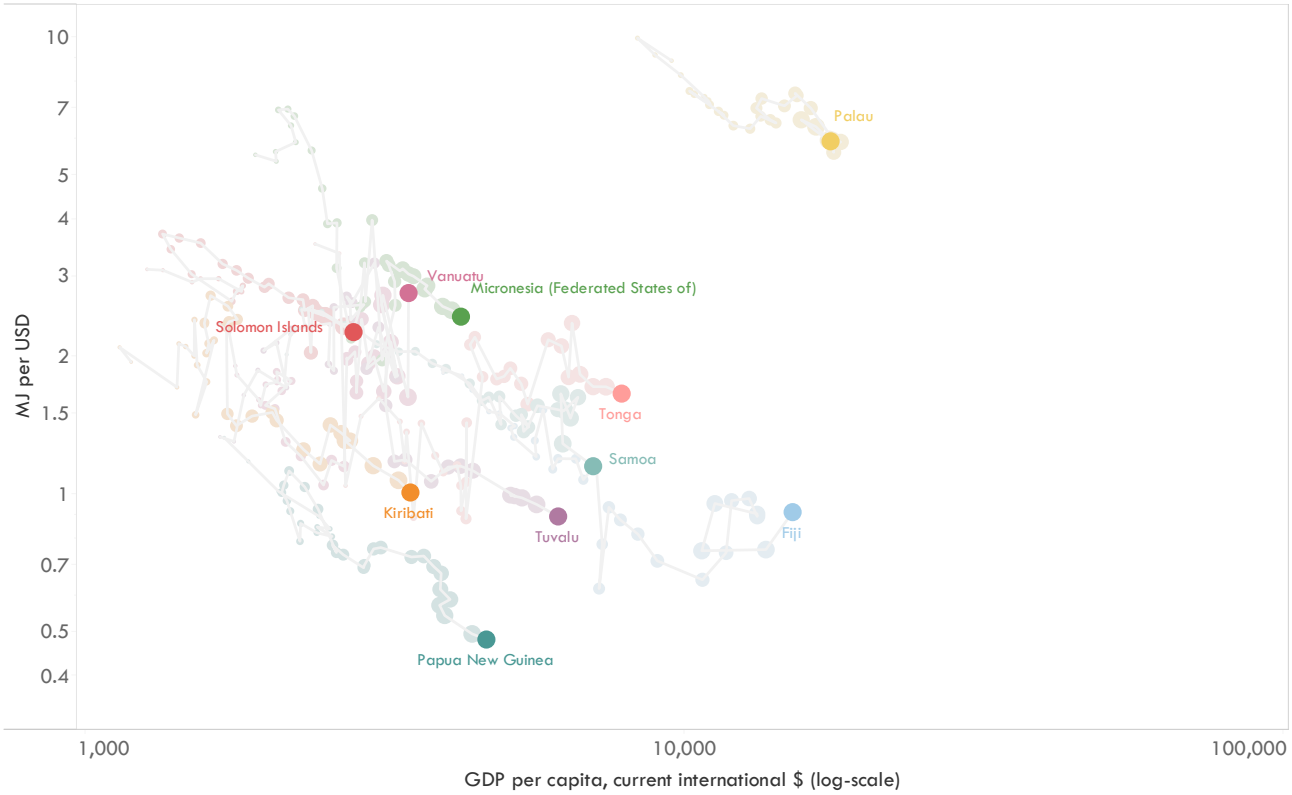


Figure 22. Transport Energy Consumption Intensity for Pacific SIDS
Source: EDGAR (2025); World Bank (2025)

Policies supporting energy diversification and reduced consumption

Policy measures across various countries highlight several common themes. There is a strong focus on enhancing energy efficiency and promoting the adoption of more efficient transport technologies through vehicle standards, financial incentives, and replacing older fleets (Fiji - Government of Fiji 2015; Tonga - Government of Tonga 2021; Solomon Islands - Government of the Solomon Islands 2014; Micronesia - Government of Micronesia (Federated States of) 2023). Many countries are also increasingly integrating renewable energy into transport systems via electric mobility initiatives, solar-powered charging stations, and renewable-powered maritime and aviation applications (Papua New Guinea - Government of Papua New Guinea 2022; Samoa - Government of Samoa 2023; Marshall Islands - Government of Marshall Islands 2016; Fiji - Government of Fiji 2024). Additionally, several countries aim to shift away from fossil fuels by setting renewable energy targets and exploring alternative fuels and technologies (Tuvalu - Government of Tuvalu 2022a; Cook Islands - Government of Cook Islands 2016; Kiribati - Government of Kiribati 2017a; Tonga - Government of Tonga 2008).

3. Transport GHG Emissions Growth

Transport emissions are particularly significant in Pacific SIDS because this sector makes up a larger portion of their economy and energy use compared to many larger economies. Analyzing the share of domestic transport emissions in total economy-wide greenhouse gases from 2000 to 2025 reveals clear differences between Pacific Islands and the broader Asia-Pacific region. In Pacific Islands, domestic transport contributed around 25% of economy-wide GHG emissions in 2023, a notable rise from 7% in 2000, reaching a peak of 36% in 2012, then stabilizing at approximately 24–25%. Meanwhile, transport emissions in the rest of Asia-Pacific have remained relatively unchanged at around 8–10% of total emissions, indicating that transport accounts for two to three times more of the overall emissions in Pacific economies (Figure 23).

This indicator also reflects broader structural differences: while power industries are the main source of emissions in the wider Asia-Pacific, the transport sector has the largest contribution in Pacific economies. It also suggests that changes within the transport sector may have a proportionally greater impact on economy-wide decarbonization pathways in Pacific SIDS.

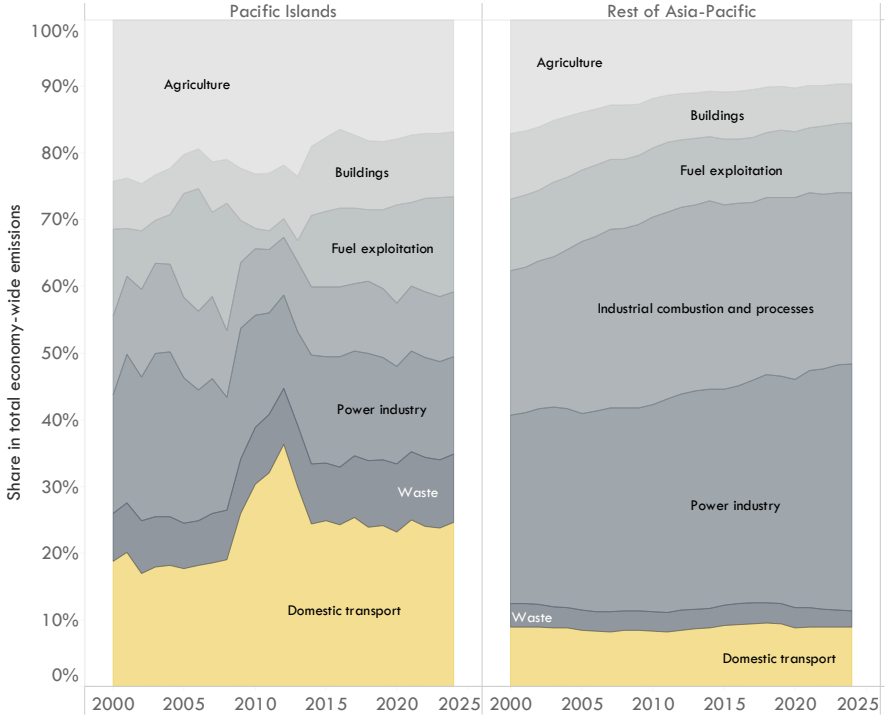


Figure 23. GHG Emissions by Sectors
Source: EDGAR (2025)

4. Transport GHG Emissions Intensity

Transport emissions intensity relative to GDP offers insights into how efficiently economic activities produce emissions and shows how transport systems develop alongside economic growth. Pacific SIDS have achieved the fastest improvements in transport GHG emissions intensity among all Asia-Pacific subregions, reducing the indicator from 104 gCO_2e per USD of GDP in 2010 to 47 in 2023. This represents an average annual decrease of 6%, higher than the 4% seen across the rest of Asia-Pacific. This substantial difference indicates that, despite structural limitations, Pacific economies are decoupling transport emissions from their economic output at a faster rate than most other regions. However, this is from a relatively higher base (Figure 24).

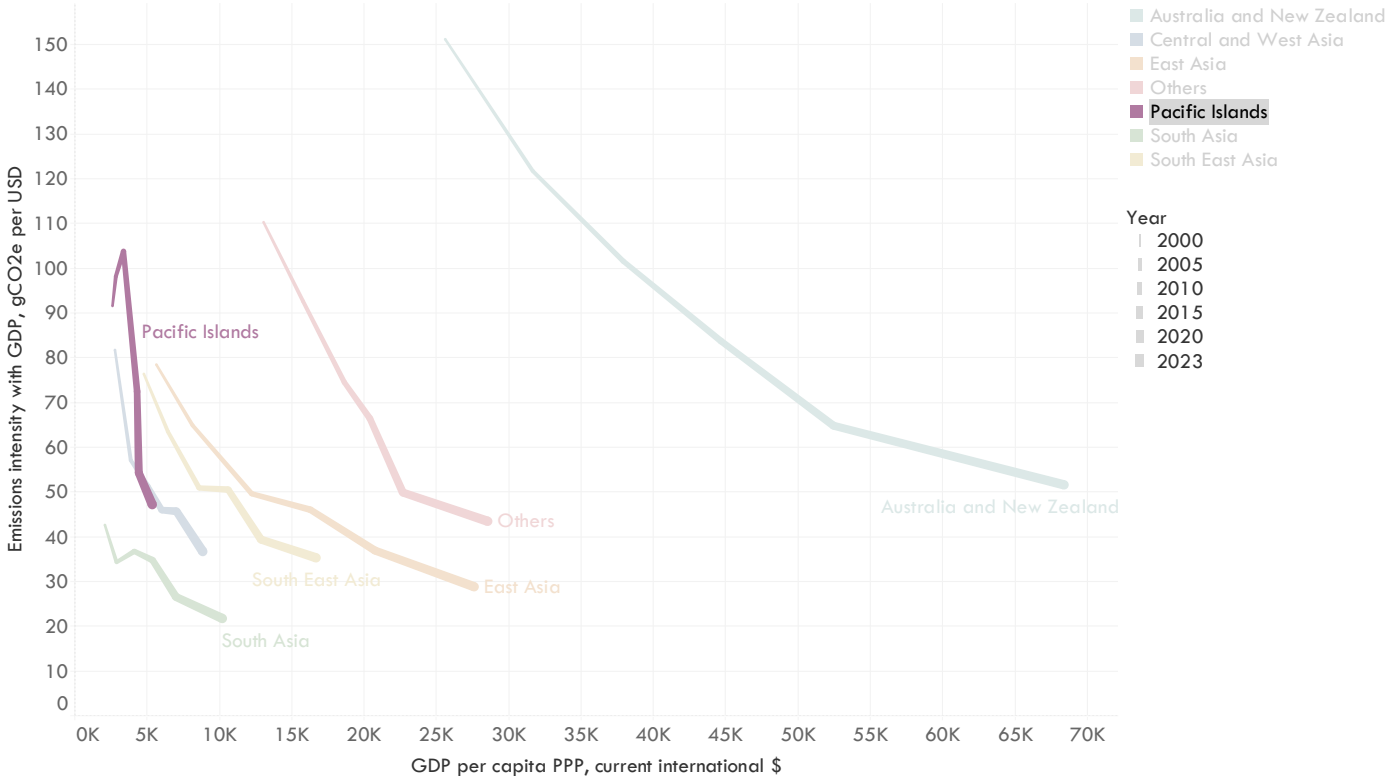


Figure 24. Transport GHG Emissions Intensity - by Subregion (2000-2023)
Source: EDGAR (2025); World Bank (2025)

Pacific SIDS have achieved the fastest improvements in transport GHG emissions intensity among all Asia-Pacific subregions

The regional improvement is evident, but there is significant variation beneath it. Countries within Pacific SIDS show sharply divergent paths. Fiji has the highest income levels among these nations, with GDP per capita reaching around $16,000. Its transport emissions intensity has significantly decreased from about 115 gCO_2e per USD in 2000 to 48 gCO_2e per USD in 2024, reflecting improved emissions efficiency (CAGR of -4%). Similarly, Papua New Guinea has experienced a decrease in emissions intensity from roughly 80 gCO_2e per USD to about 41 gCO_2e per USD (CAGR of -3%), alongside steady income growth. Conversely, Vanuatu's trajectory differs; its transport emissions intensity increased from approximately 80 gCO_2e per USD in 2000 to about 117 gCO_2e per USD in 2024 (CAGR of 2%), despite income also rising. This indicates that Vanuatu's economic growth has not been accompanied by improvements in transport emissions efficiency (Figure 25).

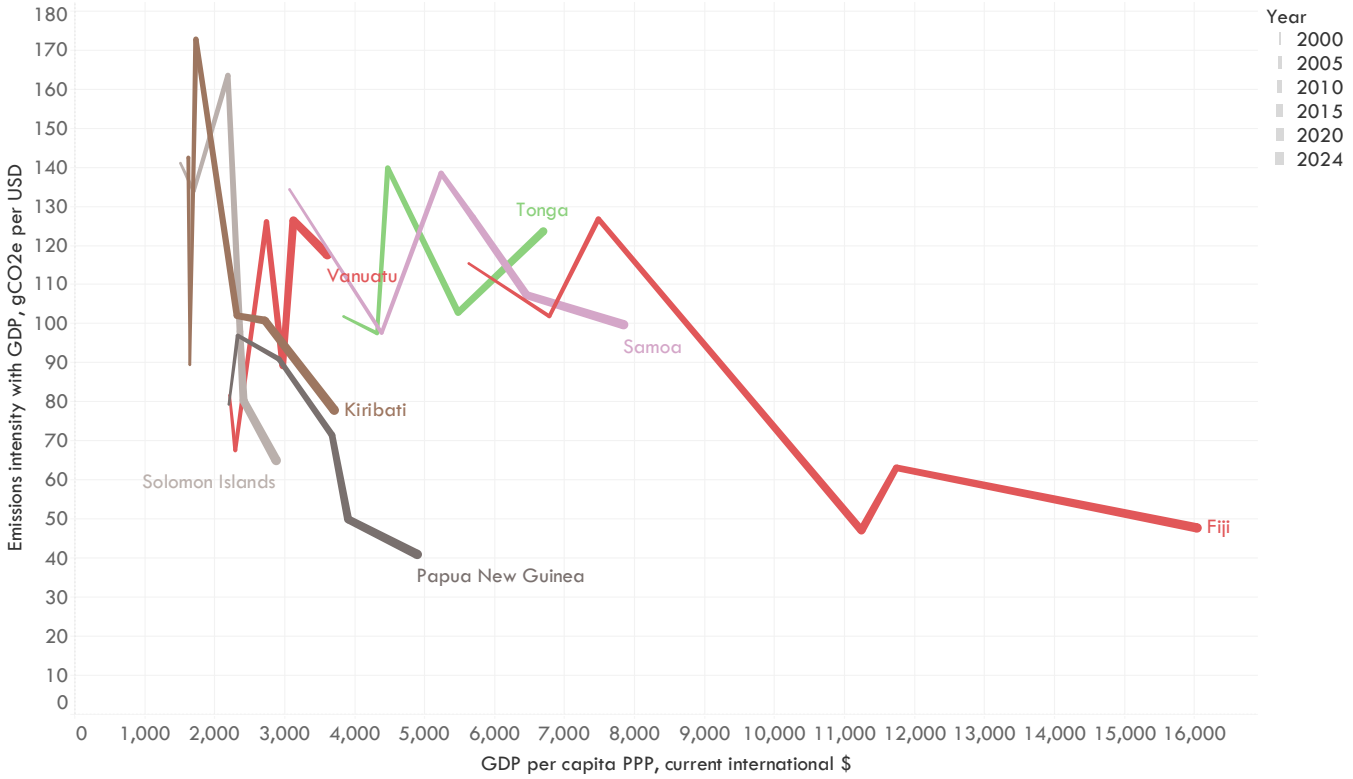


Figure 25. Total Transport Emissions Intensity (2000-2024)
Source: EDGAR (2025); World Bank (2025)
Note: Data for 7 countries were unavailable for this indicator. The available dataset is considered sufficient to reasonably reflect overall regional trends.

The decoupling story across Pacific SIDS is real but uneven. Most countries are experiencing faster GDP growth compared to transport emissions — for example, Kiribati with about 7% annual GDP growth versus 4% emissions growth, Samoa with 5% GDP against 2% emissions, and Papua New Guinea, which shows the strongest trend with emissions slightly declining (1%) while its economy grows at 5% annually. Fiji and the Solomon Islands have nearly stable emissions while sustaining moderate GDP increases. These positive trends are promising, but they largely reflect the structural characteristics of small island economies rather than solely deliberate policy efforts. Vanuatu diverges sharply from the regional trend. Its transport emissions rise about 8% annually, outpacing GDP growth at 5%. This indicates that the economy is becoming more emissions-intensive (Figure 26).

Decarbonizing transport in Pacific SIDS isn't mainly driven by income growth; instead, it's influenced by transport infrastructure, energy reliance, and policy decisions that affect fleet makeup, fuel quality, and modal investments. When these policy choices are delayed or absent, emissions increase alongside economic growth rather than staying in check.

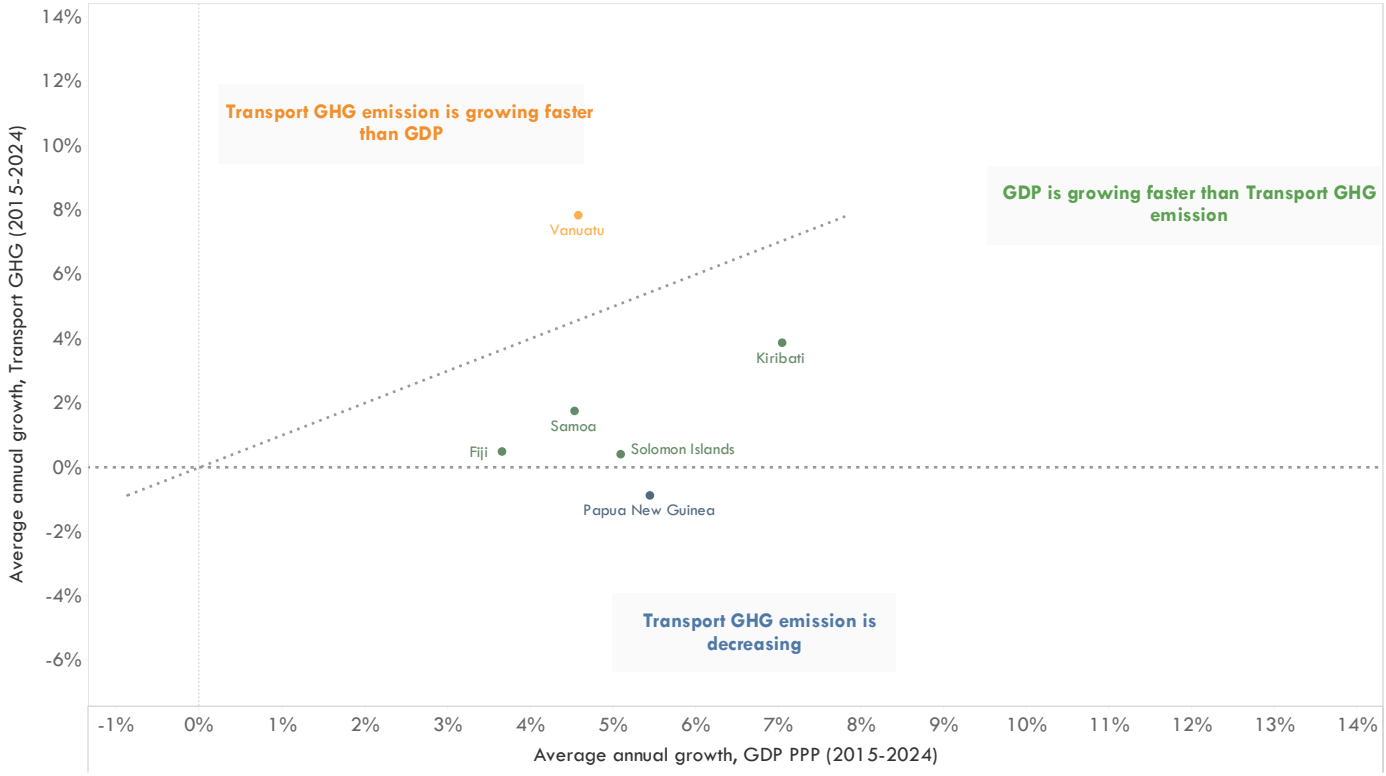


Figure 26. Transport GHG Emissions vs. GDP Growth
Source: EDGAR (2025); World Bank (2025)

5. Modeshare in Transport GHG emissions

The comparison between the energy consumption story and the GHG emissions story shows both similarities and differences. Road transport continues to be the leading sub-sector in both areas, but its share of transport emissions has increased more significantly, rising from 73% in 2003 to 86% in 2024. Domestic navigation and aviation each account for about 7%-8% of transport GHG emissions, a small yet important share given the region's reliance on these modes (Figure 27).

The comparison with the broader Asia-Pacific region and the global situation provides additional context. Both areas show more consistent modal trends over the past twenty years, with road transport dominating at around 87% in Asia-Pacific and 92% worldwide. Domestic navigation has decreased to about 4-5% in Asia-Pacific and 1-2% globally, reflecting the unique emissions profile of Pacific SIDS. It's also notable that Rail accounts for a significant share in both the Asia-Pacific and global transport emissions, a mode that is absent in Pacific SIDS. This absence increases emissions from road, maritime, and aviation, as there are no low-carbon land-based alternatives included (Figure 27).

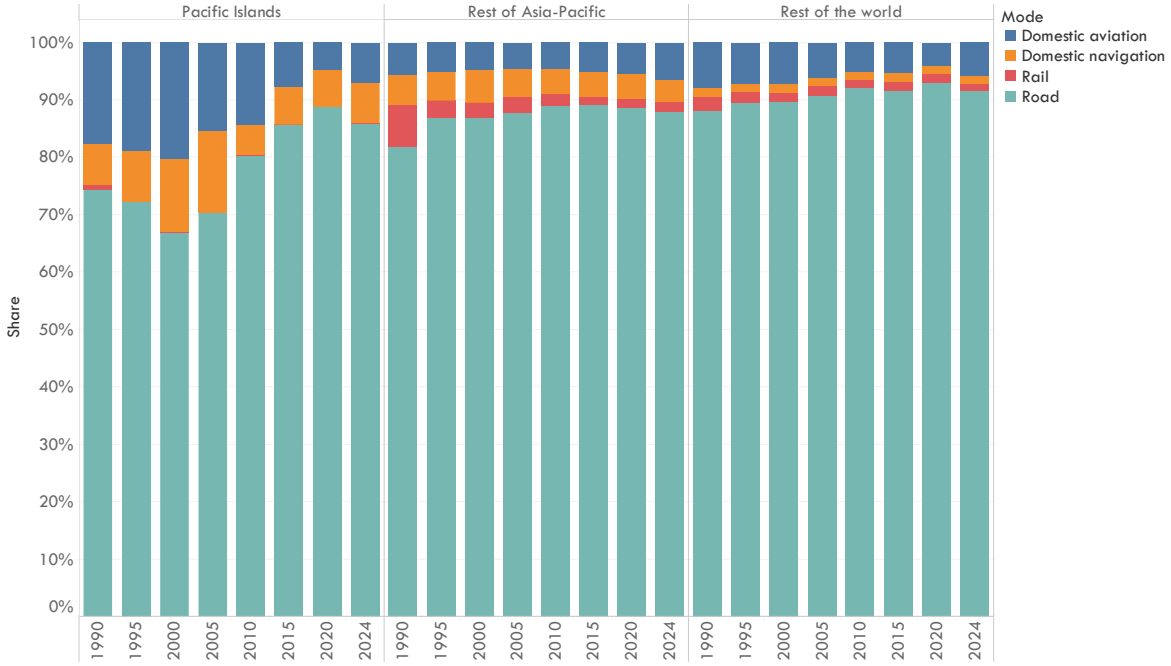


Figure 27. Modeshare in Transport GHG emissions
Source: EDGAR (2025)

Policies supporting transport GHG emission reduction

Policy measures across countries show several common priorities in addressing transport GHG emissions. A key focus is reducing emissions from domestic maritime transport, which is among the most frequently identified mitigation areas in policy frameworks (Fiji - Government of Fiji 2020b; Marshall Islands - Government of Marshall Islands 2020; Solomon Islands - Government of Solomon Islands 2023). Countries increasingly link transport emission reductions with broader economy-wide decarbonization strategies and climate commitments (Tonga - Government of Tonga 2020c; Marshall Islands - Government of Marshall Islands 2018a; Fiji - Government of Fiji 2022). Supporting measures such as electrification and cleaner transport technologies are also identified as enabling pathways (Marshall Islands - Government of Marshall Islands 2018b; Fiji - Government of Fiji 2024). Quantitative targets vary across countries. These include reducing domestic shipping emissions by 40% by 2030 and achieving full sector decarbonization by 2050 (Fiji- Government of Fiji 2020a; Marshall Islands - Government of Marshall Islands 2020; Solomon Islands - Government of Solomon Islands 2023), reducing domestic transport emissions by 16% by 2025 and 27% by 2030 (Marshall Islands - Government of Marshall Islands 2016, 2020), and setting an overall transport decarbonization target of 40% by 2030 (Fiji - Government of Fiji 2022).

Set against these commitments, observed emissions trends offer a useful point of reference. Where mode-level data is available, recent trajectories do not consistently align with the reductions targeted. Samoa's Ocean Strategy calls for a 50% reduction in marine emissions by 2030 relative to 2020 levels, yet shipping emissions rose by roughly 26% over 2020-2023 (EDGAR), moving further from rather than toward that goal. Fiji's shipping emissions, against which its NDC and NDC Investment Plan set a 40% reduction target, also increased by about 26% over the same period. Tonga's NDC 3.0 targets an approximately 50% reduction in transport-sector emissions by 2030 relative to a 2006 baseline, while combined road, shipping, and aviation emissions had instead grown by roughly 108% over that baseline by 2023. These comparisons suggest that translating transport-related climate commitments into measurable emissions reductions remains a challenge across the region.

6. Electrification

Transport electrification in Pacific SIDS is still in its nascent stage, with adoption constrained by infrastructure, policy, and institutional readiness. According to UNEP's 2024 E-Mobility Readiness Index, most Pacific SIDS rank below broader Asia-Pacific countries, especially in areas like technology access, market readiness, and charging infrastructure. Larger island economies, such as Fiji, perform relatively better in the region, but still face gaps in electricity system coverage, financing, and technical skills. These issues contribute to the uneven and relatively low adoption of e-mobility across the region (Figure 28).

Import patterns reveal an early and uneven shift toward electric vehicles. Although the share of EVs in total road vehicle imports by value remains limited, some countries have seen increases. In 2024, Samoa had the highest share at 10.4%, while the Cook Islands reached 9.6% in 2023, then dropped to 1.9%. Other nations have lower shares: Marshall Islands (1.3%), Fiji (1.9%), FSM (1.9%), Tuvalu (1.4%), Vanuatu (0.7%), Solomon Islands (0.5%), and Kiribati (0.5%). Tonga and Niue are close to negligible. The fluctuations in these figures reflect the small, episodic nature of Pacific vehicle markets, where infrequent fleet procurement decisions can cause significant annual variations (Figure 29).

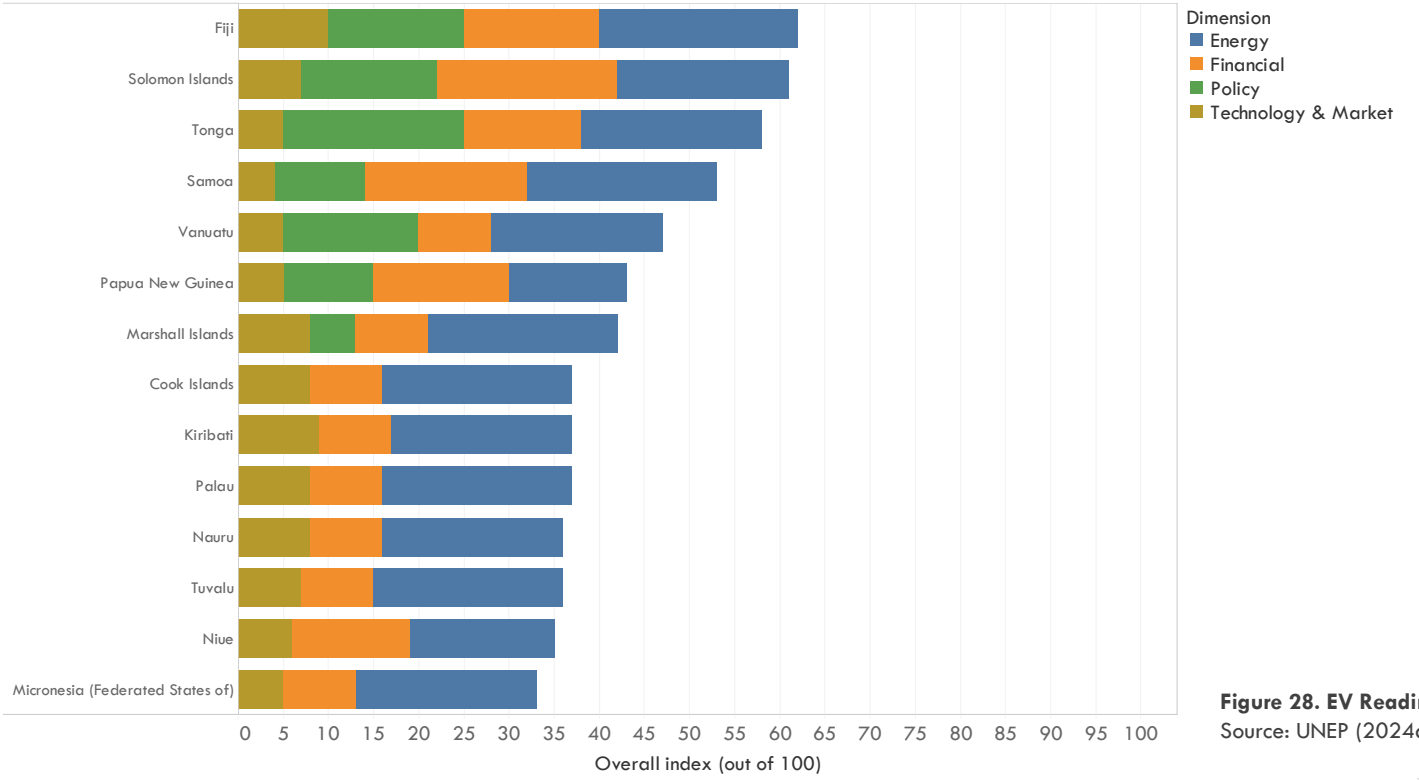


Figure 28. EV Readiness Index
Source: UNEP (2024a)

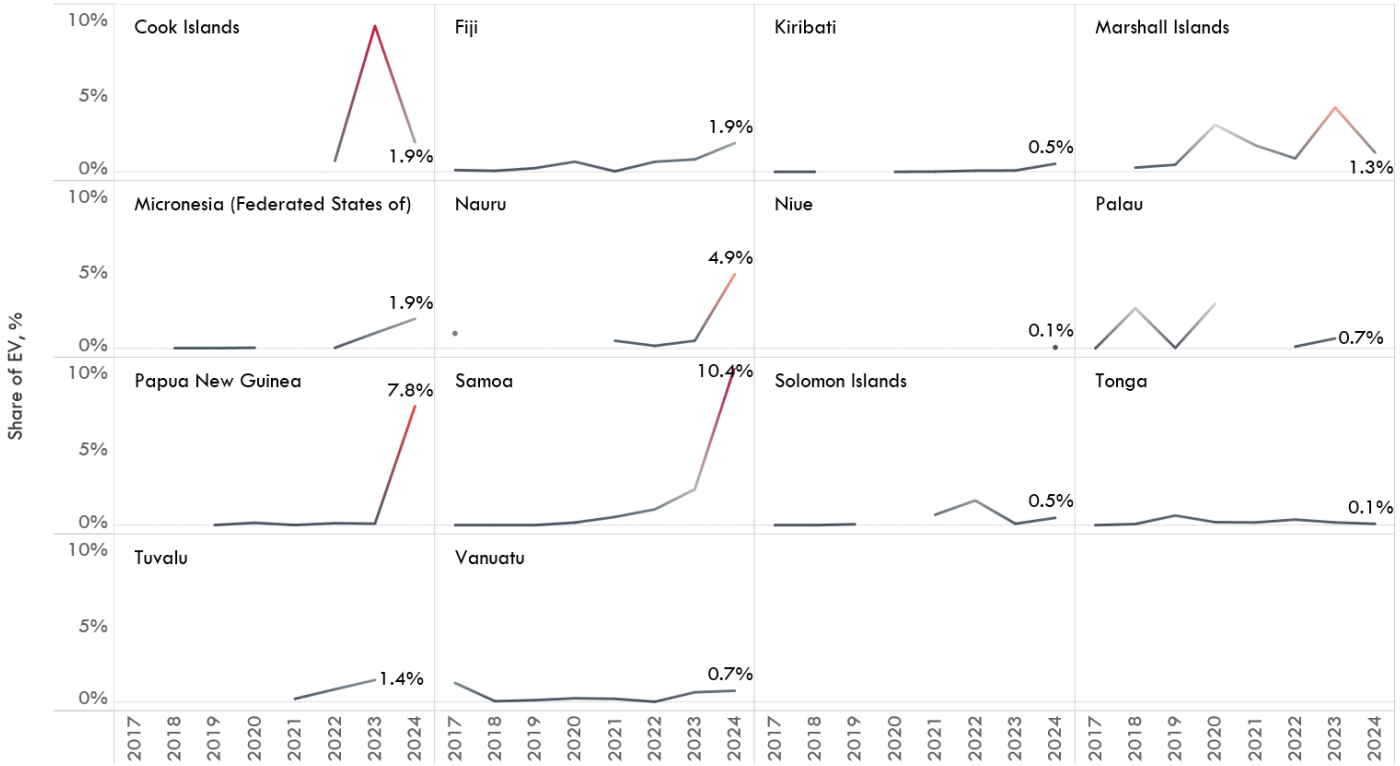


Figure 29. Share of EVs in Road Vehicle Imports
Source: Trademap (2025)

Box no. 3. Country Highlight – Fiji

Fiji stands out as a country-level example of early market uptake. In 2024, newly registered fully electric vehicles reached 137, accounting for 1.1% of all new registrations, up from 0.7% in 2022. Newly registered hybrid or semi-electric vehicles increased to 428 units, representing 3.5% of registrations, up from 1.7% in 2022 (StatsFiji, n.d.). These figures indicate that the market is gradually strengthening, suggesting the potential for further growth as supporting infrastructure and policy frameworks improve.

Policies supporting Electrification

E-mobility targets across Pacific SIDS show that countries are adopting varied pathways and levels of ambition. Targets extend beyond vehicle deployment to include charging infrastructure, fleet transition, market development, and supporting systems. The target landscape emphasizes public and government fleets as early entry points, alongside gradual market penetration targets across vehicle categories. Several countries have set vehicle adoption targets, including 15% of all new vehicle registrations to be electric by 2030 (Papua New Guinea - Government of Papua New Guinea 2022), 10% of public buses and 10% of government vehicle fleets transitioning to electric by 2030 (Vanuatu - Government of Vanuatu 2022, 2020), and 100% electrification of municipal government fleets by 2050 (Tonga - Government of Tonga 2021).

Targets increasingly extend toward supporting systems and long-term transformation pathways. Fiji's low-emission pathway outlines progressively increasing EV penetration scenarios. These range from partial electrification of taxis, buses, cars, and trucks to 100% electrification of all vehicle categories under very high ambition scenarios by 2040 (Government of Fiji 2018a). Fiji also targets deploying 16,000 EVs and supporting charging infrastructure by 2030 (Government of Fiji 2022). Solomon Islands adopts a phased approach with detailed targets for vehicle categories and charging infrastructure. It aims for an overall EV sales share of 28.3% by 2030 and 35.6% by 2035, alongside deploying 300 charging stations by 2030 and 580 by 2035 (Solomon Islands - Government of Solomon Islands 2022).

Countries increasingly identify fiscal and regulatory interventions such as tax exemptions, import incentives, and support measures to encourage EV uptake (Fiji - Government of Fiji 2020b; Tonga - Government of Tonga 2021). Measures also emphasize enabling infrastructure and supporting systems, including charging networks and integration with renewable energy systems (Samoa - Government of Samoa 2023; Papua New Guinea - Government of Papua New Guinea 2022). At the same time, countries frame e-mobility as part of broader transitions aimed at reducing fuel import dependence and strengthening long-term transport resilience rather than solely as a climate mitigation measure (Marshall Islands - Government of Marshall Islands 2018b; Kiribati - Government of Kiribati 2017a; Tuvalu - Government of Tuvalu 2022a).

7. Used Passenger Car Import

Used passenger car imports in Asia-Pacific and the Pacific Islands have shown similar trends. From the 1990s through the 2010s, average annual import values rose steadily. In the early 2020s, there was a sharp decline, likely due to COVID-19 disrupting trade. In contrast, global imports stayed strong beyond 2020.

It is worth looking more closely at growth rates before 2020. Pacific SIDS had the highest CAGR at nearly 22%, while Asia-Pacific reached 14% and the world saw 8%. However, the Pacific SIDS figure should be viewed with caution because the starting numbers are very small. Just a few extra vehicles in a year can make the growth rate look much higher, even if the real change is minor.

The period from 2015 to 2020 saw the highest import activity. One possible reason is that importers brought in vehicles before tightening of regulations. There were clear signs of this. Between 2015 and 2019, several SIDS announced plans for stricter import controls.

Compared to the wider region, Pacific SIDS still make up a small share of imports. Across all 14 countries, imports peaked at 707 vehicles in 2020 but dropped to 45 in 2021. Most of this trade came from just two countries: the Marshall Islands and Vanuatu, which together made up about 90% of the subregional total during this time.

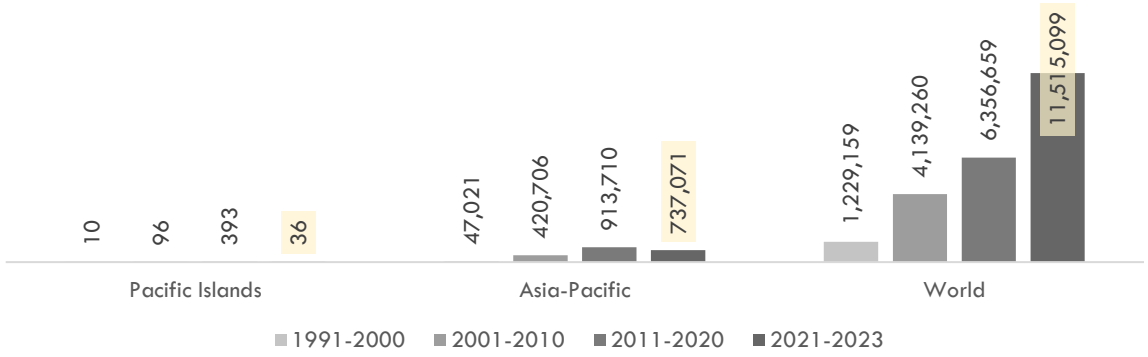


Figure 30. Average annual used vehicle (Passenger Car) Imports
Source: ITF (2024)

Policies related to Used Car Import

Vehicle age and quality is addressed under Strategy 7 of the World Bank's Guide to Mobility for Livable Pacific Cities (World Bank 2024), which sets out recommended import requirements to control fleet quality at entry. For light-duty vehicles, this includes a maximum age of 8 years and 100,000 km travelled at the time of import, together with minimum Euro 4/Japan 05 emissions standards for ICE vehicles or UNECE R100 compliance for EVs; heavy-duty vehicles are subject to a maximum age of 10 years under the same emissions provisions. Pre-shipping inspections under this strategy are already in place in Fiji and are recommended for adoption across the remaining Pacific Island Countries.

8. Fossil Fuel Subsidies

Fossil fuel subsidies in Pacific SIDS include both explicit support via direct price measures and implicit costs from unpriced externalities like road crashes, congestion, and road damage. These subsidies are an important yet less visible part of transport economics in the region. Data shows that Pacific SIDS generally fall within the lower-to-middle range of fossil fuel subsidies per person compared to the wider Asia-Pacific area, though there is notable variation among countries. For example, Fiji's implicit subsidies amount to about $86 per person, while Solomon Islands and Kiribati have lower levels around $4-10 per person. Papua New Guinea has some of the lowest at around $2 per person, despite its relatively higher income. The variation suggests that subsidy outcomes are influenced by factors beyond economic development, including energy import dependence, fuel pricing structures, transport characteristics, performance and policy arrangements.

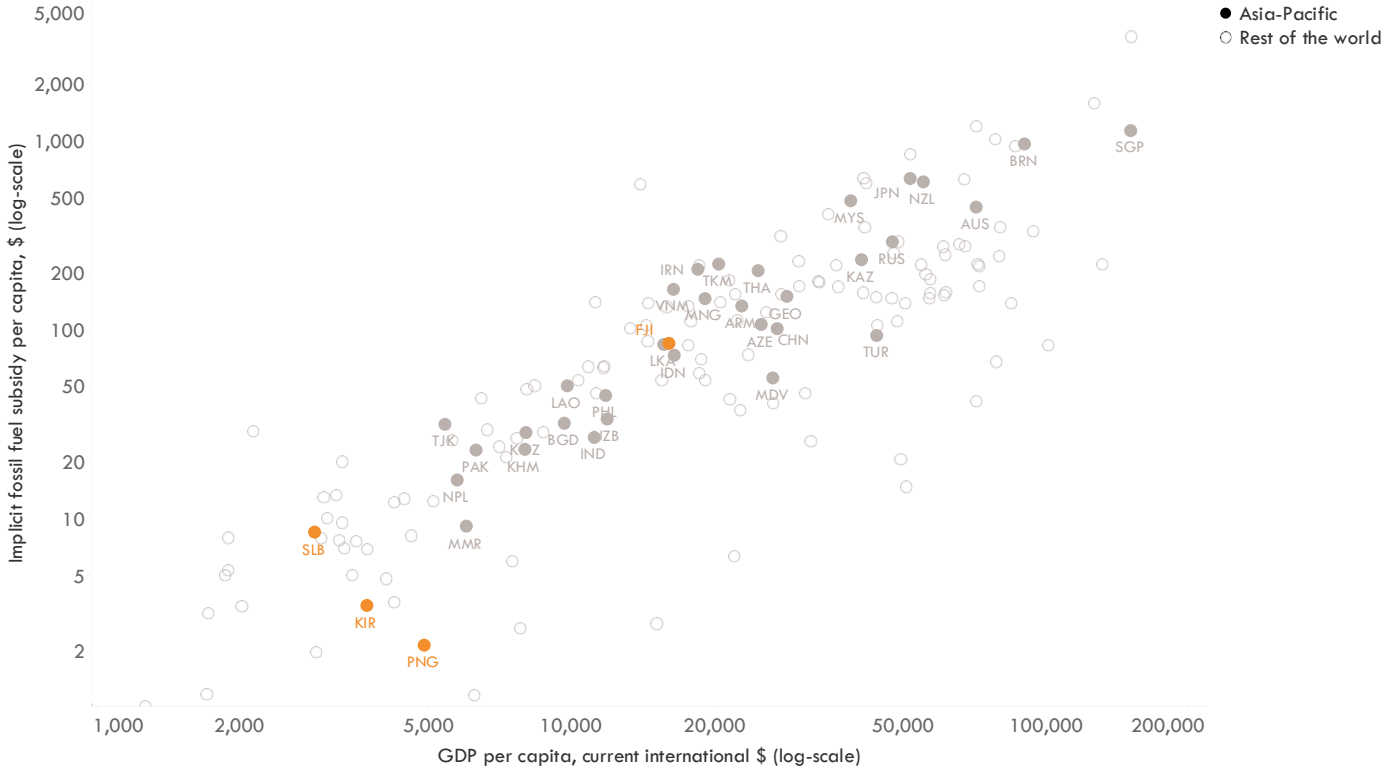


Figure 31. Implicit Fossil Fuel Subsidies
Source: International Energy Agency (IEA) (n.d.); World Bank (2025)

Policies supporting rationalisation of the fossil fuel subsidies

Measures related to fossil fuel subsidies in Pacific SIDS are reflected in a combination of international commitments and country-specific policies focused on transport and energy transitions (Asian Transport Observatory 2025). Several nations mention commitments made under the High Ambition Coalition COP26 Leaders' Statement, including efforts to stop inefficient fossil fuel subsidies as soon as possible (HAC 2025). At the country level, actions include reviewing transport subsidy systems and implementing fiscal measures to promote cleaner transportation options, such as electric mobility (Fiji - Government of Fiji 2015, 2023a; Solomon Islands - Government of Solomon Islands 2022).

9. Grid Decarbonization

The carbon intensity of electricity grids is a key factor in determining if EV adoption truly results in emissions reductions. IRENA data (2025) show that the share of renewable energy in electricity capacity in Pacific SIDS electricity generation varies considerably: Tuvalu leads at approximately 59%, followed by Fiji (49%), Tonga (46%), followed by others. Most Pacific SIDS have seen renewable electricity capacity shares increase since 2015. For example, Kiribati increased from 13% in 2015 to 38% in 2024, Niue from 14% to 43%, and Samoa from 22% to 41%.

Grid decarbonization across Pacific SIDS shows an adverse trend, with the average grid emission factor increasing by approximately 0.8% annually over the last two decades[4]. In contrast, the broader Asia-Pacific region has followed an improving trajectory, with average grid emission factors declining by around 0.5% annually, while the global average has improved at approximately 0.6% annually. For example, PNG's grid emission factor increased from 466 gCO_2/kWh in 2015 to 514 gCO_2/kWh in 2023, showing a slight increase in grid carbon intensity despite potential for renewable energy from hydropower (Figure 32). Further, Solomon Islands, Nauru, Tonga, and Vanuatu have high grid emission factors (500–750 gCO_2/kWh), indicating that without grid decarbonization, EV adoption will offer limited net emission reductions.

Figure 32. Grid Emission Factor
Source: Ember (2024)

[4] The CAGR values have been averaged across the last decade to provide a smoother representation of long-term trends

10. Transport Air Pollution

Transport air pollutant emission trends offer insight into whether economic growth correlates with increased environmental pressures from mobility systems. The Pacific Islands show a unique pattern: despite a more than threefold rise in GDP from 2000 to 2022, transport air pollutant emissions generally decreased, with reductions in black carbon being the most significant. This contrasts with the broader Asia-Pacific region, where rapid economic growth often coincided with stable or rising transport emissions. Globally, there was a more gradual decline in transport-related pollutants (Figure 33).

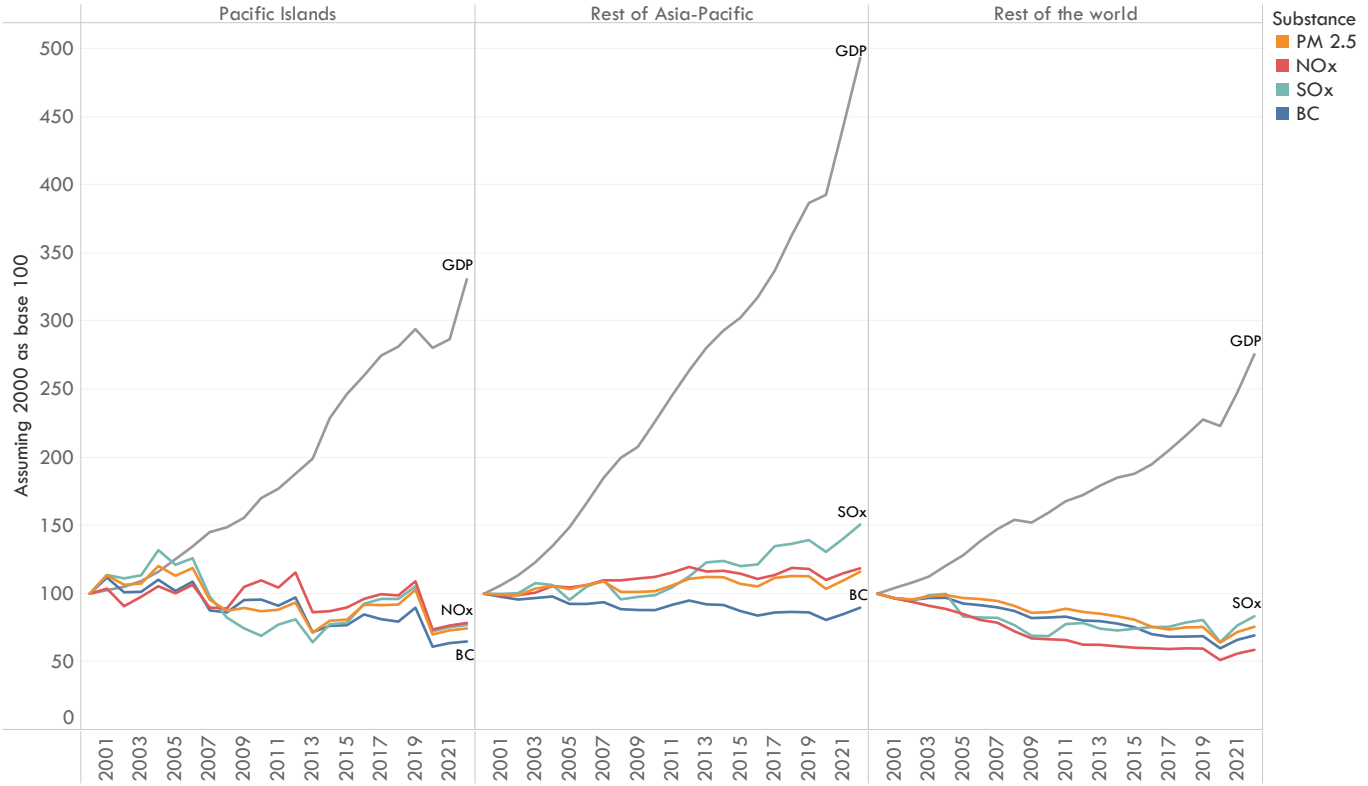


Figure 33. Transport air pollutants growth
Source: European Commission (2024)

Transport mode shares for air pollutant emissions reveal a dynamic trend, especially for PM2.5. Domestic shipping has grown substantially, increasing from 54% in 2012 to 70% in 2022, with an average annual increase of 0.2%. Meanwhile, road transport's share declined from 34% to 20%, with a compound annual decline of about -7%. Shipping is now the primary source of PM2.5 emissions from transport among Pacific SIDS. Comparing this with the rest of Asia-Pacific and global data shows notable differences in starting points. In 2022, navigation accounts for roughly 55% of transport PM2.5 in the rest of Asia-Pacific and only 23% worldwide, while road transport contributes 22% and 42%, respectively. Although the absolute shares vary, the overall trend remains consistent: shipping share is increasing, and road's share is decreasing. This shift is most significant in Pacific SIDS, highlighting the need for focused attention on domestic shipping. Dust from exhaust, brake, and tyre wear also significantly contributes to PM2.5 in the transport sector, making up 9% in Pacific SIDS, compared to 13% in the rest of Asia-Pacific and 23% globally (Figure 34).

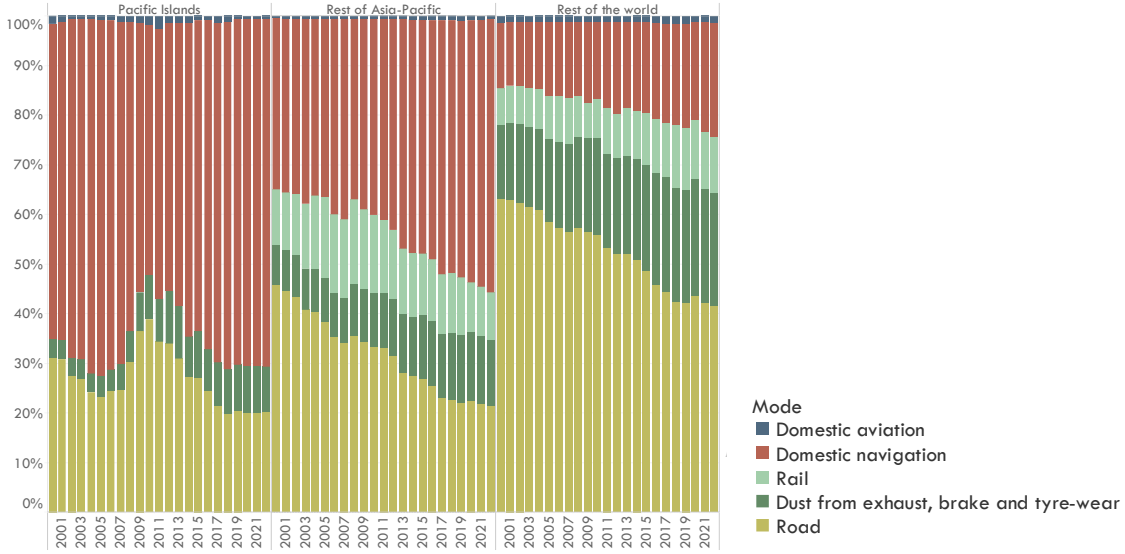


Figure 34. PM2.5 Emissions from the Transport Sector - by Mode
Source: European Commission (2024)

Policies supporting reduction in transport air pollution

Transport air pollution strategies across Pacific SIDS mainly aim to enhance vehicle and fuel standards, regulate emissions from current vehicle fleets, and encourage cleaner transportation technologies. Several countries mention adopting increasingly strict standards, such as Euro IV, Euro V, and Euro VI, for imported vehicles and fuels (Fiji - Government of Fiji 2015, 2018a; Solomon Islands - Government of Solomon Islands 2022). They also implement measures like stricter smoke emission rules, pollution certification systems, public awareness campaigns, and incentives for fuel-efficient and alternative fuel vehicles (Samoa - Government of Samoa 2017; Tonga - Government of Tonga 2016; Nauru - Government of Nauru 2014).

11. Annual disaster losses

Annual disaster losses offer key insights into how often and how severely economies and infrastructure in Pacific SIDS are affected by disruptions. Due to the region's high exposure to climate and geophysical hazards, transport networks are especially vulnerable, as roads, ports, airports, and related infrastructure often act as vital lifelines connecting isolated communities. The overall pattern indicates a continual multi-hazard risk environment, in which both frequent and geographically diverse events can cause repeated disruptions and economic setbacks across transport systems and broader development efforts (Figure 35).

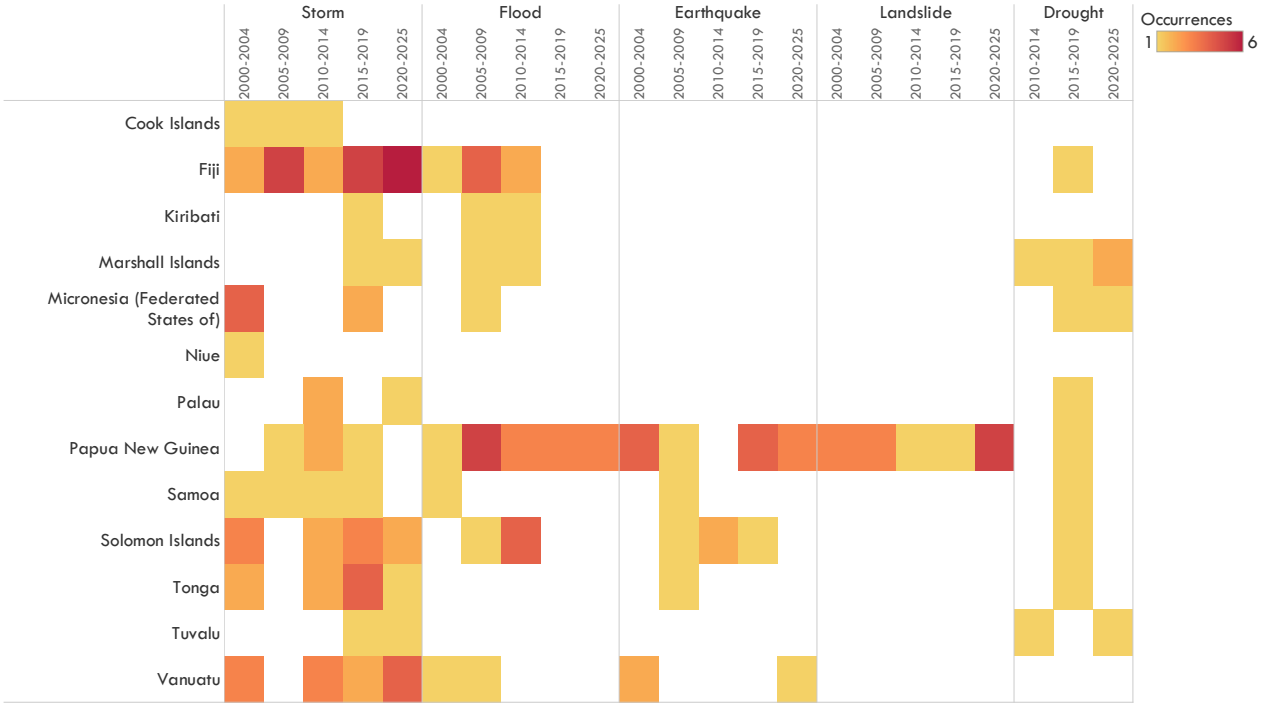


Figure 35. Disaster Occurrences
Source: EM-DAT (2025)

Average annual losses to transport infrastructure, relative to GDP, highlight the disproportionate economic impact of disasters on Pacific SIDS. Vanuatu stands out as the most significant outlier among Pacific island nations. With a GDP per capita of about $3,400, it has average annual losses of roughly 0.14% of GDP, exceeding those of most countries in the global dataset, including many with higher income levels. Tonga and Palau have similar loss ratios near 0.06% of GDP, still well above the global average of 0.04% for a sample of 146 countries. Samoa and Fiji are around 0.03% (Figure 36).

Besides direct losses, there are indirect effects on trade. With a value of $67 million in 2023, the trade at risk accounts for only 0.2% of total Asia-Pacific trade (Verschuur et al. 2023). Regionally, this seems minor. However, for Pacific SIDS, this figure is critically important. For small island economies, disaster-related losses constitute a recurring and structurally significant share of national output, constraining fiscal space and limiting resources for transport investment, infrastructure maintenance, and post-disaster recovery.

Figure 36. Average annual losses to transport infrastructure, as a share of GDP
Source: CDRI (n.d.)

Average annual losses to transport infrastructure, relative to GDP, highlight the disproportionate economic impact of disasters on Pacific SIDS

Roads account for the largest share of transport infrastructure at risk[5] across most Pacific SIDS, ranging from 33% in Palau to 89% in Vanuatu. Ports absorb a significant share as well, averaging 36% across the 14 countries (Figure 37). Together, roads and ports represent the two critical arteries through which Pacific economies move goods, people, and essential supplies, making their exposure to climate and disaster risk a core economic vulnerability.

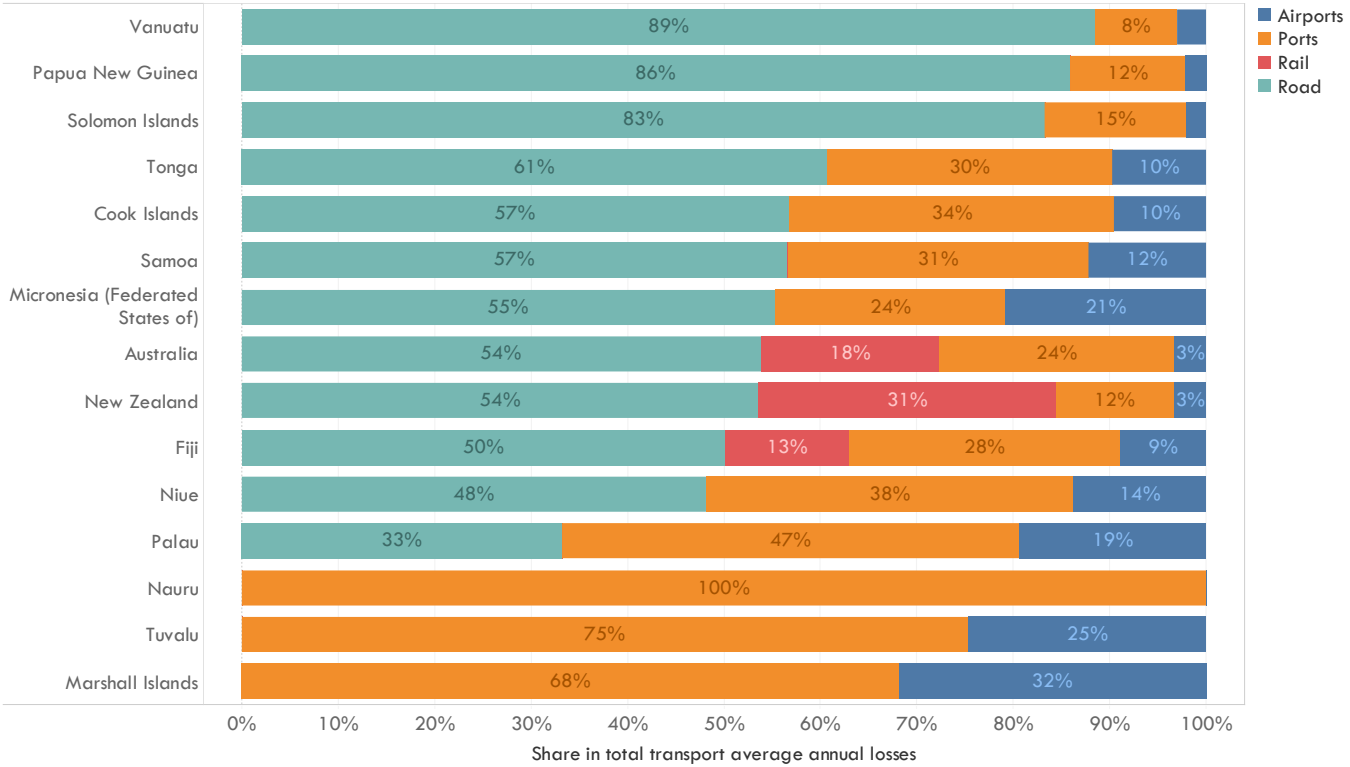


Figure 37. Modeshare in Total Transport Average Annual Losses
Source: CDRI (n.d.)

[5] Based on the average annual losses

Policies supporting transport infrastructure resilience

A major policy theme involves integrating climate considerations into transport infrastructure planning, design standards, and construction practices. Measures increasingly emphasize resilient engineering standards, climate-proofing of roads and bridges, and infrastructure designed to withstand future climate conditions rather than historical conditions alone (Fiji - Government of Fiji 2018b; Papua New Guinea - Government of Papua New Guinea 2023b; Samoa - Government of Samoa 2023; Tonga - Government of Tonga 2020b). Countries also identify rehabilitation and upgrading of vulnerable infrastructure assets, including roads, bridges, and coastal transport infrastructure exposed to climatic risks (Vanuatu - Department of Foreign Affairs and Trade 2017; Solomon Islands - Government of the Solomon Islands 2016b; Kiribati - Government of Kiribati 2020).

Several countries also emphasize strengthening evidence-based planning through vulnerability assessments, risk mapping, and integration of climate risks into infrastructure planning processes (Fiji - Government of Fiji 2018b; Tonga - Government of Tonga 2021; Samoa - Government of Samoa 2023). Policy measures increasingly identify the need to assess infrastructure exposure and incorporate future risks into investment decisions and asset management systems, supporting a shift from reactive responses toward longer-term planning approaches (Kiribati - Government of Kiribati 2024; Vanuatu - Government of Vanuatu 2016b).

These national measures are supported by a wider set of regional investment and coordination mechanisms. The World Bank-supported Pacific Climate Resilient Transport Program has a programmatic approach to strengthen roads, ports, wharves, jetties, and airport infrastructure across Pacific Island Countries exposed to climate and disaster risks. World Bank reporting notes that the program is supporting resilience in key transport infrastructure in the Federated States of Micronesia, Kiribati, the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu, including around 150 kilometers of roads, eight maritime sites, and one airport (World Bank 2023). The Australian Infrastructure Financing Facility for the Pacific provides loans and grants for quality, climate-resilient infrastructure in the Pacific, including those on transport (DFAT 2026). The Pacific Region Infrastructure Facility plays a complementary role by supporting climate-resilient transport through partner coordination, infrastructure pipeline development, technical assistance, and knowledge products on road vulnerability, transport asset management, maritime and aviation systems, and climate adaptation in Pacific transport planning (PRIF - What We Do 2026).

12. Road Vulnerability Index

Road infrastructure vulnerability indicates the resilience of transport systems in Pacific SIDS. Data shows these countries generally have some of the most vulnerable road networks worldwide, despite differences in network size and geography. Most Pacific SIDS are in the lower half of global road vulnerability rankings, with countries like Kiribati, Nauru, Papua New Guinea, and FSM ranking around 200–210 (Lower ranking is better). Even relatively better-off nations such as Solomon Islands and Samoa are below the global midpoint, at 88 and 107 respectively (Figure 38).

Projected climate exposure estimates further reinforce these risks. Based on estimates (Liu et al. 2023) under the RCP 4.5 mid-century scenario[6], approximately 100% of Palau's road network, 53% of Samoa's, and 49% of Fiji's are projected to be exposed to precipitation-related hazards, highlighting the substantial climate sensitivity of transport infrastructure across Pacific SIDS.

Since road networks serve as essential lifeline infrastructure with limited infrastructure availability, disruptions to even minor sections can cause outsized effects on mobility, service access, and the economy. The results highlight the need to focus on climate-resilient design, asset management, and risk-aware infrastructure planning in addition to expanding the network.

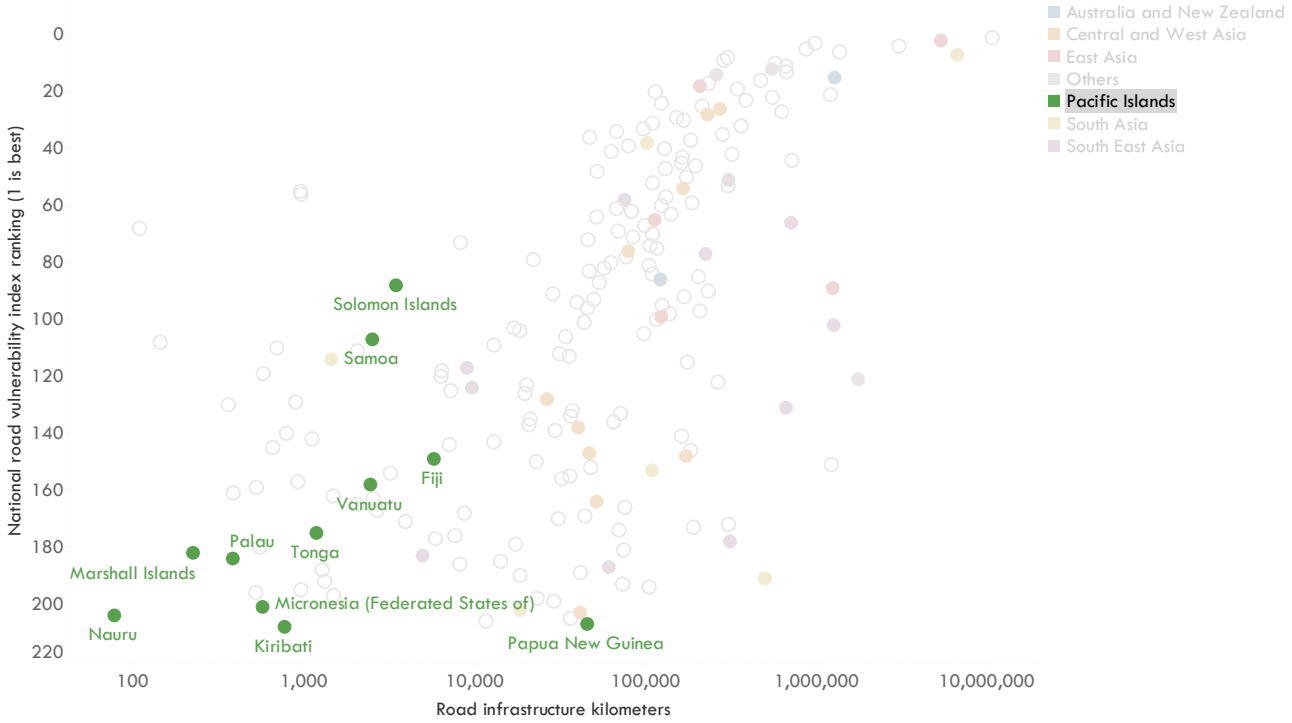


Figure 38. National Road Vulnerability Index
Source: Koks et al. (2023)

[6] RCP4.5 (Representative Concentration Pathway 4.5) is a medium stabilization climate scenario in which greenhouse gas mitigation efforts limit radiative forcing to approximately 4.5 W/m² by 2100, resulting in global warming of roughly 1.8°C by mid-century (2030–2059) and about 2.5°C by late century (2070–2099) relative to historical conditions.

Shape People-centred Urban Mobility and Liveable Cities

1. Urbanization

Urbanization in Pacific SIDS rose by 4% from 2015 to 2025, representing a modest but significant change from a starting point of 42% in 2015. In comparison, the rest of Asia-Pacific experienced a slower growth of 1%, beginning from a much higher rate of 83%—almost twice that of Pacific SIDS. This difference highlights that, although Pacific SIDS are urbanizing more rapidly relative to their starting point, they are still considerably less urbanized in absolute terms (Figure 39).

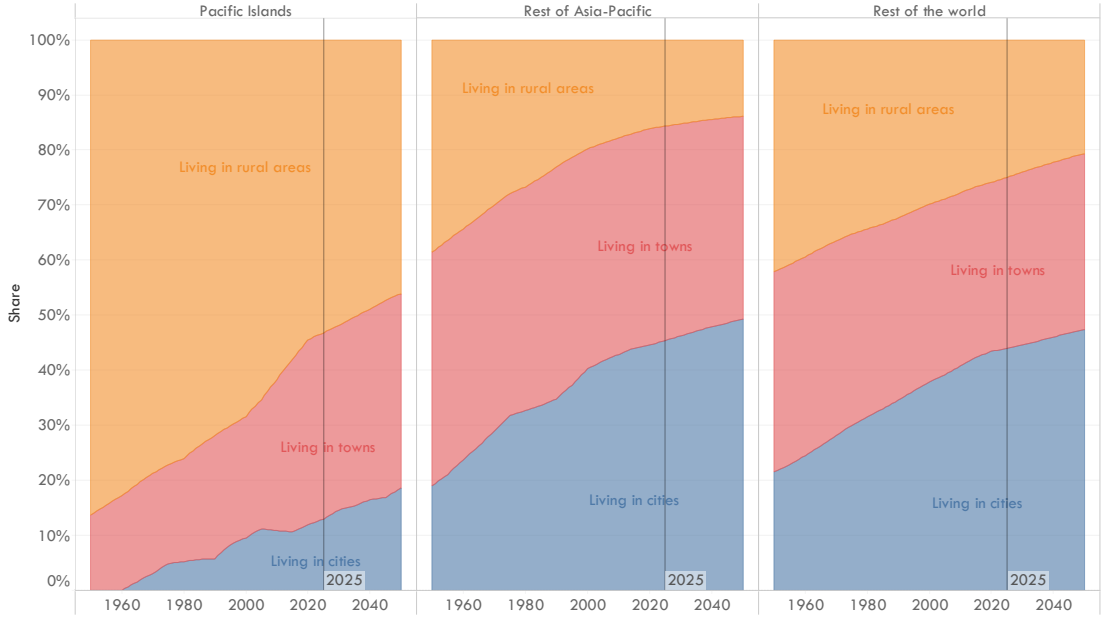


Figure 39. Share of Population
Source: UN (2025b)

In Papua New Guinea, the urban population nearly doubled from around 700,000 to 1.3 million between 2000 and 2024, while Honiara has absorbed a large share of internal migration and South Tarawa faces growing congestion pressures associated with increasing urban density (ATO 2026a). The emerging regional pattern suggests that urbanization is not simply increasing demand for transport infrastructure but is reshaping mobility needs through greater concentration of population and economic activity, often in contexts where network capacity, land availability, and planning systems remain constrained.

2. Transport Mode Share

Urban travel patterns across Pacific SIDS continue to rely heavily on public transport services, particularly buses, while active modes such as walking remain important for short-distance trips and first- and last-mile access. However, mobility patterns are gradually evolving across several countries. Fiji provides one of the clearest examples, with buses accounting for approximately 46% of vehicle movement in Suva and about 60–65% of peak-hour trips into central Suva. In the Solomon Islands, public transport accounts for approximately 38% of trips in Greater Honiara, while walking remains substantial at roughly 19% of total trips. These patterns suggest that public transport and non-motorized modes continue to play an important role in mobility systems across Pacific urban centers. (ATO 2026a)

Increasing motorization pressures are reshaping mobility systems across the region. Vehicle ownership growth in several countries outpaces population growth and infrastructure expansion. In Fiji, vehicle ownership rose from 68 vehicles per 1,000 people in 2000 to 167 per 1,000 in 2024. About 74% of registered vehicles are privately owned passenger cars. A national survey found private cars account for around 72% of commuting trips, compared with buses (13%) and walking (9%). Samoa recorded nearly a 50% increase in its vehicle fleet between 2013 and 2023, rising from about 20,700 to 30,000 vehicles. The vehicle-to-population ratio shifted from one vehicle per 10 residents to one per 7.5 residents. Projections for Solomon Islands suggest registered cars could increase by about 192%, exceeding projected population growth of 48%. In PNG, household ownership patterns indicate a gradual shift toward motorised mobility. Car and truck ownership increased from 5% to 6%, while bicycle ownership declined from 10% to 8% over recent survey periods. (ATO 2026a)

3. Bus Trade

Public transport systems in Pacific SIDS are mostly informal and privately run, often operating without fixed schedules or comprehensive routes. The small urban populations and low-density settlements hinder the development of large formal transit networks. Meanwhile, rapid urban growth in multiple Pacific cities is intensifying demand for existing transport services, posing challenges to ensuring accessibility, service quality, and network coverage.

Bus trade import indicators across Pacific SIDS show evolving investment trends in fleet expansion and replacement, with significant differences among countries and over time. Regionally, bus import values decreased from about $460 million in 2011–2020 to $285 million in 2021–2024, a drop of around 38%. This decline is less severe than the 66% drop in the broader Asia-Pacific region and the 56% decrease globally.

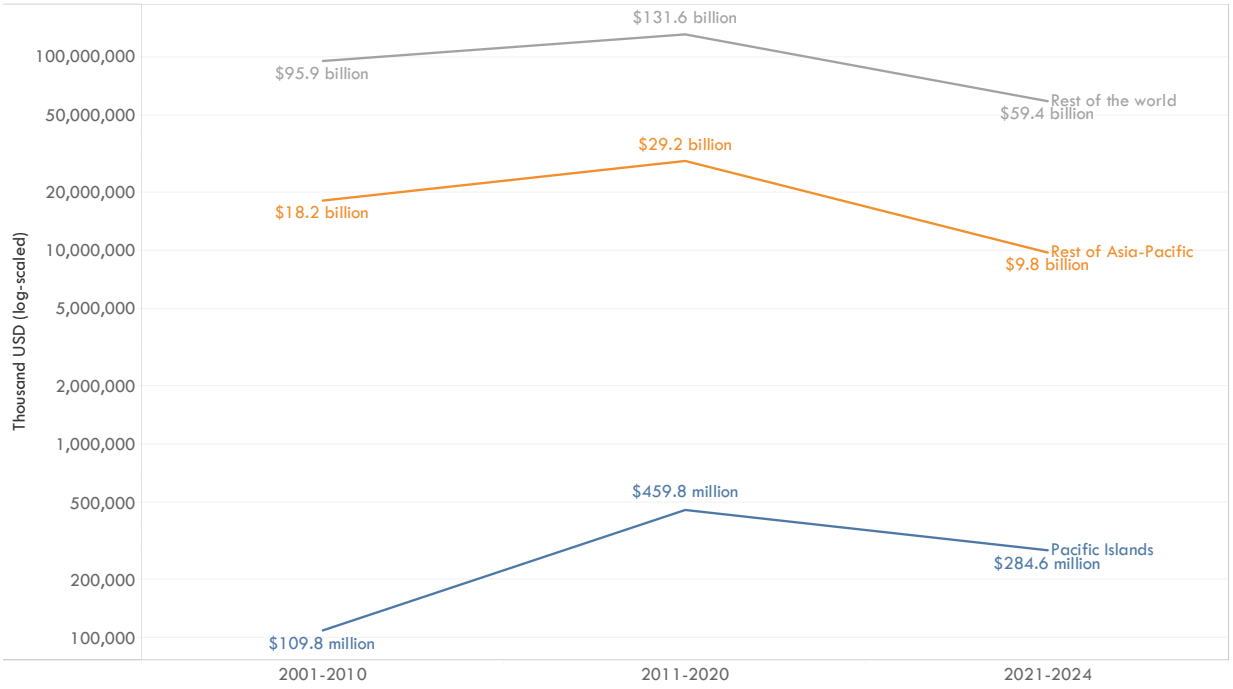


Figure 40. Bus import (in $thousand)
Source: Trademap (2025)

At the country level, however, patterns diverge. Over the last decade, bus import values have decreased in around half of the Pacific SIDS, while the other half showing an increase. Papua New Guinea, the region's largest importer, recorded a substantial increase, with average annual bus import values rising from about $32 million during 2011–2020 to over $76 million during 2021–2024. Fiji, on the other hand decreased from roughly $9 million to nearly $6 million over the same period. Kiribati, Niue, Nauru, Palau, Samoa, and Tuvalu were among the other Pacific SIDS that recorded declines in bus import values during the last decade (Figure 41).

Policies shaping urban mobility in the Pacific SIDS

Across Pacific SIDS, urban mobility efforts increasingly aim to create people-centered, liveable urban environments through integrated land use planning, enhanced public transportation, active and shared mobility options, and more inclusive choice of transportation (Asian Transport Observatory 2025). Policy initiatives reveal several connected themes. The integration of transport and land-use planning remains a key focus, promoting coordinated urban growth and better accessibility for all user groups (Samoa - Samoa Ministry of Works, Transport and Infrastructure 2025; Fiji - Government of Fiji 2017a; Tonga - Government of Tonga 2022b). Public transport, especially bus system upgrades,

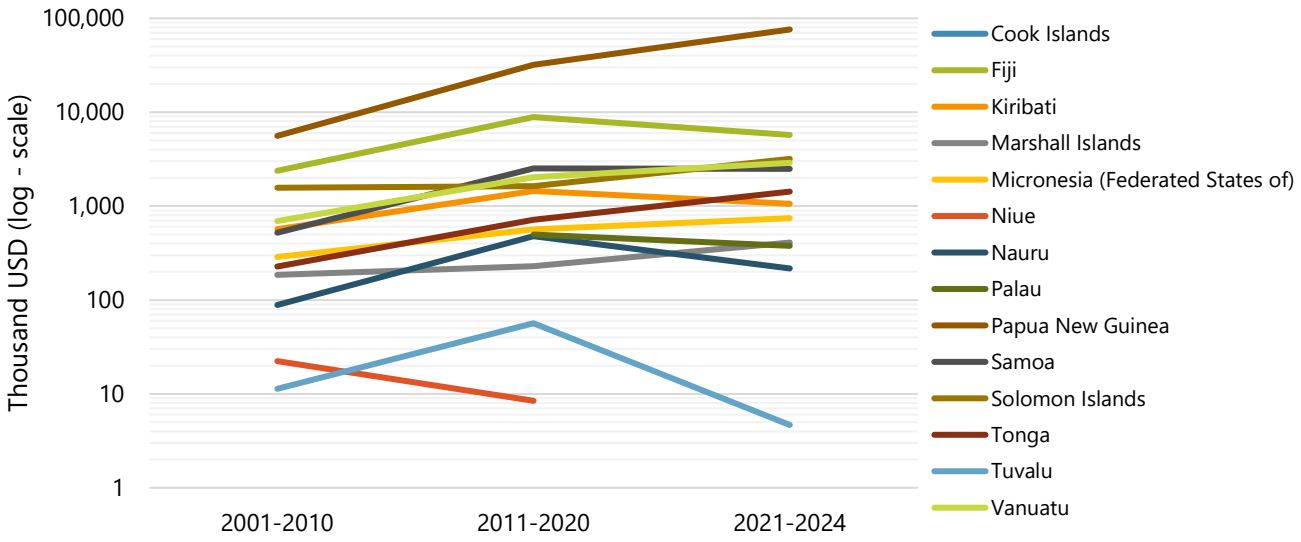


Figure 41. Bus Import by Country (in $thousand)
Source: Trademap (2025)

is prominent, involving route restructuring, service improvements, fleet modernization, terminal and interchange facilities, and expanded service coverage (Samoa - Government of Samoa 2023; Fiji - Government of Fiji 2015; Papua New Guinea - Government of Papua New Guinea 2013; Solomon Islands - Government of the Solomon Islands 2016b). In the Greater Suva-Nausori corridor, measures focus on strengthening public transport and enhancing urban accessibility, while Port Moresby's policies increasingly connect mobility planning with broader urban growth and emerging mobility transitions (Fiji - Government of Fiji 2017a; Papua New Guinea - Government of Papua New Guinea 2022).

Active mobility measures in Pacific SIDS are not viewed as standalone modes but as part of broader efforts to improve accessibility, urban safety, and the efficient use of limited island urban spaces where concentrated settlements and short trips make walking and cycling vital for livability, health, and climate resilience. Policy initiatives consistently emphasize integrating footpaths, cycling lanes, and dedicated pathways into wider transport planning and road upgrades (Cook Islands - Government of Cook Islands 2021; Fiji - Government of Fiji 2023b; Solomon Islands - Government of the Solomon Islands 2018; Tonga - Government of Tonga 2022b), along with safer street design, green spaces, and mode separation (Fiji - Government of Fiji 2022; Tonga - Government of Tonga 2021; Samoa - Government of Samoa 2011). Behavioural and enabling initiatives, including awareness campaigns, shared mobility schemes, and financial incentives, complement infrastructure investments in several countries (Fiji - Government of Fiji 2022; Samoa - Samoa Ministry of Works, Transport and Infrastructure 2025; Nauru - Government of Nauru 2018; Kiribati - Government of Kiribati 2019).

Make Transport Safe and Secure

1. Road Safety

Road crash fatalities remain a significant public health and economic concern across Pacific Small Island Developing States (SIDS), with notable disparities in mortality rates and demographic patterns among countries. In 2023, Papua New Guinea reported the highest fatality rate at 17.7 per 100,000, positioning road crashes as the 11th leading cause of death. The associated economic burden reached approximately $969 million in 2021, representing about 4% of GDP and including an estimated 65,000 serious injuries. The Solomon Islands recorded a fatality rate of 16.6 per 100,000, ranking as the 9th leading cause of death. Samoa's fatality rate was 9.8 per 100,000 in 2021, a 14% decrease from 2010 to 2021, slightly less than the Asia-Pacific average reduction of 19% and the Pacific average of 16%. Kiribati's rate increased from 4.4 per 100,000 in 2016 to 6.2 in 2023 (Figure 42).

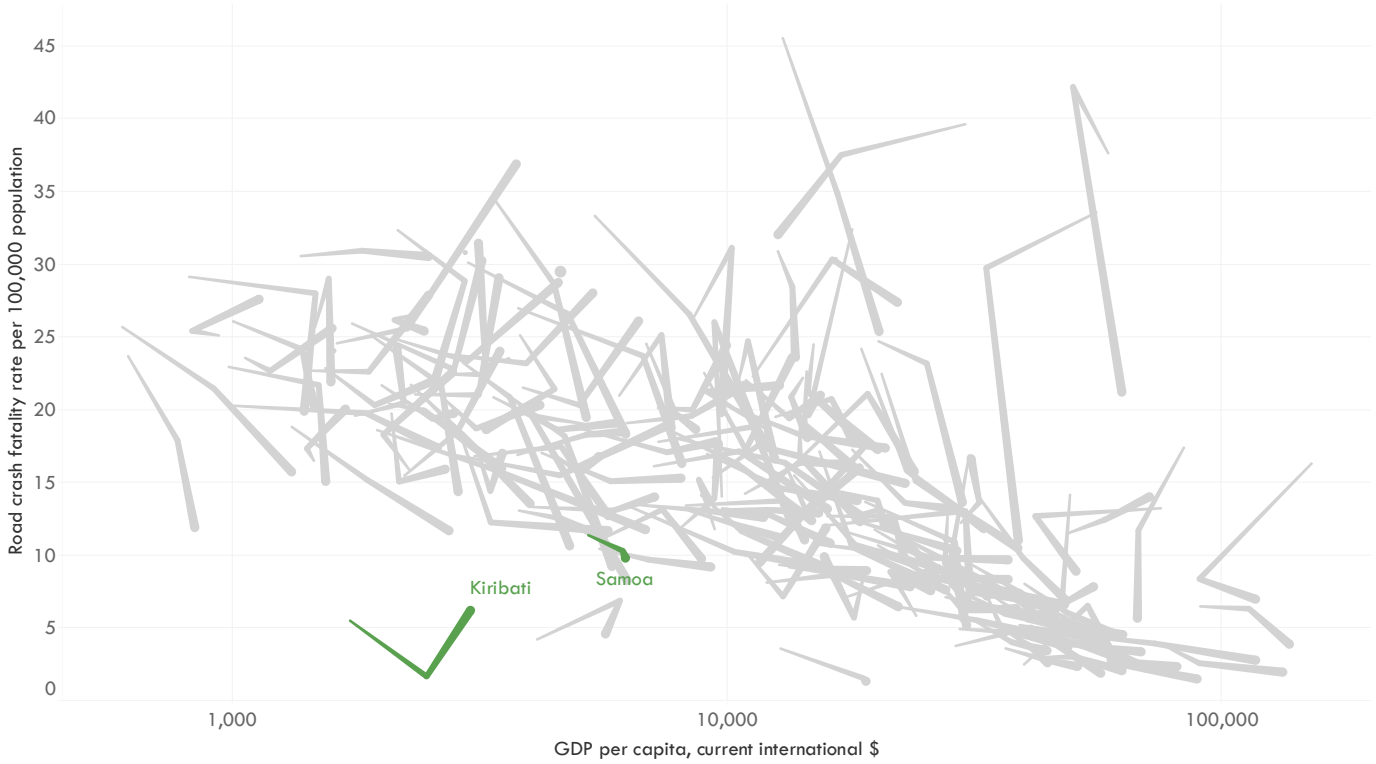


Figure 42. Road Crash Fatality Rate (2010,2016,2021)
Source: WHO (2023); World Bank (2025)

The demographic profile shows variations in exposure and vulnerability. In PNG, female fatalities grew from 32% in 2015 to 35% in 2023, exceeding the Asia-Pacific average of 25%. Children under 14 and adults over 60 made up 22% of all deaths. Samoa also has a high female fatality share at 34%, with pedestrians accounting for 63% of fatalities—double the Asia-Pacific average of 31%. Fiji's female share remained around 27%, with minors and seniors increasing from 24% to 27%. Solomon Islands saw a slight rise in female fatalities from 23% to 24% between 2010 and 2021. In Kiribati, pedestrian fatalities increased dramatically from 6% in 2007 to 40% in 2021, while two-wheeler fatalities fell from 44% to 20%, reflecting changing road-user exposure. (WHO 2023)

Road crash fatalities in the Pacific Islands rose by an average of 5.9% annually from 2016 to 2021, reversing the 3.7% yearly decline seen between 2010 and 2016. Compared to other Asia-Pacific regions, this shift is significant: South Asia grew by 1.8%, East Asia declined by 0.9%, and Southeast Asia decreased by 4.8%. The Pacific's increase is notable, though its low starting point makes the growth rate appear larger. Still, the overall change from decreasing to increasing is an important trend. (WHO 2023)

Infrastructure quality strongly correlates with safety outcomes. In PNG, only 2% of roads meet a 3-star or higher iRAP rating for vehicle occupants and just 1% for pedestrians. Fiji's ratings are similarly low, with 5% of roads at a 3-star or higher level for vehicles and 2% for pedestrians. On Kiritimati Island, only 19% of roads scored a 4-star rating for vehicle safety and 4% for motorcyclists. Samoa has about 77% of its roads rated at 3-star or better but still faces a high fatality density of 8.4 deaths per thousand km. This indicates infrastructure quality alone does not eliminate road safety issues. Economic investments are being quantified. iRAP (2024) estimates that annual spending of $52 million in PNG and $2 million in Samoa could markedly reduce fatalities. These findings suggest that road safety challenges in Pacific SIDS are increasingly linked to systemic infrastructure and policy gaps rather than solely driver behaviour.

Policies enhancing Road Safety

Road safety is increasingly positioned not only as a public health and transport challenge but also as an important aspect of transport system resilience. Safe transport systems can enhance the reliability and continuity of mobility networks by reducing disruptions caused by crashes, injuries, and loss of productive capacity. In small island contexts where road networks are often limited and alternative routes can be constrained, road safety outcomes can also have broader implications for access to essential services and communities. Policy measures increasingly integrate road safety considerations within wider transport planning, infrastructure design, and institutional frameworks.

Policy measures across countries reveal several recurring themes. Infrastructure-related interventions feature prominently through safer road design standards, pedestrian facilities, improved intersections, traffic calming measures, and safety improvements around schools and high-risk corridors (Fiji - Government of Fiji 2015; Samoa - Government of Samoa 2023; Solomon Islands - Government of the Solomon Islands 2016b; Tonga - Government of Tonga 2022b). Countries also emphasize strengthening regulatory and enforcement mechanisms through vehicle standards, speed management measures, driver licensing systems, and stricter enforcement of road regulations (Fiji - Government of Fiji 2017a; Samoa - Government of Samoa 2017; Papua New Guinea - Government of Papua New Guinea 2013). Alongside these measures, policies increasingly identify awareness programmes, road safety education, and institutional coordination arrangements as supporting mechanisms for improving safety outcomes (Kiribati - Government of Kiribati 2013; Vanuatu - Government of Vanuatu, n.d.; Tonga - Government of Samoa 2018).

2. Road crash fatality burden

Road crash fatalities carry an economic cost that is rarely made visible in transport planning discussions. Figure 43 does exactly that, plotting the cost of road crash fatalities and injuries as a share of GDP against healthcare expenditure as a share of GDP for 2021.

This chart reveals a hidden fiscal drain for Pacific SIDS, with road crash costs consistently consuming about 2% to 6% of GDP, compared to average 10% of expenditure on healthcare. In the broader Asia-Pacific region, road crash fatality costs average approximately 4% of GDP, while healthcare expenditure averages around 7%.

For small island economies, already strained by disaster exposure and limited revenue sources, this amounts to a significant, largely preventable economic loss. The impact affects households, health systems, labor markets, and overall productivity. Therefore, investing in road safety should now be viewed as a crucial measure of fiscal efficiency.

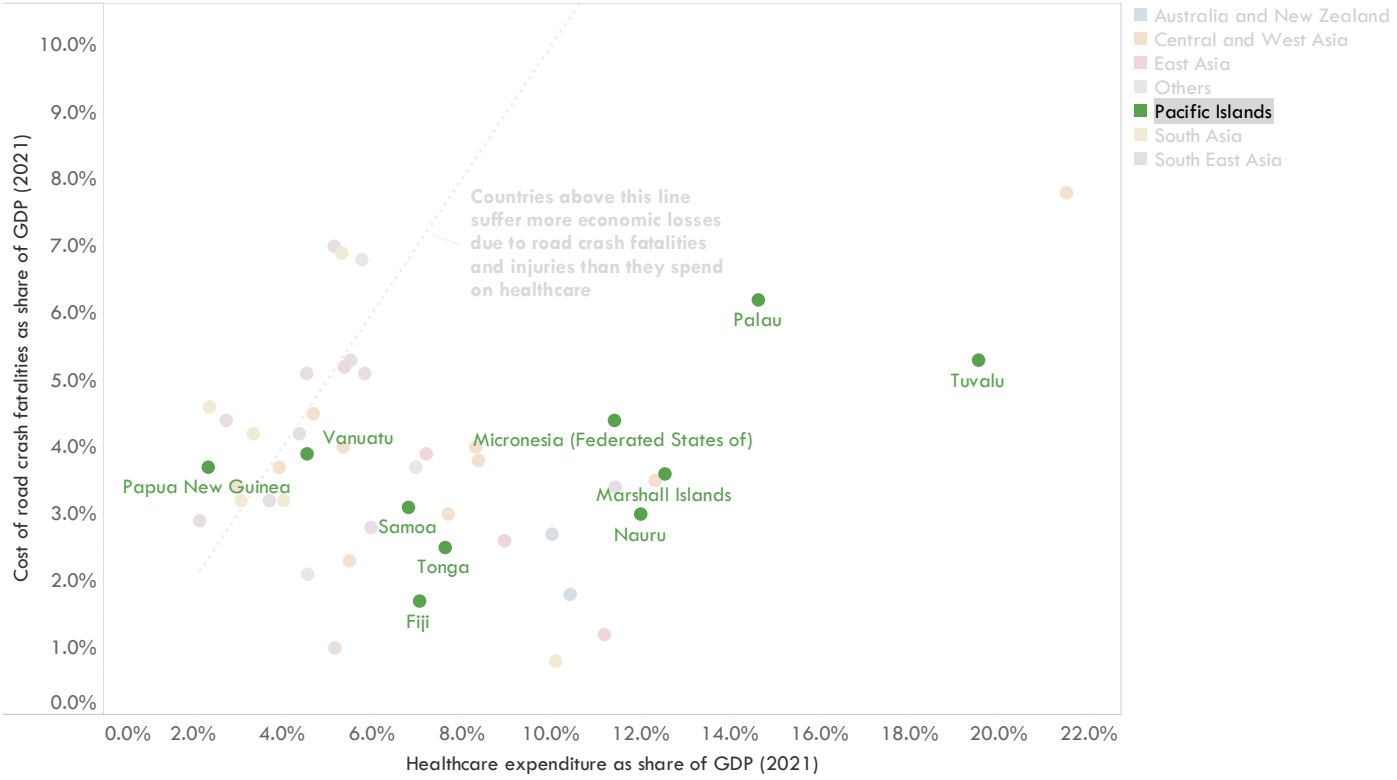


Figure 43. Healthcare Expenditure vs. Cost of Road Crash Fatalities
Source: World Bank (2024a); iRAP (2024)

Leverage Science, Technology, and Innovation for Sustainable Transport

1. Access to Internet

Internet access in Pacific SIDS has grown rapidly over the past decade, with the average share of the population with internet access rising from 26% in 2015 to 60% in 2023. In the same period, Asia-Pacific and Global averages increased from 41% and 48% to 74% and 73%, respectively (ITU 2025).

Some countries, like Kiribati (88%), Nauru (82%), Niue (80%), and Fiji (79%), show high penetration rates, indicating that substantial connectivity improvements are achievable even in small island nations. Conversely, larger and more remote countries such as Papua New Guinea (~24%) and Micronesia (~39%) continue to lag behind, underscoring the ongoing challenges posed by remoteness, dispersed populations, and high infrastructure costs. This pattern indicates that in the Pacific, digital connectivity outcomes are influenced as much by geography as by economic factors.

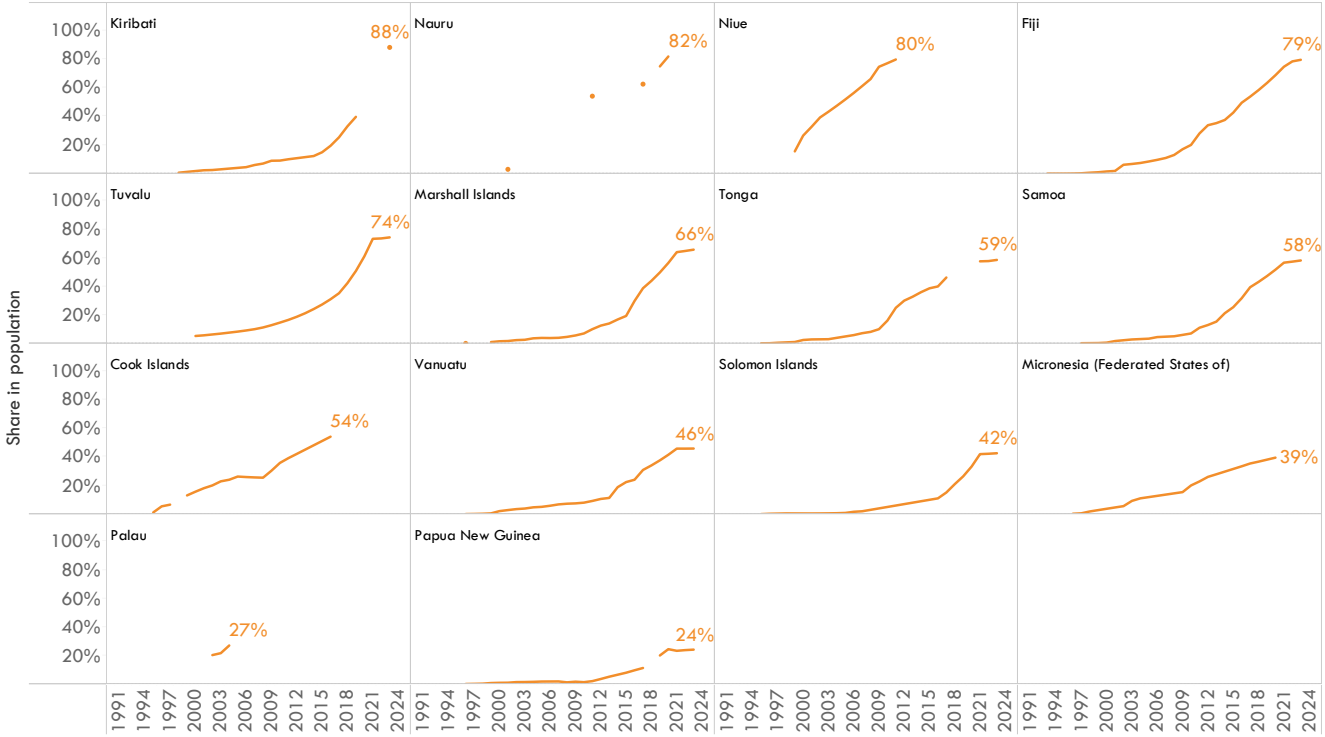


Figure 44. Share of Population with Access to Internet
Source: ITU (2025)

Crosscutting

A. Transport and Socio-economic indicators

1. Transport Economic Contribution

Despite strong dependence on transport connectivity, the transport, storage and communications sector across Pacific SIDS has not grown as a share of economic output over five decades (6%-7%). Comparable shares in the rest of Asia-Pacific and worldwide show a modest upward trend since the 1990s. This stagnation reflects factors specific to small island economies: smaller transport activity concentrated in informal modes, thin freight markets with structural barriers to logistics sector development in dispersed, import-dependent geographies (Figure 45). The broader sectoral composition reinforces this reading. Agriculture, forestry, and fishing occupy roughly 18% to 22% of the Pacific stack throughout the period, a substantially larger and more persistent share than in either comparator group.

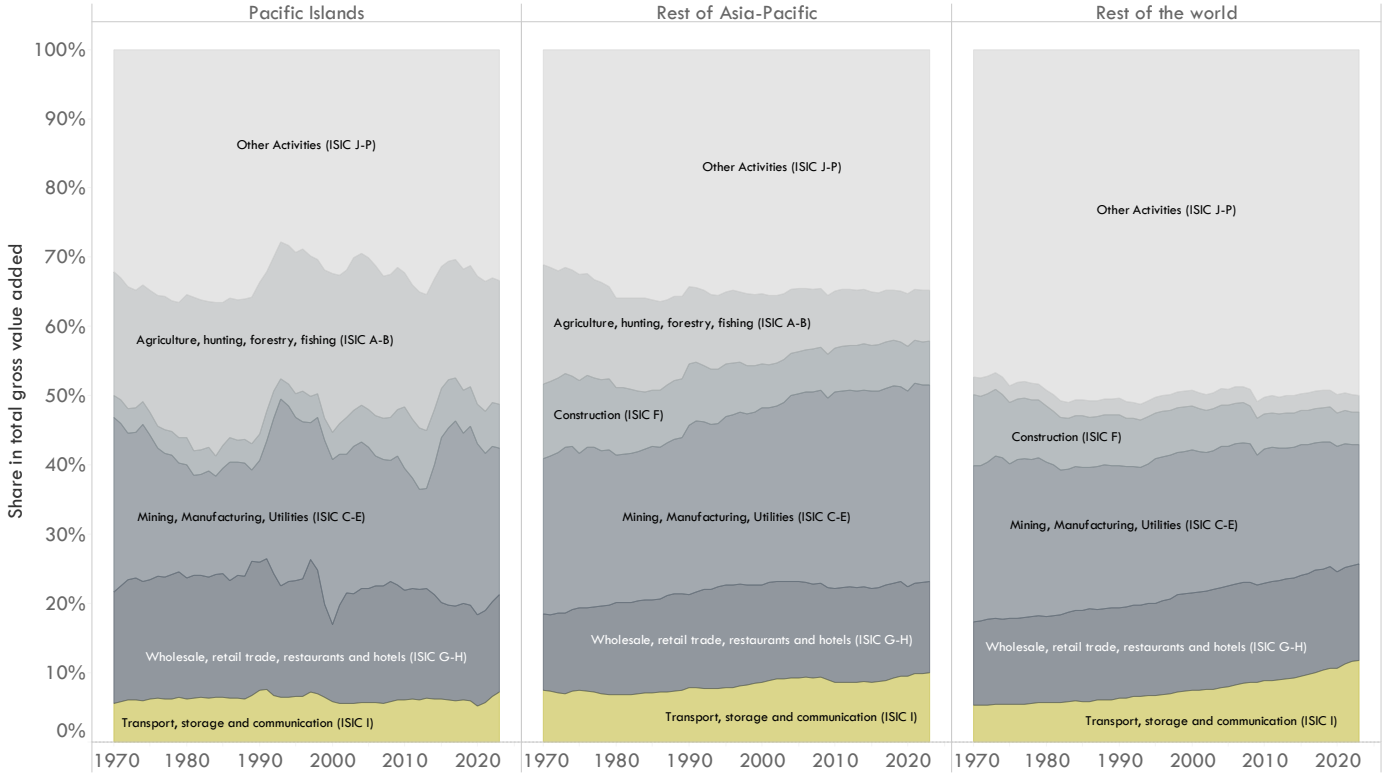


Figure 45. Sectoral Shares in Total Gross Value Added (GVA)
Source: World Bank (2025)

2. Transport Employment

Transport-related employment across Pacific SIDS is modest in share but structurally significant in the livelihoods it supports, and the connectivity functions it enables. Figure 46 reveals a consistent pattern of small but meaningful transport employment shares across a range of sub-sectors.

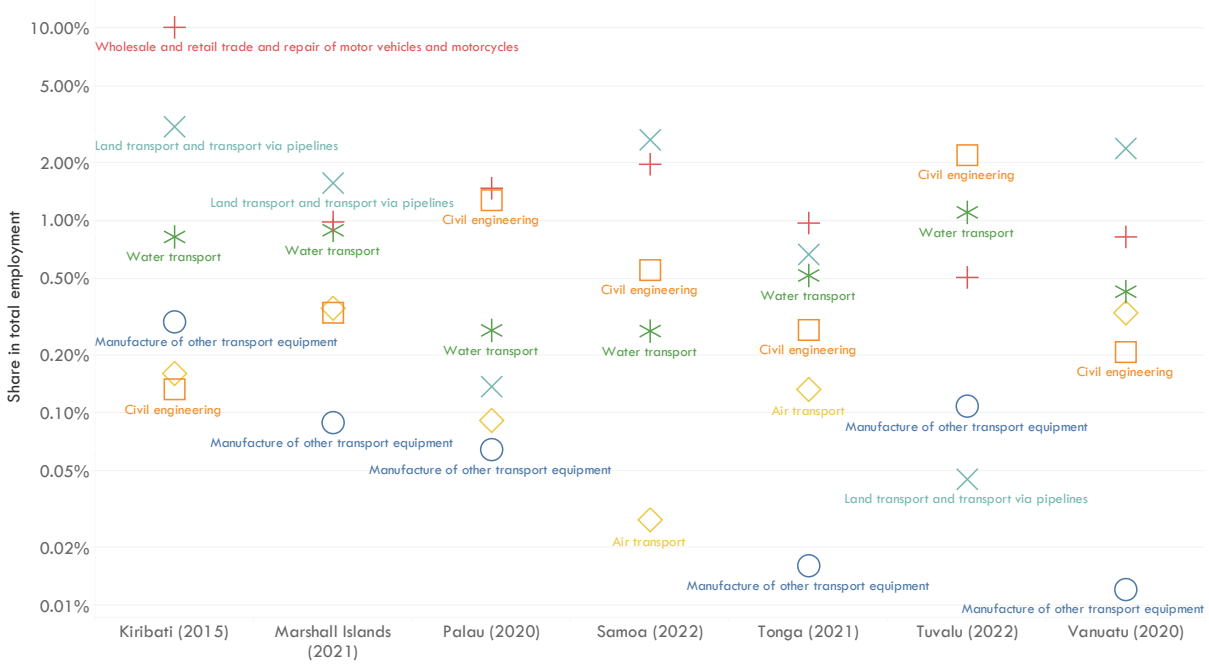


Figure 46. Transport Employment
Source: ILO (2026)

The share of transport employment in total employment is diverging between Pacific SIDS and other parts of Asia-Pacific. Both regions had around 4% in 2000, but their trends have reversed over the last twenty years. In Pacific SIDS, this share declined to about 3% by 2025, whereas it increased to approximately 6% across the rest of Asia-Pacific. This highlights contrasting changes in the transport sector's role in overall employment. (ILO 2026)

Land transport and transport via pipelines account for the largest single transport employment share in several countries, reaching approximately 3.1% of total employment in Kiribati and around 2.6% and 2.4% in Samoa and Vanuatu, respectively. Water transport employment sits at roughly 0.3% to 1% across most of the group, reflecting the fundamental role of maritime operations in island connectivity. Civil engineering, which captures employment in transport infrastructure construction and maintenance, ranges from around 0.1% in Kiribati to approximately 2.2% in Tuvalu. One category that stands out is wholesale and retail trade and repair of motor vehicles and motorcycles,

which in Kiribati reaches approximately 10% of total employment, an exceptionally high share that reflects the particular structure of that economy and the centrality of vehicle trade and servicing in its labor market. The connection to the GVA picture discussed previously is instructive: transport's relatively flat share of economic output coexists with a visible employment presence, pointing to a sector characterized by labor intensity and informality rather than high value-added productivity. For tourism-dependent economies in particular, transport employment, spanning water taxi operators, bus and taxi drivers, port and airport ground staff, and road maintenance crews, forms part of the service backbone that visitor-facing industries depend on, and whose disruption during cyclones, flooding, or infrastructure failure directly affects tourism continuity. (ILO 2026)

Policies related to Transport Employment

Policy measures in different countries focus on workforce development, labor conditions, and new skills linked to evolving transport systems. These include improving labor standards by reviewing seafarer wages (e.g., Fiji's 5-Year and 20-Year National Development Plans - Government of Fiji 2017a), enhancing business and employment prospects in shipping (e.g., Samoa's Transport and Infrastructure Sector Plan - Government of Samoa 2023), and fostering skills for emerging transport shifts like electric mobility. This involves training programs for EV mechanics, charging station staff, and related services (e.g., Papua New Guinea's EV Policy Draft for PNG - Government of Papua New Guinea 2022).

3. Female Employment

Female employment in the transport sector shows different growth patterns between Pacific SIDS and the broader Asia-Pacific region, especially when comparing data before and after 2020. In Pacific SIDS, female transport jobs shifted from a decline of -0.2% CAGR before 2020 to positive growth of about 1.2% CAGR after COVID-19. This shows a reversal and renewed momentum in female workforce participation. Conversely, the rest of Asia-Pacific continued growing in both periods, though the growth rate slowed from 2.6% CAGR before 2020 to 1.1% afterward. Although Pacific SIDS traditionally lagged behind the rest of Asia-Pacific, recent developments indicate a strengthening trend in female involvement in the transport industry (ILO 2026) (Figure 47).

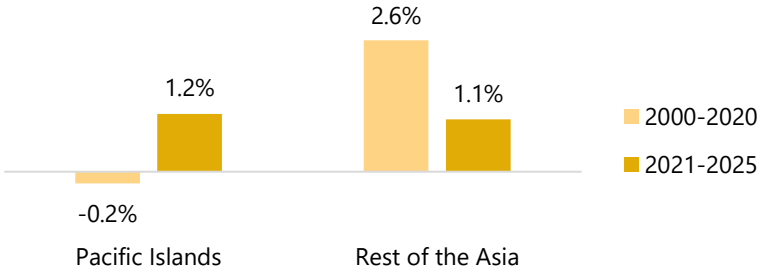


Figure 47. Growth of Female employment in the transport sector
Source: ILO (2026)

Female participation in transport sectors within Pacific SIDS varies, with higher representation in support roles than in core transport operations.

Land transport shows minimal female involvement, generally between 0–12% across most countries. In contrast, women participate more in air transport, reaching 53% in Tonga, 46% in Fiji, and 43% in PNG. Logistics and warehousing see moderate female involvement, ranging from 15% to 35% in several nations. Overall, women are underrepresented in key transport jobs, with greater presence in auxiliary services and activities (Figure 48).

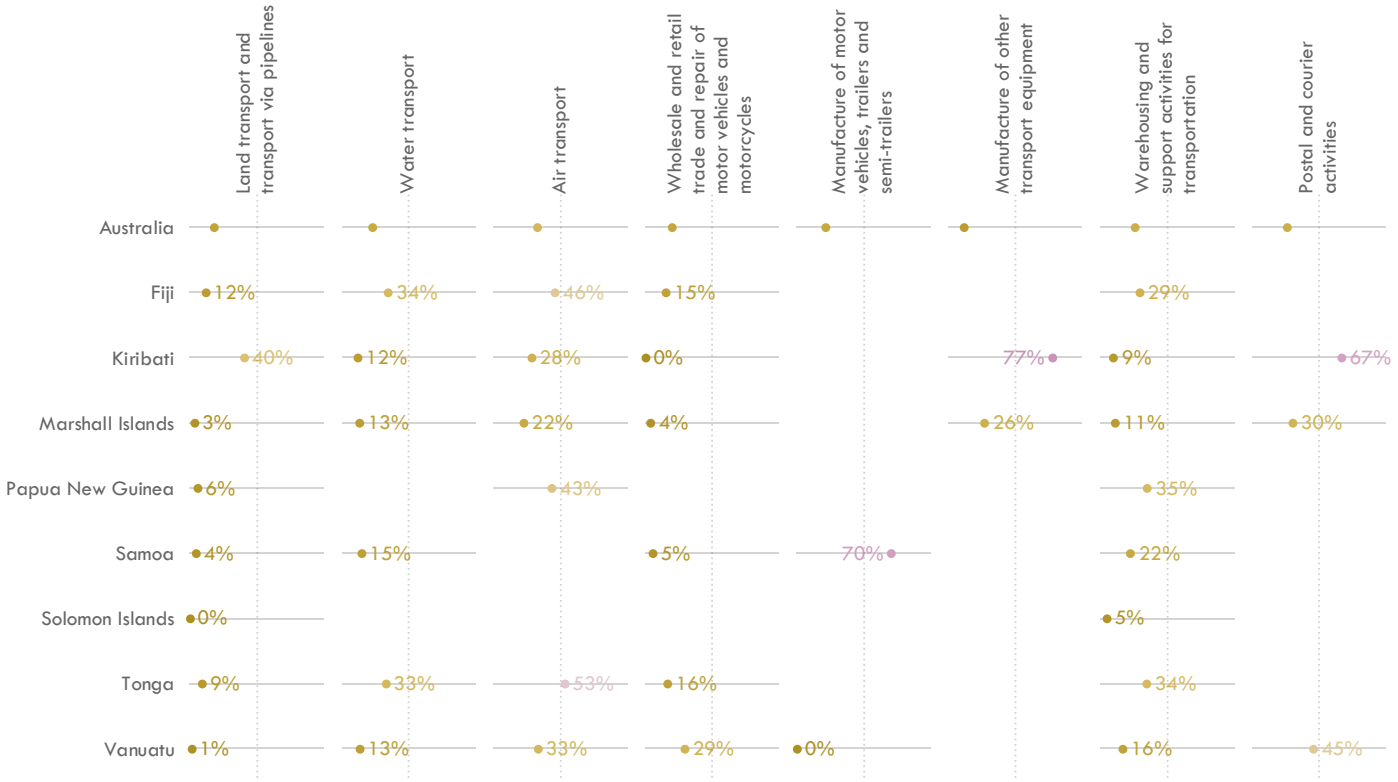


Figure 48. Female Employment in Transport
Source: ILO (2026)

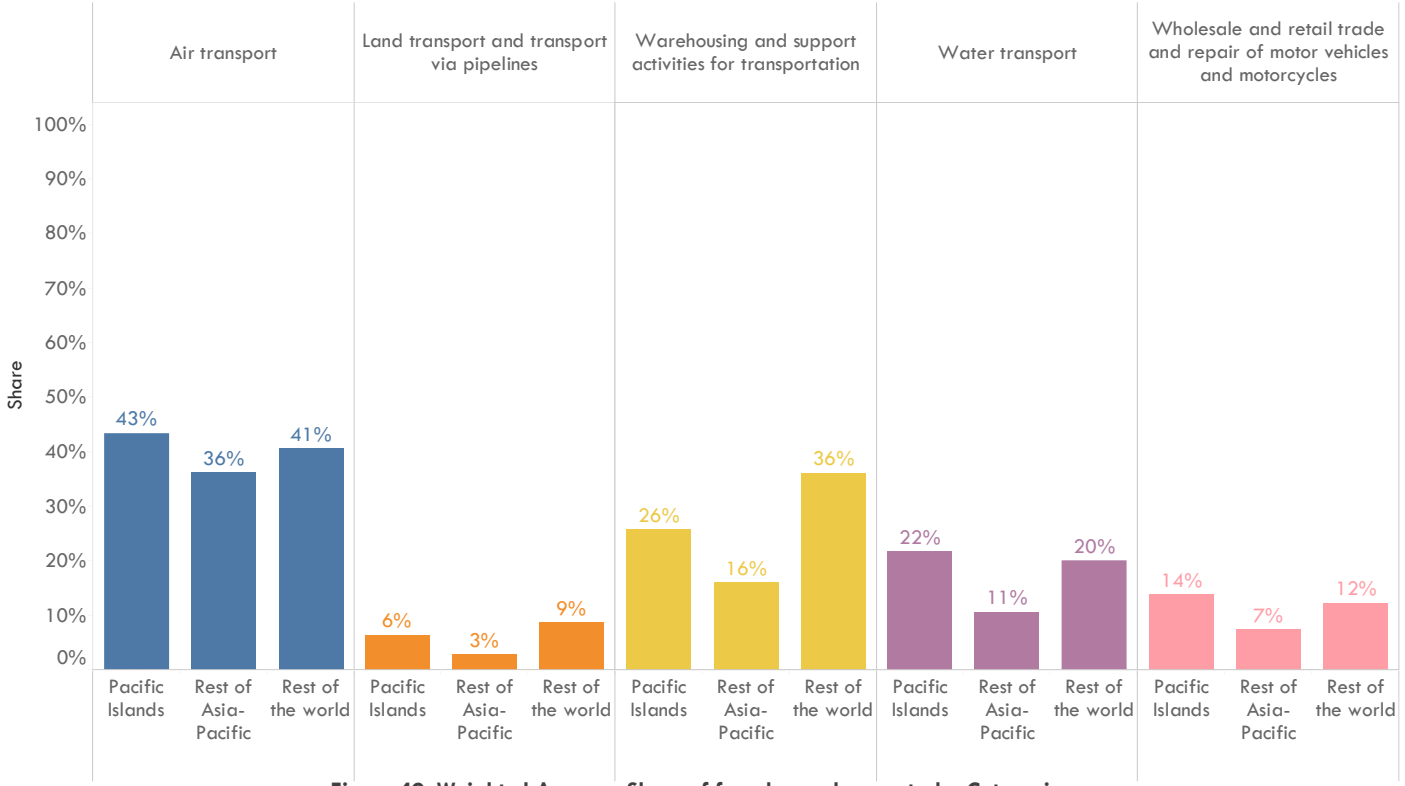


Figure 49. Weighted Average Share of female employment - by Categories
Source: ILO (2026)

Policies promoting female considerations in transport

Several measures aim to enhance women's participation and employment through skills development, vocational training, and workforce participation targets in the transport sector (Fiji - Government of Fiji 2015; Papua New Guinea - Government of Papua New Guinea 2013; Samoa - Samoa Ministry of Works, Transport and Infrastructure 2025; Tonga - Government of Samoa 2018). Safety and accessibility are also prioritized, including initiatives for safer public transport routes, better lighting and infrastructure, gender-responsive facilities, and women-focused transport services (Papua New Guinea - Government of Papua New Guinea 2020; Samoa - Samoa Ministry of Works, Transport and Infrastructure 2025; Solomon Islands - Government of the Solomon Islands 2016b). Furthermore, countries focus on incorporating gender perspectives into transport planning and decision-making through gender analysis, community consultations, gender-responsive budgeting, and gender-disaggregated data use (Samoa - Government of Samoa 2021; Fiji - Government of Fiji 2021; Micronesia - Government of Micronesia (Federated States of) 2023; Tuvalu - Government of Tuvalu 2012).

B. Transport Finance

1. Development Assistance

ODA flows have generally increased for Pacific SIDS, the Asia-Pacific region, and worldwide. When comparing trends before and after 2015, there is a noticeable change. Before 2015, Pacific SIDS saw a annual growth rate of 9%, which was higher than Asia-Pacific's 6% but just below the global rate of 10%. After 2015, growth slowed for all three groups. In terms of actual amounts, Pacific SIDS received about $100 million each year in the early 2000s. This rose to an average of about $380 million in the early 2010s and around $590 million in the early 2020s. The overall trend is still upward, but growth has become slower in recent years.

Between 2000 and 2024, the modal composition of transport development finance across Pacific SIDS reveals changing investment priorities, structural connectivity needs, and the increasing impact of climate resilience efforts on the flow and distribution of external funding. Based on OECD CRS data (2026), which includes ODA grants, ODA loans, other official flows, equity investments, and private development finance, the overall picture shows modal variability at the individual country level but clear directional trends when viewed regionally.

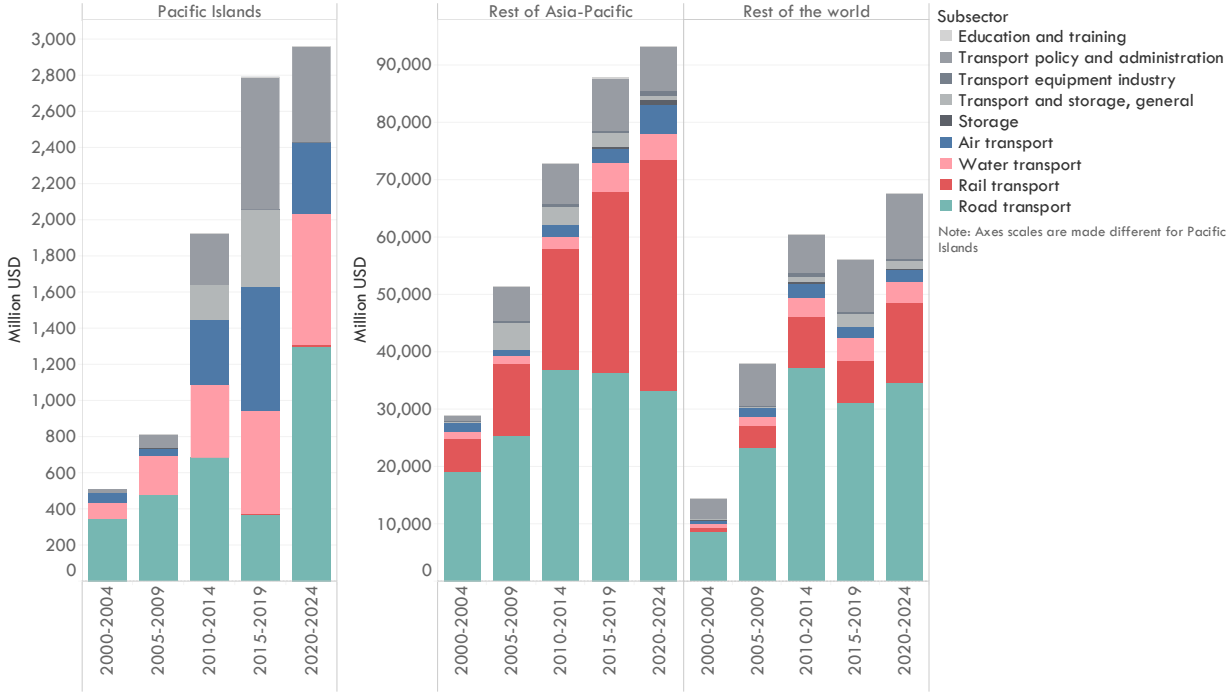


Figure 50. Development Assistance Growth
Source: OECD (2026)

In the Pacific SIDS, the share of road transport exhibited a marked decline, decreasing from approximately 67% in the early 2000s to about 13% by 2020. This was followed by a recovery to nearly 40% in the early 2020s, a level comparable to that of the early 2010s. By contrast, the broader Asia-Pacific region experienced a more consistent downward trend throughout the period, with road transport share falling from around 65% in the early 2000s to approximately 35% in the early 2020s.

The changes across transport categories followed distinct patterns. In the Pacific Islands, the reduction in road transport share was primarily offset by increases in air transport and transport policy and administration. In the remainder of the Asia-Pacific region, the shift was mainly attributable to rail transport, which represented approximately 43% of financing in the early 2020s (Figure 51).

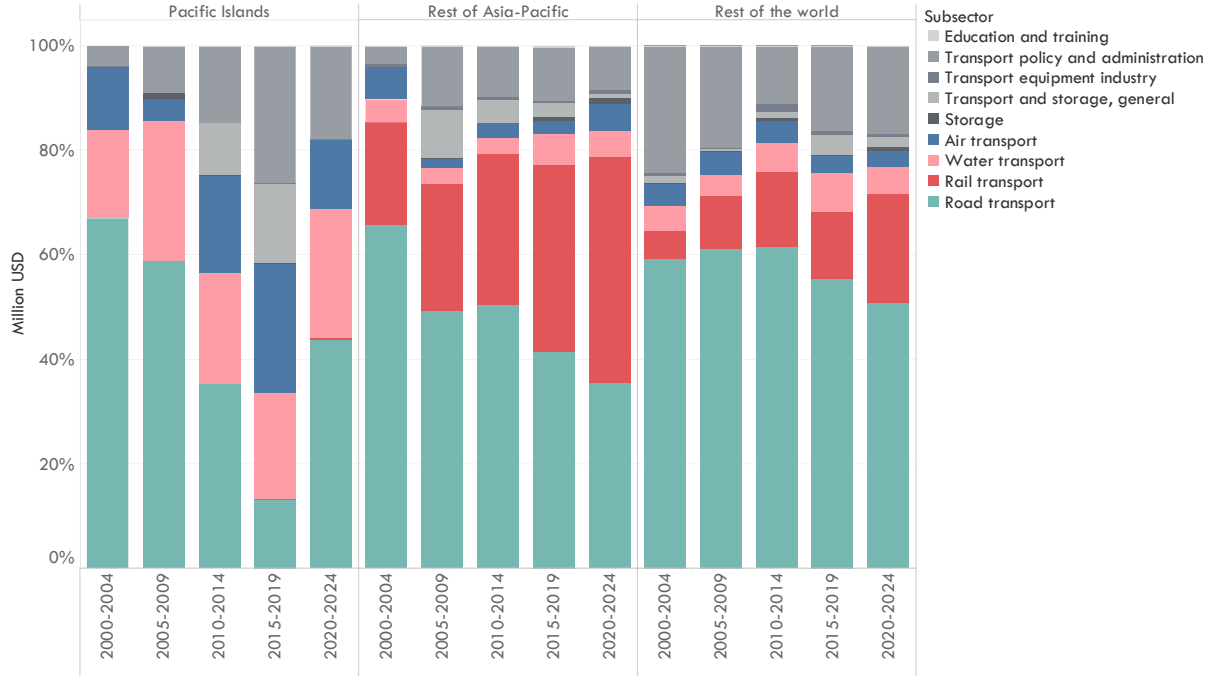


Figure 51. Development Assistance Share by Category
Source: OECD (2026)

PNG shows road transport at around 80% of total transport finance in the 2000 to 2004 period, oscillating considerably in subsequent periods and coming again at 75% in the 2020-2024 period. Fiji shows road transport rising close to 100% in the 2005 to 2009 period.

Maritime connectivity finance has consistently played a significant role in smaller island states, reflecting geographic structure rather than investment cycles. In the Cook Islands, water transport accounted for approximately 90% of transport finance across most periods, which aligns with its status as an archipelagic state with limited road

infrastructure needs. Nauru maintained a water transport share of roughly 90 to 100% during most observed periods, indicating near-total reliance on maritime access as a single-island microstate. In Tuvalu, water transport finance increased from a modest initial share to approximately 85% by 2020 to 2024, consistent with increased investment in maritime climate resilience. Similarly, Tonga saw water transport regain dominance in the most recent period following a phase of greater investment in road and aviation infrastructure.

Aviation finance reached its highest concentration between 2005 and 2009 in the Marshall Islands, Niue, and the Federated States of Micronesia, with several countries recording aviation shares that approached or exceeded 70% of total transport finance during peak periods.

The volatility visible throughout the series is a structural feature of small island development finance, where a single project can shift a country's entire modal composition in any given period.

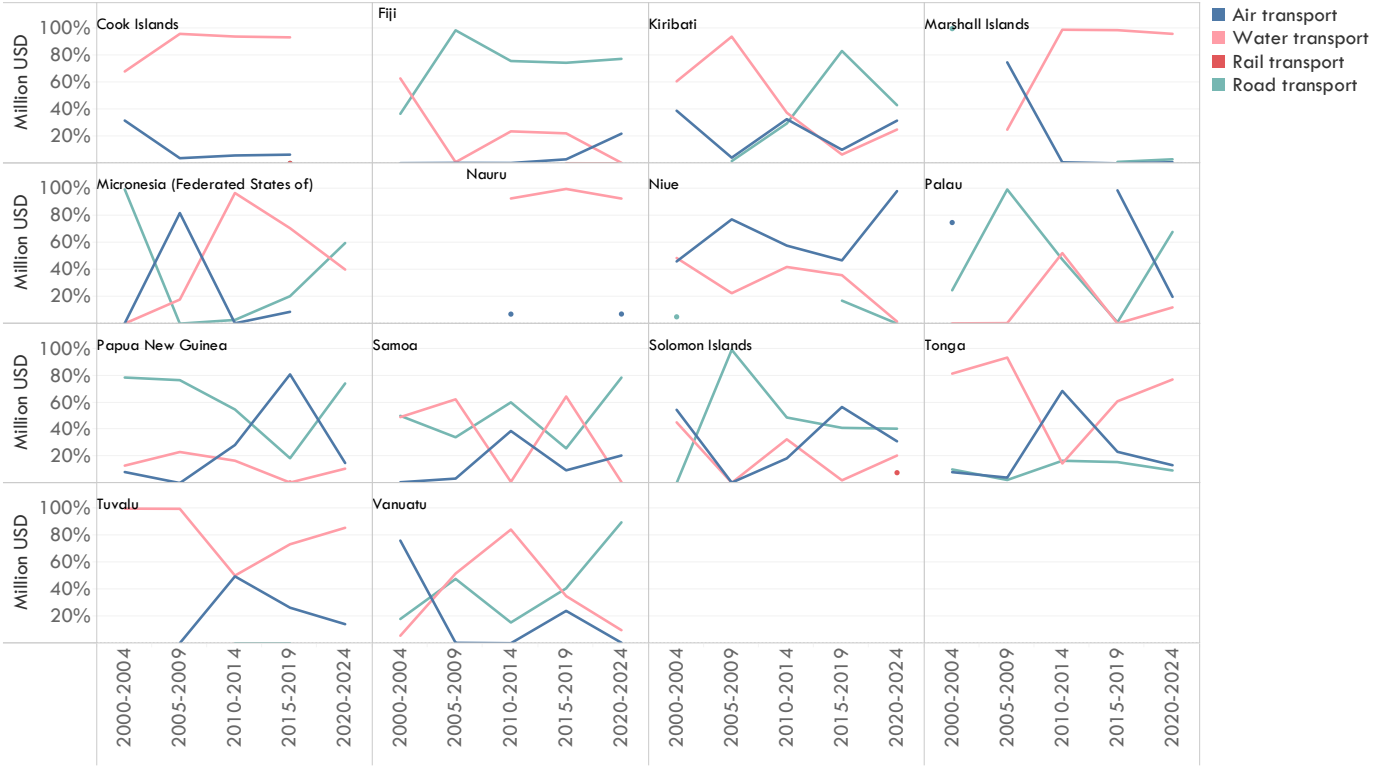


Figure 52. Development Finance for Transport - by Modes
Source: OECD (2026)

Maritime connectivity finance has consistently played a significant role in smaller island states, reflecting geographic structure rather than investment cycles

2. Fuel tax revenue

Fuel taxes play a crucial role in generating revenue in Pacific economies. Countries like Fiji, where fuel taxes make up 10% of government income, and Papua New Guinea with 9%, rely heavily on revenue from transport fuel consumption. Conversely, Solomon Islands and Kiribati gather only about 1% from fuel taxes. This suggests that, unlike many countries worldwide that subsidize fuel, Pacific SIDS generally maintain positive fuel taxes. While this creates fiscal space, it also poses a potential challenge for long-term transport decarbonization, as fuel tax revenues could decline with the rise of electrification and energy transition.

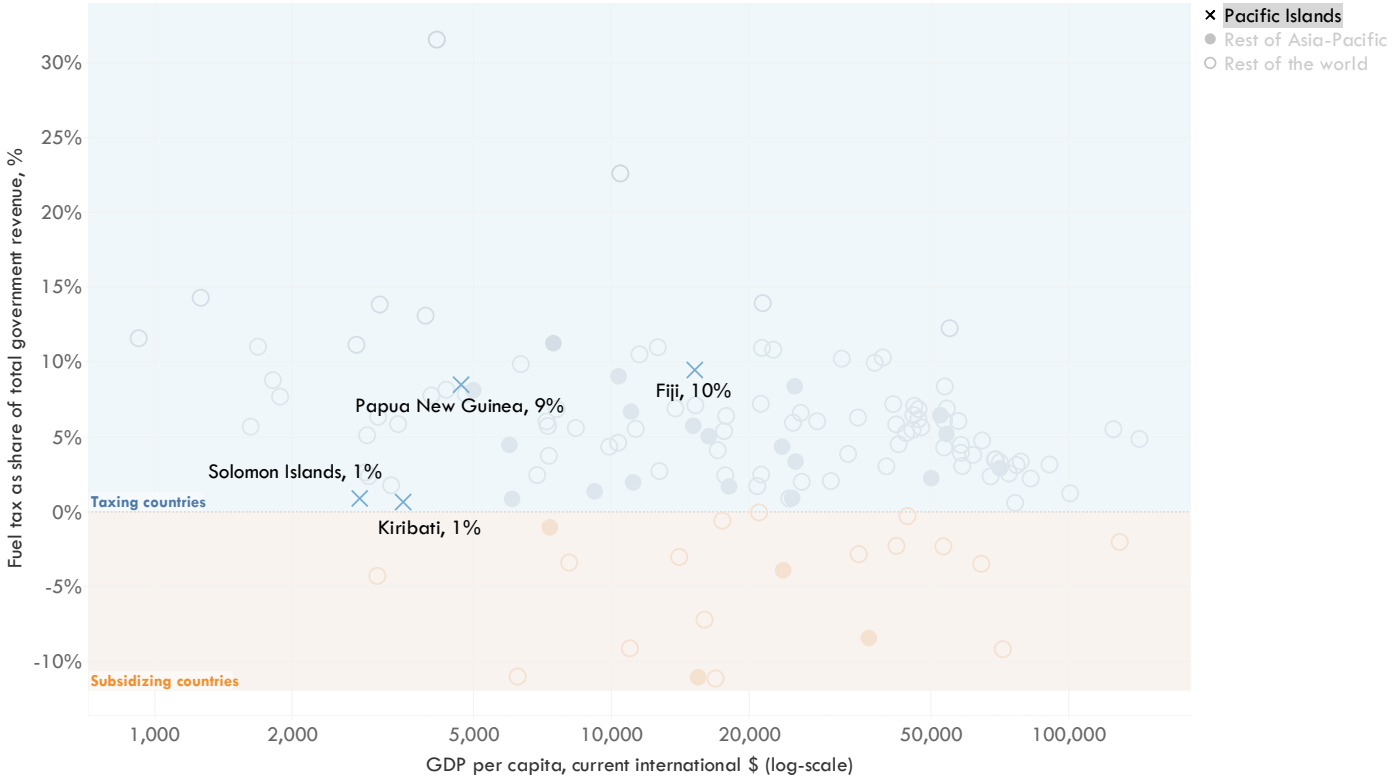


Figure 53. Fuel Tax as a share of Total Government Revenue
Source: Noll et al. (2026)

Policies related to Fuel Tax

In Pacific SIDS, fuel taxes and user-based financing are mainly viewed as methods to fund transport infrastructure and recover long-term operating expenses. Several nations mention road user charges, fuel levies, and specialized revenue sources to support maintenance and transport services (Fiji - Government of Fiji 2015; Papua New Guinea - Government of Papua New Guinea 2013; Solomon Islands - Government of the Solomon Islands 2021). These measures include expanding road user charges based on vehicle type and fuel use, designating parts of fuel taxes for transport funds, and progressively relying more on user-based financing methods (Fiji - Government of Fiji 2015; Papua New Guinea - Government of Papua New Guinea 2013).

3. PPP

Pacific SIDS have attracted very limited transport PPP investment, with no significant country-scale projects evident across the region. Private participation has largely remained confined to small urban services and transport operations rather than major infrastructure financing. In contrast, Asia-Pacific PPP investments have historically been dominated by roads; however, the magnitude has reduced over the past few years. (World Bank 2024b)

Policies related to Transport Finance

Transport-related development finance measures across Pacific SIDS emphasize mobilizing and sustaining investments in infrastructure development, maintenance, and climate resilience. Policies go beyond public spending and increasingly involve a mix of public funds, development aid, climate finance, dedicated grants, and private-sector participation mechanisms. (Asian Transport Observatory 2025)

Key strategies include strengthening dedicated transport financing systems, such as road and transport funds (Tonga - Government of Tonga 2020a; Solomon Islands- Government of the Solomon Islands 2016b; Fiji - Government of Fiji 2015). Other approaches involve expanding public-private partnerships (PPPs) and private financing options (Papua New Guinea- Government of Papua New Guinea 2010; Fiji - Government of Fiji 2010), as well as leveraging international and climate finance for resilient, low-carbon transport projects (Fiji - Government of Fiji 2017b; Tonga - Government of Marshall Islands 2016; Tuvalu - Government of Tuvalu 2019; Fiji - Government of Fiji 2024). The policy environment further emphasizes the importance of securing long-term funding for maintenance and resilience, acknowledging that asset sustainability is as critical as infrastructure expansion.

Policymaking across Pacific SIDS increasingly recognizes that public funds alone are insufficient to address transport infrastructure needs. Diversifying funding sources, particularly through private sector involvement, is essential for the sustainability and growth of transport systems. The Public Private Partnership (PPP) framework is incorporated into multiple national transport and development policies. Fiji, for example, explicitly promotes PPP models such as build-operate-transfer arrangements for roads, bridges, and jetties, and seeks to attract investment in alternative transport modes through PPP frameworks (Fiji - Government of Fiji 2015, 2017a). The National Climate Change Policy connects PPP mechanisms to the expansion of affordable, low- to zero-carbon transport options (Government of Fiji 2019). Papua New Guinea's National Transport Strategy prioritizes PPP schemes for the expansion and maintenance of road networks, including private funding for specific projects and outsourcing services when cost-effective (Government of Papua New Guinea 2013). Vanuatu's long-term development vision also advocates for strong partnerships that foster private sector growth and enhance the role of rural communities as transport service providers (Government of Vanuatu 2016a).

Summary: Assessing the Pacific Baseline

Transport in the Pacific is survival infrastructure. Fourteen island nations considered in the assessment are spread across an ocean bigger than any continent. The fourteen island nations covered in this assessment are dispersed across an ocean larger than any continent, making connectivity both vital and difficult to sustain. Maritime transport carries most goods, air services provide critical links for people, services, and remote communities, and roads support movement within islands. When any part of this system is disrupted, the consequences quickly extend beyond transport itself, affecting access to schools and clinics, the movement of food and essential supplies, tourism activity, market access, and the ability of governments and communities to respond to emergencies.

This report reviews progress toward the United Nations Decade of Sustainable Transport, 2026–2035. It uses more than forty indicators across seven areas to compare Pacific Island Countries with the rest of Asia and the Pacific and, where possible, with global averages. The findings establish a regional baseline. They show a transport system that is essential, highly constrained by geography, and exposed to rising risks, but also one where targeted investment, regional cooperation, better data, and long-term planning can make a significant difference.

What is working?

Several indicators point to measurable progress. Transport greenhouse gas emissions intensity dropped from 104 to 47 grams of CO_2 per US dollar between 2010 and 2023. This annual decrease of about 6% is the fastest in the Asia-Pacific region. Black carbon and air pollution also went down, even as GDP more than tripled. Internet access more than doubled in eight years. Female employment in transport has started to rise after years of decline. Several countries now have strong policies for cleaner shipping and electrification, such as Fiji's low-emission plan, Solomon Islands' e-mobility roadmap, and Marshall Islands' electricity roadmap.

What still needs attention?

The scale of the challenge remains substantial. Transport contributes about 25% of national greenhouse gas emissions in Pacific Small Island Developing States, compared to 8 to 10% in the rest of Asia-Pacific. In most countries, transport is the biggest source of emissions and is entirely dependent on fossil fuels. Domestic aviation energy use is growing by about 7% each year, which is twice as fast as road and shipping. Grid emission factors are worsening, rising by 0.8% a year, while the rest of Asia-Pacific is improving by 0.5%. Without improvements to the grid, more electric vehicles will not lead to much overall emission reduction.

Connectivity also remains fragile. Pacific shipping connectivity scores sit between 15 and 50; the Asia-Pacific average is 246. No Pacific port appears in the global top 200. Container dwell times are high when compared with vessel turnaround — the bottleneck is customs and administrative processes and not vessels. Aviation trips per capita fell from 0.68 to 0.59 between 2019 and 2024, while the rest of Asia-Pacific recovered.

Road safety is getting worse. Traffic deaths in the Pacific increased by 5.9% each year from 2016 to 2021, reversing a previous annual decline of 3.7%. Only 2% of surveyed roads in Papua New Guinea and 5% in Fiji meet a 3-star iRAP rating. The cost of crashes is 2 to 6% of GDP. This is an additional financial burden for economies already under pressure from climate risks. For example, Vanuatu loses about 0.14% of its GDP each year just from disaster damage to transport infrastructure.

Investments are limited. Public-private partnership investment in transport is effectively absent. Development assistance can fluctuate significantly between five-year windows on the back of a single project. Fuel taxes still fund 9–10% of government revenue in Fiji and PNG. That base could erode as fleets electrify.

The transport sector's economic contribution has remained relatively stable, accounting for about **6% to 7% of gross value added over the past five decades**. Its employment contribution, however, has weakened. Transport's share of total employment declined from around **4% to about 3%**, while in the rest of Asia and the Pacific it increased to about **6%**. This suggests that, despite its continued economic importance, the sector is not generating jobs at the same pace as the wider region.

Reading the trends together

When we look at the indicators together, nine key patterns stand out.

1. In Vanuatu, imports sit for seven days while vessels turn around in just one day, showing a wider trend. Across the region, one of the main challenges to freight connectivity is in clearance, paperwork, and customs. While ports have seen physical upgrades, procedures have not kept up.
2. Population dispersion escalates the connectivity and access gap. More than 70% of people in Solomon Islands and Vanuatu live off the main island. Access to these outer islands relies on both maritime and aviation links. The Pacific region experiences one of the world's widest rural access gaps.
3. The aviation blind spot: Aviation energy use is growing by 7% each year, about twice as fast as road and shipping. Still, aviation gets little attention in mitigation policies across the region, with most strategies focused on shipping and road.
4. Fleet composition is shaped elsewhere: Most Pacific fleets are updated with used vehicles from richer countries. The age, emissions, and safety of these vehicles are mainly determined by the export markets, not by Pacific buyers.
5. The need for energy diversification: Pacific transport relies on a single fuel source. Imported petroleum fuels nearly all road vehicles, most vessels, and nearly all aircraft across the fourteen island states. Between 2000 and 2023, transport energy use nearly doubled, but the fuel composition remained unchanged.
6. The decoupling paradox: Pacific transport emissions intensity is dropping faster than anywhere else in Asia-Pacific, but grid emission factors are rising in most PICs. These trends partly offset each other. An EV in the Pacific runs on a grid that is getting dirtier, not cleaner. As long as this continues, the net benefit from electrification shrinks. Most decarbonization is happening at the vehicle level, not at the energy source.

7. Climate and crash losses are escalating: Roads account for 33 to 89% of at-risk transport assets in PICs, and ports add about 36% on average. Road crashes cost 2–6% of GDP. Together, climate exposure, rising crash losses, and limited historical maintenance spending are placing additional pressure on transport budgets.
8. Investment financing options need recalibration: Fuel taxes still account for a significant share of government revenue in several Pacific countries, including Fiji and Papua New Guinea, but this revenue base will become less reliable as vehicle fleets become more efficient and gradually shift toward electrification. The transition to cleaner transport will therefore require governments to rethink how infrastructure is funded and maintained.
9. Policy ambition and outcomes are moving apart: The region's challenge is less about setting policy ambitions and more about translating them into measurable results. Across the indicators, policy ambition and measured outcomes do not always move together. This gap may reflect financing limits, institutional capacity constraints, data gaps, maintenance backlogs, and the structural limits of small and dispersed transport markets. No single Pacific Island Country has enough people or trade to support dense maritime services, strong aviation networks, or a self-contained vehicle market. Regional institutions such as the Pacific Community, the Secretariat of the Pacific Regional Environment Programme, and the Pacific Regional Infrastructure Facility provide an important foundation for cooperation. However, deeper transport integration will require more coordinated planning, stronger implementation mechanisms, and sustained investment across maritime, aviation, road, energy, and digital systems.

This baseline marks the starting point for the Decade. The next version of this report will show what has changed and what remains the same.

This baseline marks the starting point for the Decade.

Annex 1: Indicator definitions and methodological notes

ENSURE ACCESS TO SUSTAINABLE TRANSPORT FOR ALL	Rural Access	Rural Accesss Index (RAI) is the proportion of the rural population who live within 2 km of an all-season road.
	Urban Access	Urban access indicates a convenient access to public transport measured using the spatial distance to officially recognized transit stops. "Access" implies a person resides within a walkable distance of the nearest transit station: 500 meters walking distance for low-capacity systems (e.g., buses, bus rapid transit, and trams) and 1 kilometer walking distance for high-capacity systems (e.g., trains, metro rail, and ferries).
	Access to facilities	Access to facilities records population can reach a hospital within 60 minutes (by car), healthcare facility within 60 minutes (by car), or school with 5km
ENHANCE EFFICIENCY AND PROMOTE SUSTAINABLE CONNECTIVITY AND LOGISTICS	Street Sprawl and Urban Form	Street-Network Disconnectedness Index (SNDi) measures connectivity using factors like dead ends, intersection density, and circuity. A higher SNDi score means poorer connectivity.
	Dispersion Index	Dispersion-adjusted Population Density is a measure of population density adjusted for geographic dispersion, combining settlement spread with population size to reflect the average distribution of population across a spatial area. Lower values generally indicate populations dispersed across smaller, more isolated communities.
	Domestic material consumption	Domestic material consumption (DMC) measures the physical mass of materials that actually flow through a national economy.
	Sustainable freight transport (SFT) index	Economic sustainability relates to factors such as market access, trade competitiveness, costs, quality, reliability, productivity, resilience, connectivity, infrastructure investment, energy efficiency, operational continuity, and, sustainable production and consumption. Social sustainability relates to factors such as safety, security, employment (e.g. gender), labour conditions, affordability, aesthetic impacts, cultural preservation, health, noise and vibration. Environmental sustainability relates to externalities such as GHG emissions, pollution (air, water and soil), resource depletion, land-use and habitat fragmentation, waste, biodiversity loss, ecosystems degradation, and climate disruptions and impact.
	Trade facilitation and Port efficiency	Container import dwell time measures the time from when a container is unloaded off the ship at the destination port to when it physically departs the port gate Vessel turnaround time measures the time a container vessel spends physically inside the port area (excluding anchorage waiting time outside the port)
	Remoteness Index	Composite index developed by UNCTAD measuring how far a country is from its trading partners, weighted by actual trade flows and adjusted for geographic and economic factors. Components include distance from markets, transport connectivity, digital connectivity, and cultural-political linkages. Higher score = greater remoteness.
	Maritime Connectivity	Based on UNCTAD Liner Shipping Connectivity Index (LSCI). Measures a country's integration into global container shipping networks based on shipping services, carrier presence, route frequency, and port connectivity. Higher scores indicate stronger integration into international maritime trade networks.
	Container Port Performance	Based on the Container Port Performance Index (CPPI) developed by the World Bank Group. Measures operational efficiency of ports based on vessel turnaround time, cargo handling speed, and logistics performance relative to global benchmarks.
	Aviation Connectivity	Represented by the Average Aviation Trips per year calculates the average total annual trips per capita.

ADVANCE LOW- OR ZEROCARBON, RESILIENT, AND ENVIRONMENTALLY SOUND TRANSPORT SYSTEMS	Tourism arrivals	Total number of visitor arrivals recorded annually.
	Aviation Route Disruptions	The risk from sea level rise to airports has been calculated in terms of route disruptions, using only globally available datasets.
	Road Infrastructure Availability	Road infrastructure in kilometers per million population
	Transport Energy Consumption Growth	The growth of transport energy consumption over a period of time
	Transport Energy Consumption Intensity	Transport energy intensity reflects the amount of energy required to support mobility relative to the economy's output (GDP).
	Transport GHG Emissions Growth	The growth of transport GHG emissions over a period of time
	Transport GHG Emissions Intensity	Transport GHG emissions intensity reflects the GHG emissions from the mobility sector relative to the economy's output (GDP).
	Electrification	The UNEP (United Nations Environment Programme) EV Readiness Assessment is a localized data-driven framework used to evaluate a country's preparedness for electric vehicle (EV) adoption. It evaluates markets across several core pillars: Policy & Regulation: Evaluates the government's progress on setting emissions targets, import regulations, and e-mobility mandates. Market Potential & Affordability: Analyzes consumer readiness, cost-to-own metrics, and financial incentives for both private and public transport. Infrastructure & Energy: Assesses grid capacity, power sector maturity, and the availability of public charging networks. Technology & Deployment: Measures the existing volume of EVs on the road and the localized availability of automotive suppliers.
	Used Passenger Car Import	Used Passenger Car Import is the value or volume of imported second-hand passenger vehicles entering a country's vehicle fleet.
	Fossil Fuel Subsidies	Fossil Fuel Subsidies are government financial transfers or pricing interventions that reduce the cost of fossil fuel production or consumption below market value.
	Grid Decarbonization	A Grid Emission Factor (GEF) measures the average amount of greenhouse gases (primarily CO_2) emitted per unit of electricity consumed from a power grid (gCO_2e/kWh).
	Transport Air Pollution	Transport Air Pollution is the level of air pollutant emissions generated by transport activity, typically including pollutants such as particulate matter (PM2.5), nitrogen oxides (NOx), sulphur oxides (SOx), and other combustion-related emissions.
	Annual disaster losses	Average Annual Loss (AAL) as a share of GDP is a metric that measures the expected monetary cost of infrastructure damages from disasters in any given year, expressed as a percentage of a country's Gross Domestic Product.
	Road Vulnerability Index	Natural disasters are simulated on random and cluster of country road segments. National Road Vulnerability Index (NRVI) indicates how much of the trips are potentially disrupted due to the missing segments.

SHAPE PEOPLE-CENTRED URBAN MOBILITY AND LIVEABLE CITIES	Urbanization	Level of urbanisation is the proportion of a country's total population that resides in areas classified as "urban".
	Transport Mode Share	Transport mode share is the percentage of travelers using a particular type of transportation, or the proportion of trips made by various means within a specific geographic area and time period.
	Bus Trade	Primary import trade data is presented as total value of trade. This considers code/s 8702 from trademap database.
MAKE TRANSPORT SAFE AND SECURE	Road Safety	Measures the annual number of fatal injury deaths resulting from road traffic crashes per 100,000 people.
LEVERAGE SCIENCE, TECHNOLOGY, AND INNOVATION FOR SUSTAINABLE TRANSPORT	Access to Internet	Access to Internet is the share of the population with access to internet services.
CROSSCUTTING	Transport Economic Contribution	Transport Economic Contribution is computed as the share of gross value added generated by transport-related sectors relative to total national GVA, in order to reflect the economic contribution of the transport sector within the overall economy.
	Transport Employment	Transport Employment is the share or number of people employed in transport-related economic activities, including land, maritime, aviation, logistics, and supporting transport services.
	Female Employment	Female Employment (Transport) is the share of women employed within transport-related economic activities as a proportion of total transport sector employment.
	Development Assistance	Concessional outflows from bilateral sources (i.e. bilateral gross ODA provided by countries in the Development Assistance Committee) as well as gross multilateral concessional outflows to developing countries.
	Fuel tax revenue	Fuel Tax Revenue is the revenue generated by governments through taxes or levies imposed on transport fuels.
	PPP	PPP is a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility and remuneration is linked to performance.

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