Asian Transport Observatory

Port Moresby

Urban Transport - State of Play

Insights from the Asian Transport Observatory (ATO)

Uploaded Jan 2025

ADB ASIAN DEVELOPMENT BANK
AIIB ASIAN INFRASTRUCTURE INVESTMENT BANK

Section 1: Port Moresby– State of play

Port Moresby: Introduction

Population: 5.1 million (2022) (Source: Macrotrends)

Area: 1,610 sqkm (2015) (Source: GHS)

Population Density: 2154 people/sqkm (2015) (Source: GHS)

Built up Area: 1,142 sqkm (2015) (Source: GHS)

Main Transport features:

- Private vehicle ownership is low, with currently no rapid transport system such as bus rapid transit or light rail.
- The main modes of transport are public motor vehicles (PMVs) (buses and mini-buses) and taxis owned and operated by the private sector.
- "There are no comprehensive and integrated transport roadmaps or plans for Port Moresby to allow for short and long-term transport planning and to guide the development of urban mobility and transport infrastructure in the NCD area." (ADB: Papua New Guinea: Port Moresby Sustainable Urban Transport Mobility Approaches)

Urban public transport

Airport

Seaport

Urban private vehicle traffic

ADB ASIAN DEVELOPMENT BANK AIIB ASIAN INFRASTRUCTURE INVESTMENT BANK

Port Moresby is severely underserved with Road infrastructure

- Port Moresby has limited road infrastructure, with only 1.1 meters available per capita. It's important to note that this data, sourced from OpenStreetMap (OSM), likely includes unpaved roads, which may not be reliable during floods. (Average road availability for Papua New Guinea is 3.5 meters per capita, whereas, Asia-Pacific subregional average is 4.9 (2022).)
- This limited infrastructure is particularly concerning given Port Moresby's vulnerability to storms and floods.
- 100% of the population and land area are exposed to storm surges according to the EU – GHS report.
- Investing in climate-resilient road infrastructure is crucial for Port Moresby. By strengthening its road network, Port Moresby can improve its ability to withstand the increasing frequency and intensity of storms and floods expected due to climate change.

Sources: Oke et.al. (2019)(OSM), GHS (European Commission) | ATO Indicators: SEC-UDB-003, INF-UDB-004
Notes: Value for Port Moresby is for 2013 sourced from UN Habitat

Non-Road (Air and Maritime) transport is also crucial in the case of PNG

Maritime

- Shipping is crucial for connecting Papua New Guinea's dispersed rural communities and facilitating international and coastal traffic. Lae, the principal commercial port, serves as the gateway to Morobe Province and the Highlands region, making it vital for both international and domestic trade. Port Moresby, the second major port, also accommodates international cargo and passenger vessels.
- Papua New Guinea has 23 declared ports, including many small wharves and jetties. Of these, PNG Ports manages 15, with Port Moresby being one of the few commercially viable ports. Port Moresby handles both international and coastal traffic and maintains a reasonable level of infrastructure.

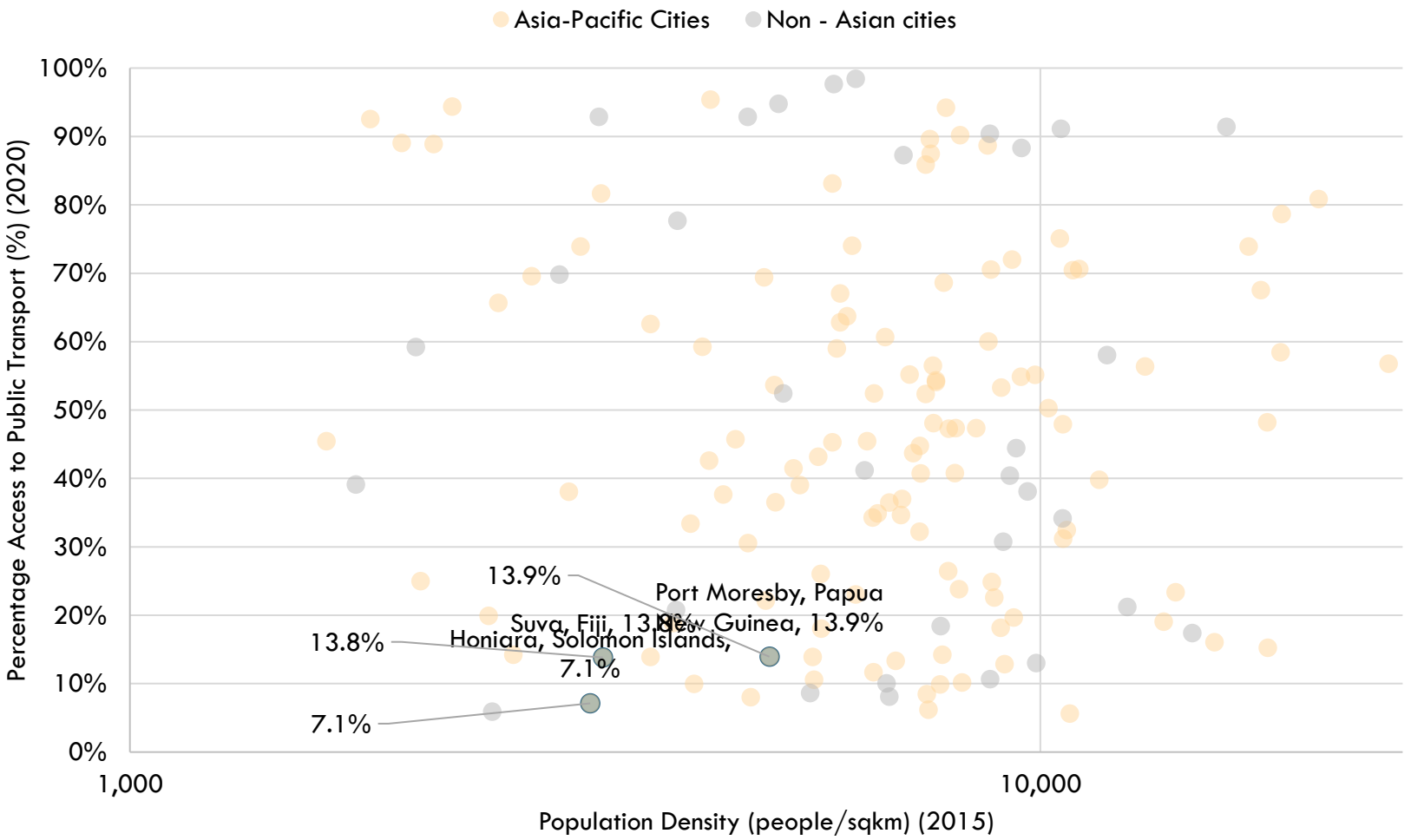
Aviation

- Port Moresby International Airport, also known as Jacksons International Airport, is located about eight kilometers from Port Moresby, Papua New Guinea. It is the country's largest and busiest airport, handling around 1.4 million passengers in 2015. The airport is the main hub for Air Niugini, PNG Air, and Travel Air.

Sources: ADB (https://www.adb.org/sites/default/files/linked-documents/CAPE-PNG-9-Transport-Sector-Assessment.pdf), Wikipedia (https://en.wikipedia.org/wiki/Port_Moresby_International_Airport)

Only 14 out 100 people have a decent access to public transport in Port Moresby

- Decent access to public transport can be defined as the proportion of the population that has convenient access to public transport – Based on the UN Habitat definition, this indicator is computed as share of population who live within a walking distance (along a street network) of 500m to a low capacity public transport system (eg bus, tram) and 1000m to a high capacity public transport system (eg trains, ferries, etc). Only public transport stops which are mapped are included in the analysis which may include both formal and informal stops.
- In the case of Port Moresby, only 13.9% of the total population has a decent access to public transport.
- Generally, the Pacific SIDS lag in this context with Suva at 13.8% and Honiara at 7.1%.

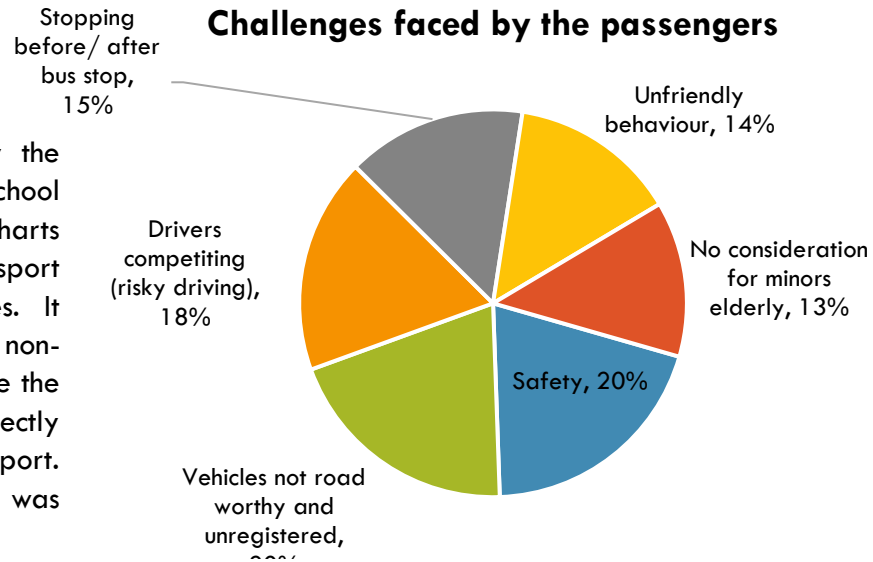


Source: ATO visualization based on the date sourced from UN-Habitat

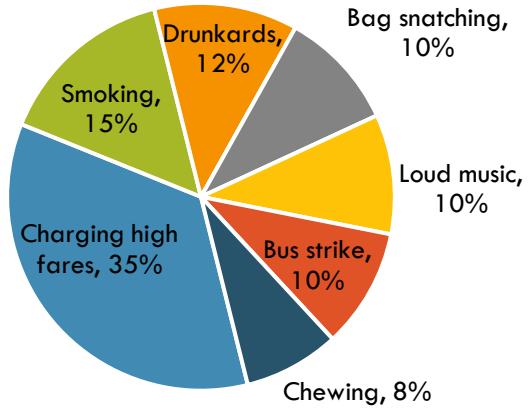
Public transport users and their challenges

- A recent study was conducted by the University of Papua New Guinea School of Business and Public Policy (see charts on the left) about the Public Transport System Challenges and Strategies. It identified that safety and vehicle non-road worthiness were reported to be the most concerning challenges directly relating to the use of public transport. Among other challenges, high fares was the most concerning challenge.
- Based on another study conducted by Jack Assa (see graph on the right), 300 public transport users were asked to rate the indicators. Accordingly, majority of the respondents were satisfied with the seat comfort, overall safety, and cleanliness of the crews and buses, while majority were unsatisfied with the operator friendliness, traffic rule adherence and respect for women and people with disabilities.

Challenges faced by the passengers

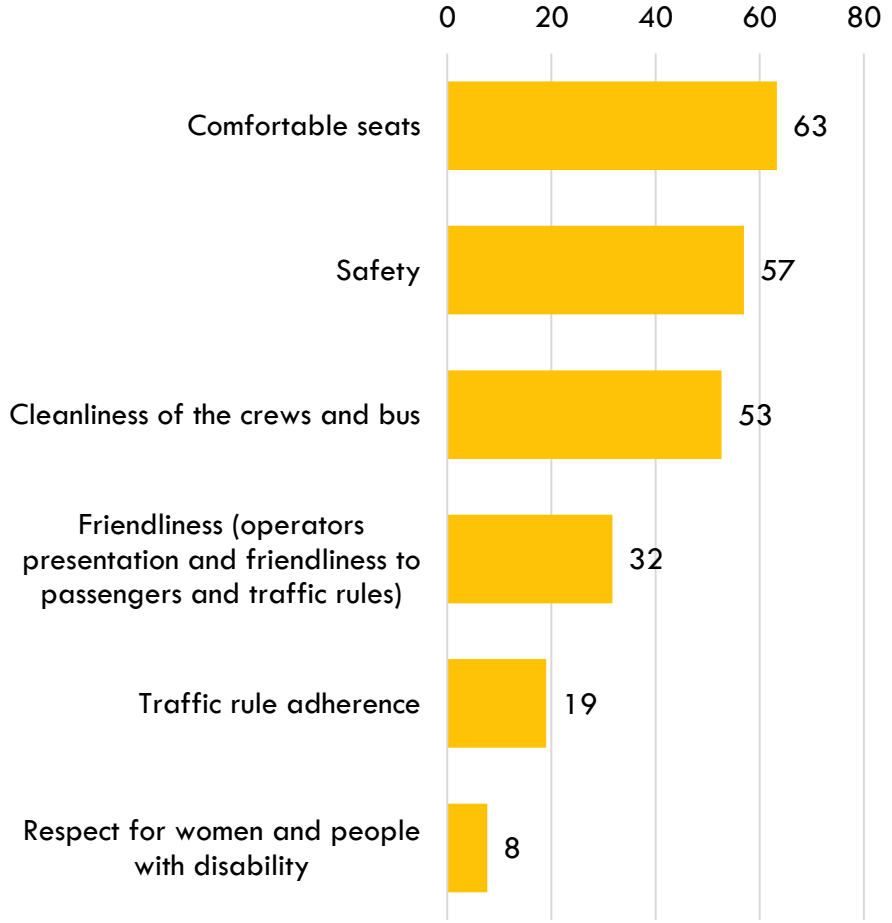


Other issues encountered by passengers



Source: Mo et al. (2022) (https://devpolicy.org/2022-PNG-Update/Public-Transport-System-Port-Moresby_DMo.pdf)

Percentage of respondents rating Very Good or Excellent for the following criteria of the Public Transport

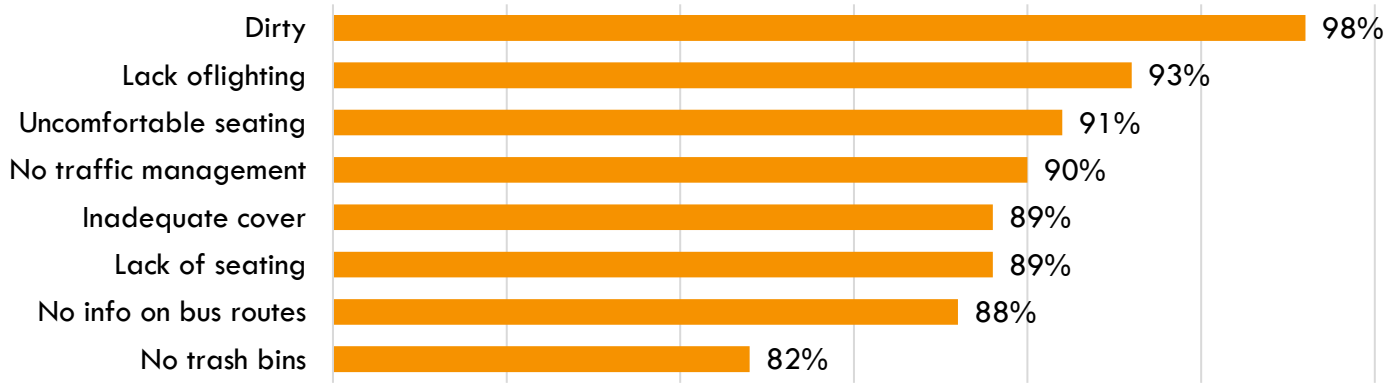


Source: Assa, J. (2015) (https://devpolicy.org/Events/2015/2015-PNG-Update/Presentations/Day-2/Urban-development_paper_Assa.pdf)

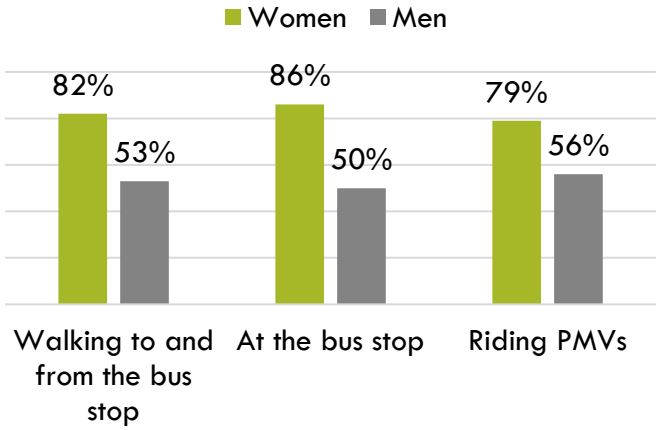
Public transport users survey reports dissatisfaction

- The following analysis is based on a 2015 study, for which a more recent update is unavailable.
- Bus stops were described as severely lacking basic amenities. The most commonly identified problem was uncleanliness, followed by a lack of lighting, uncomfortable or inadequate seating and insufficient cover. It was also revealed that bus stops provide no information about bus routes.
- A major problem identified at bus stops was inadequate traffic control of public motor vehicle (PMVs) when they pick up and drop off passengers. Comments described PMVs driving dangerously in and out of bus stops in an attempt to pick up passengers quickly and beat competing PMVs.

Bus stop maintenance



Respondents who feel unsafe using the public transport



Reasons for public transport use by females

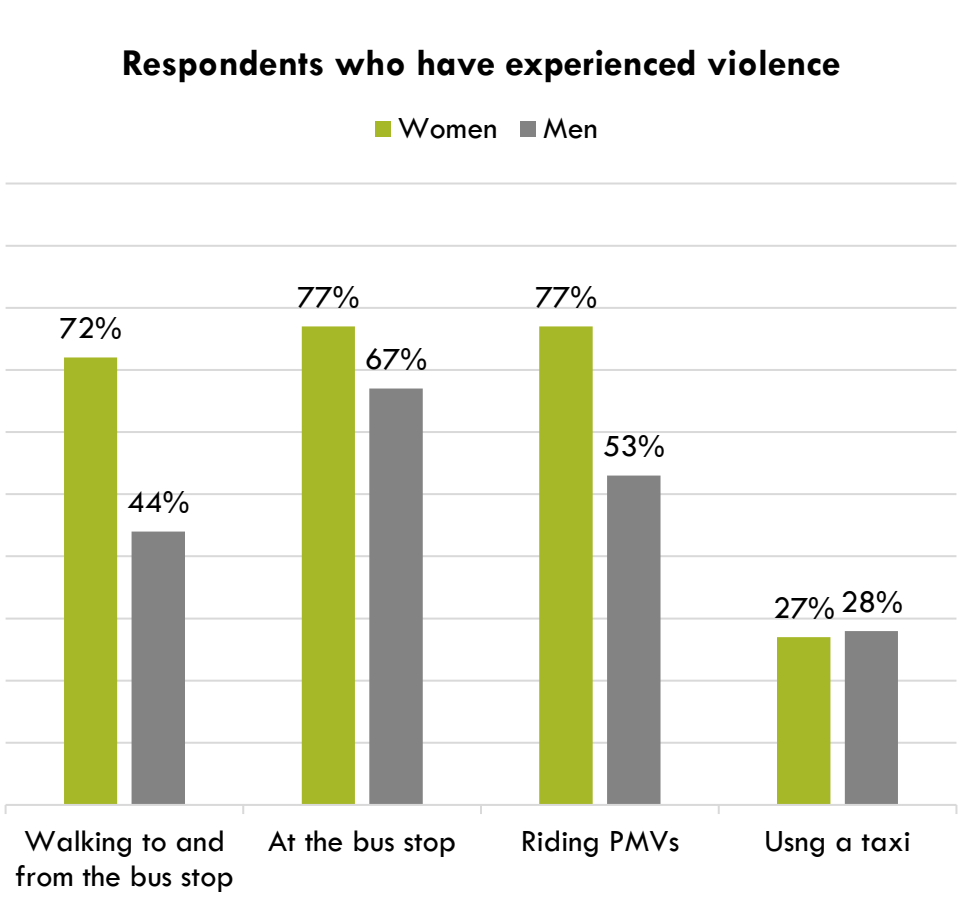
Use	n	%
Market	87	70%
Visit family/ friends	74	60%
Shopping	77	62%
School	65	52%
Church	63	51%
Work	27	22%
Other	12	10%
Airport	4	3%
Hospital	2	2%

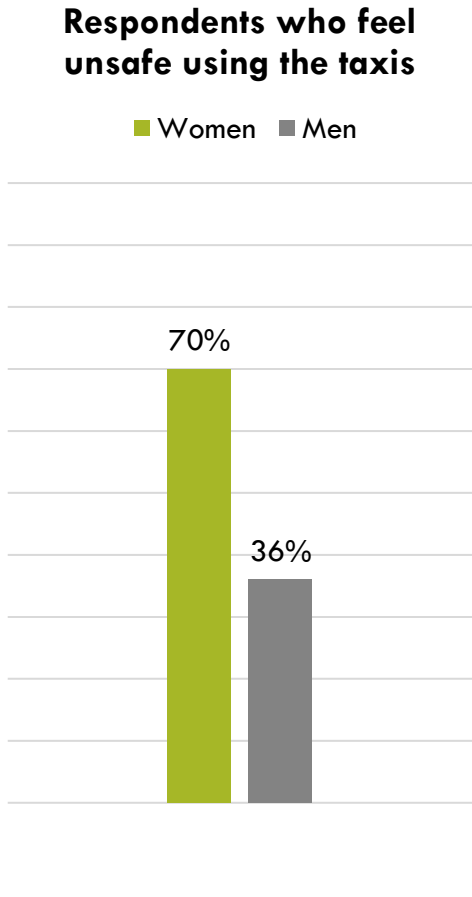
Source: UN Women (https://unwomen.org.au/wp-content/uploads/2015/12/UNW_safe_public_transport.pdf)

Public transport is perceived unsafe by the majority, especially women

According to a 2014 survey, concerning rates of violence against women and girls while accessing public transport were reported:

- 90% experienced various forms of violence: physical assault, robbery, sexual harassment, sexual violence, verbal abuse, threats, and intimidation.
- 97% of women and 75% of men felt unsafe using public transport; 60% of violence incidents went unreported.
- 92% felt unsafe using public motor vehicle (PMV) services; 97% of women and 75% of men felt unsafe during PMV use.
- 64% of women and 44% of men who experienced violence did not seek help; 60% of violence witnesses did not report incidents.
- 84% believed current public transport services inadequately accommodate people with disabilities.

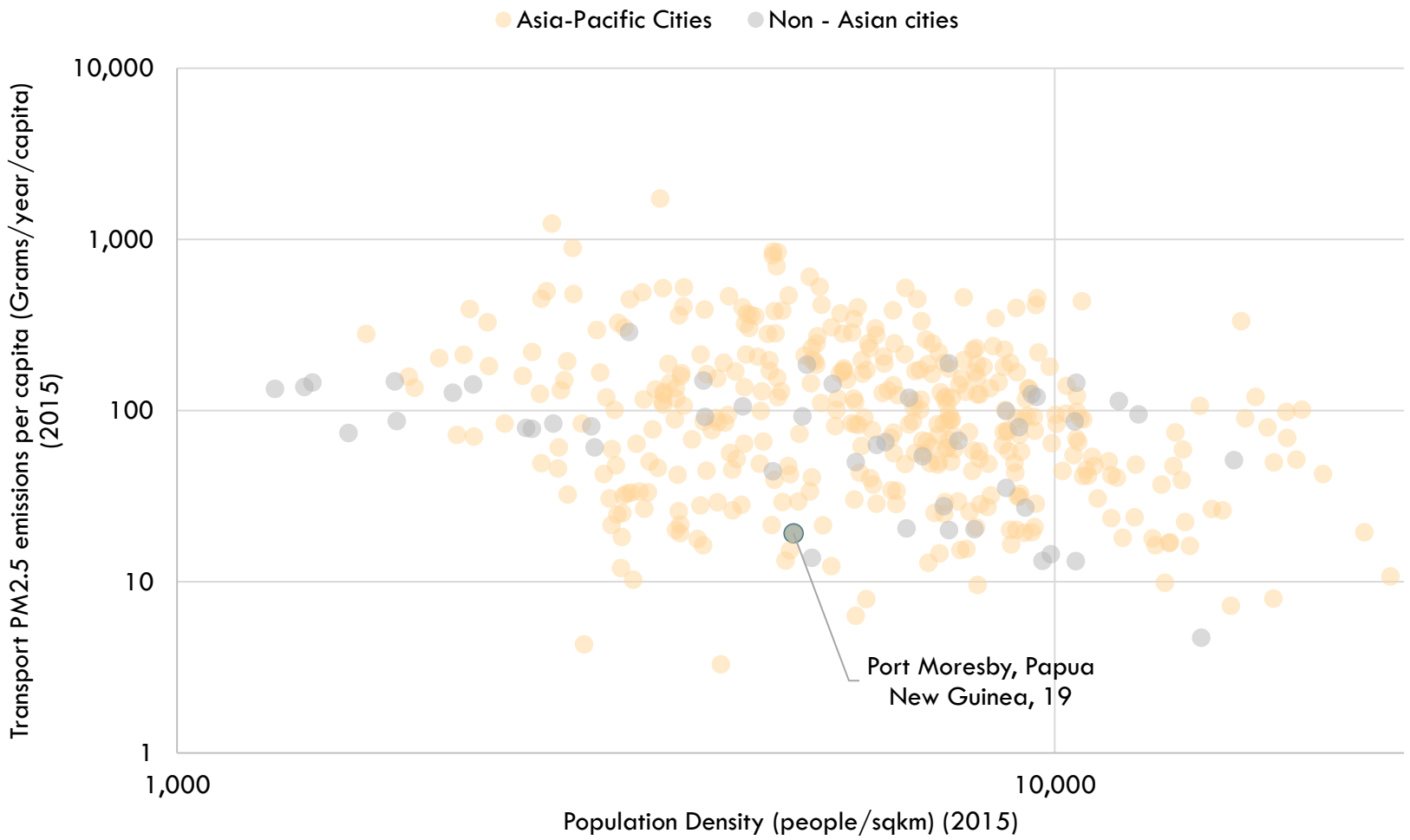




Source: UN Women (https://unwomen.org.au/wp-content/uploads/2015/12/UNW_safe_public_transport.pdf)

Port Moresby has relatively low Transport PM2.5 per capita emissions

- Port Moresby (19 g/ year / capita) ranks significantly low compared to other Asia – Pacific UCs at similar population density levels in terms of transport PM2.5 emissions per capita.



Sources: GHS (European Commission) | ATO Indicators: SEC-UDB-003, APH-UDB-003

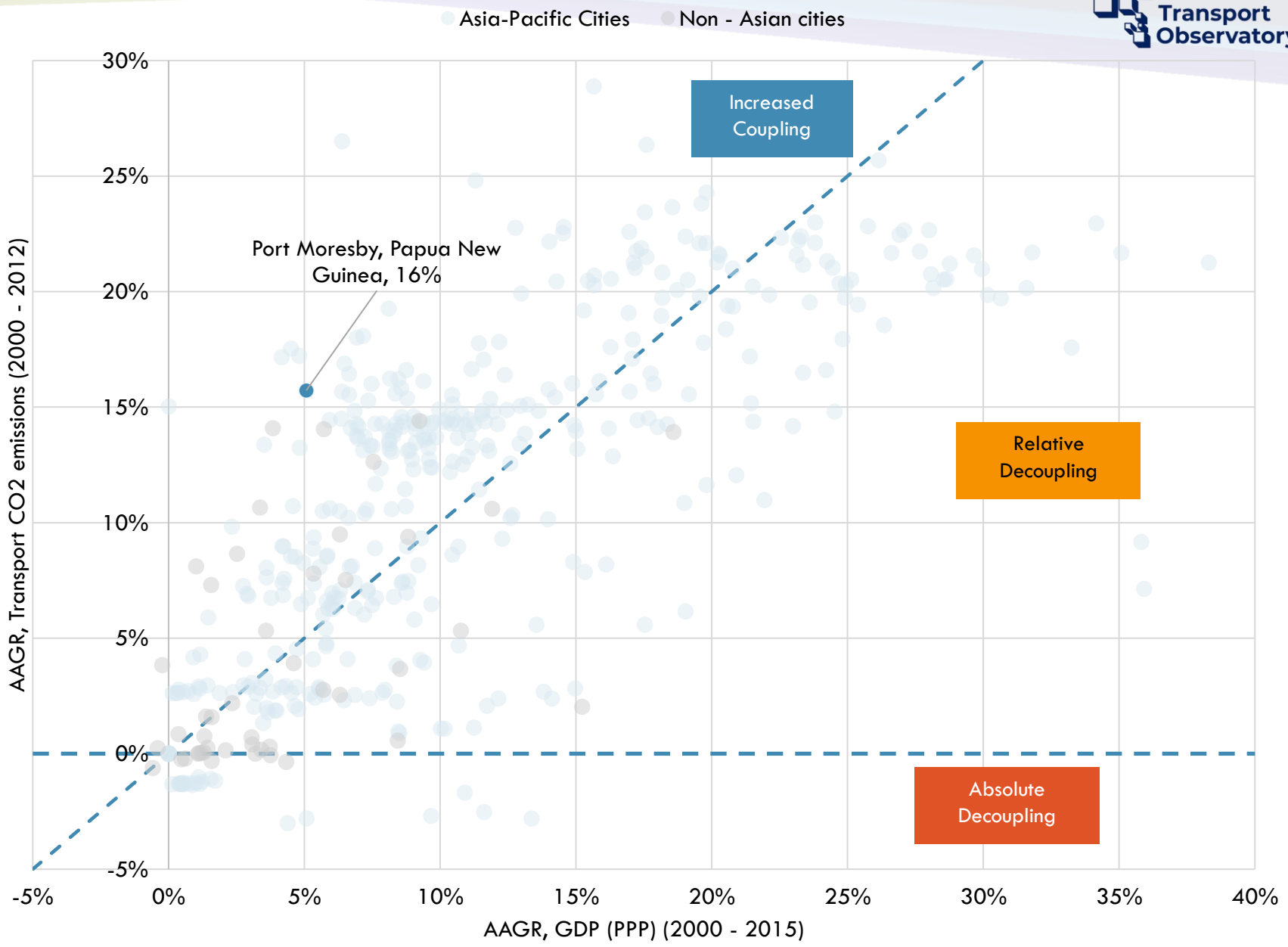
Port Moresby has very low Transport CO2 per capita emissions

- Port Moresby (49) (as of 2000) ranks significantly low compared to other Asia – Pacific UCs at similar population density levels in terms of transport CO2 emissions per capita.
- Sparser population density only presents challenges.

Sources: GHS (European Commission), IPCC | ATO Indicators: SEC-UDB-003, CLC-UDB-002

Port Moresby is increasingly coupling Transport CO2 emissions with GDP

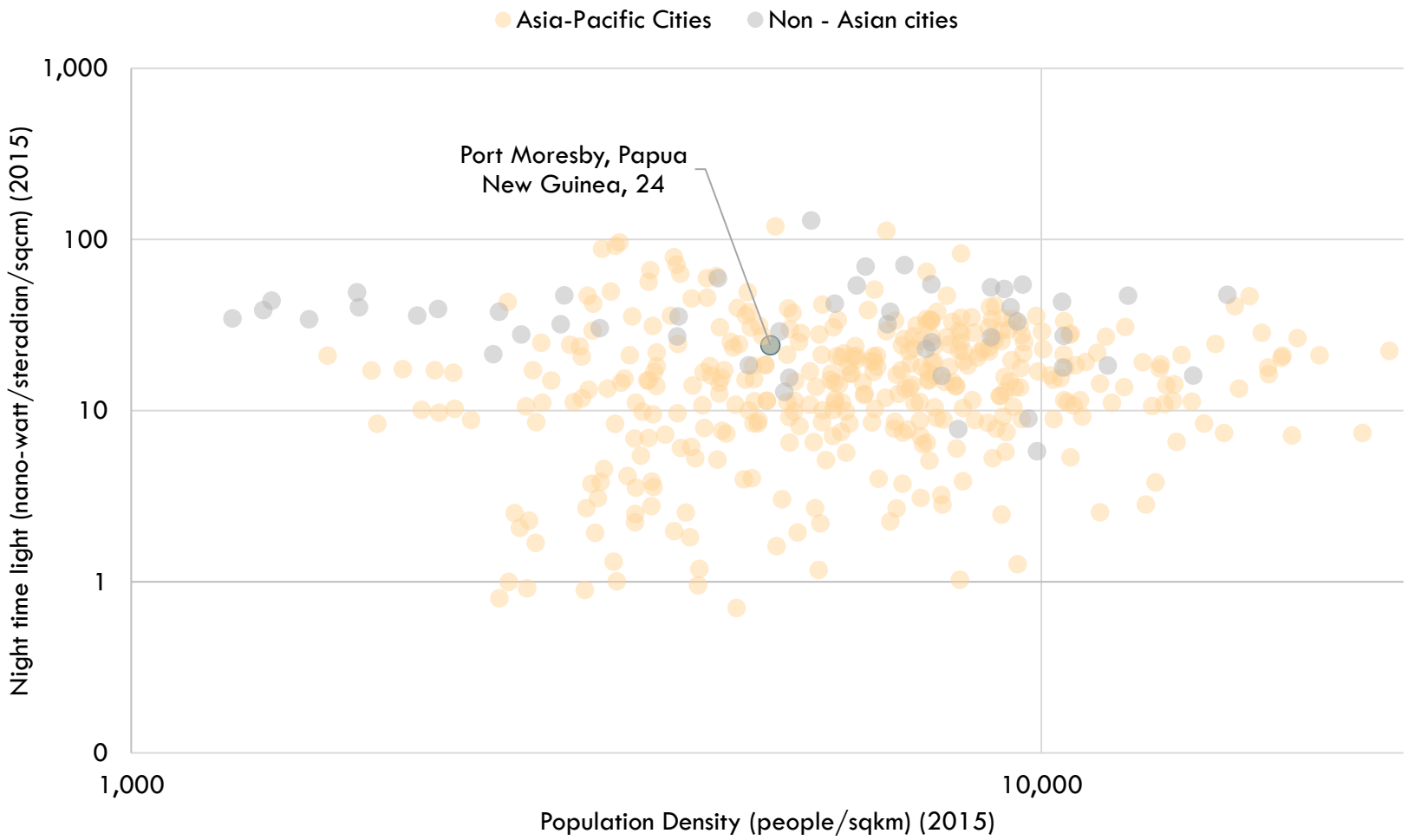
- Available data points towards Port Moresby increasingly coupling its the transport CO2 emissions with its economic growth (GDP).
- The AAGR of transport CO2 emissions between 2000 and 2012 is 16% whereas the GDP increased by 5% during the period 2000 and 2015.
- PNG, on the other hand is in the absolute decoupling zone with 5% increase in GDP and 4% decrease in the transport (fossil) CO2 emissions in the period 2015 to 2022.



Source: ATO Analysis using the data sourced from GHS - EC

Night time light analysis indicates Port Moresby's population is relatively densely packed

- Nighttime light analysis is a technique that involves studying satellite imagery of Earth at night to analyze the patterns and intensity of artificial lights. It reflects the urbanization trends, potentials of transport hubs, traffic and movement patterns etc.
- In comparison with the peer Asia – Pacific UCs (Urban Centres) at similar population density levels, Port Moresby shows a significantly higher level of urbanization concentration. This suggests that Port Moresby's urban population might be more densely packed compared to its peers.



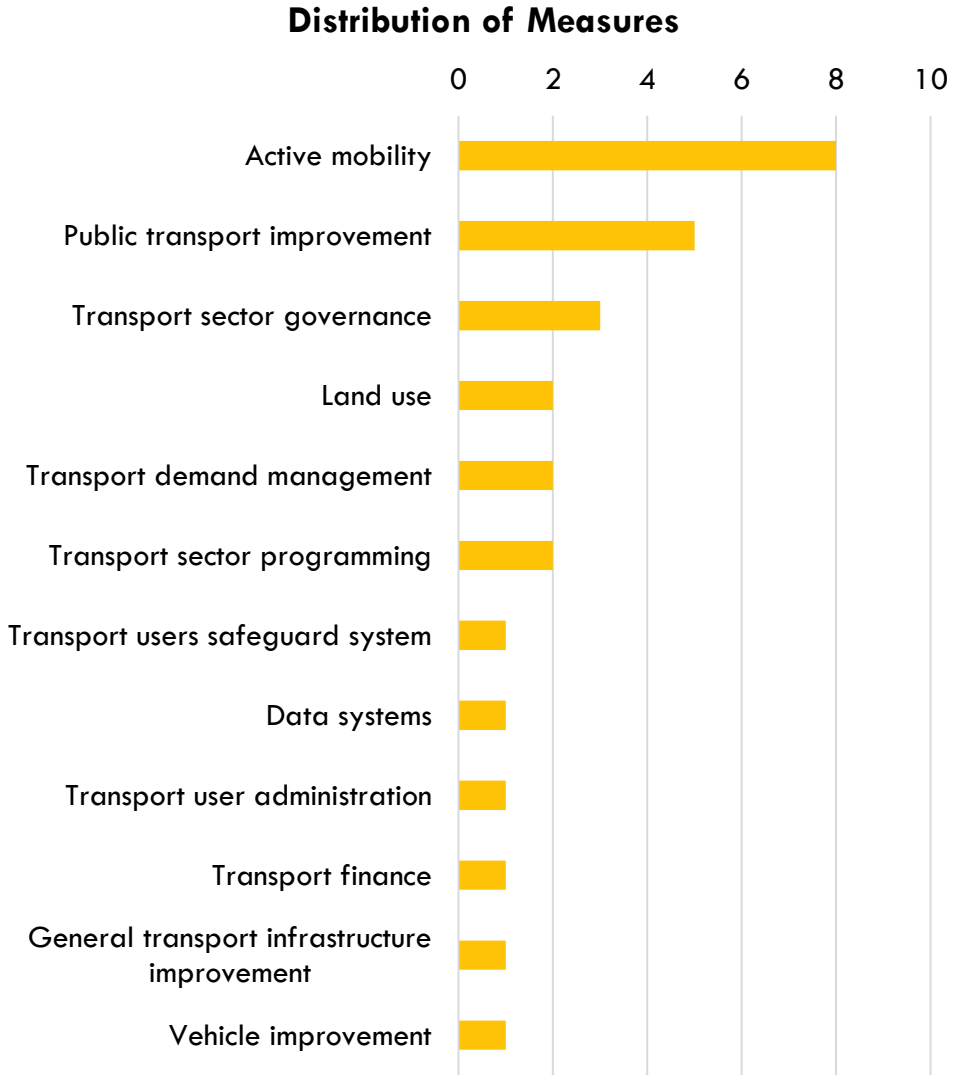
Sources: GHS (European Commission) | ATO Indicators: SEC-UDB-003, MIS-UDB-005

Section 2: Port Moresby– Policy overview

Port Moresby policy tracker overview

Document Name	Year Published	Document Type
National capital district urban development plan	2006	Urban Development Policy
Port Moresby Towards 2030	2020	Urban Development Policy
EV Policy Draft for PNG (National level policy)	2022	Transport Subsector Policy
National Transport Strategy (National level policy)	2013	National Transport Policy

- Port Moresby's policy landscape focuses on improving urban mobility, safety, and sustainability. Plans include developing a bus transit-way or light rail system in the long term to enhance public transport efficiency and reduce traffic congestion. Immediate priorities include expanding and enhancing the walking and cycling network to create a citywide pedestrian network that accommodates cycle lanes where necessary, linking key activity areas. Efforts also aim to increase pedestrian safety and comfort through improved infrastructure and traffic management strategies.
- The city emphasizes the integration of pedestrian pathways with cycle lanes, aiming to enhance walkability and reduce reliance on vehicular transport. Policies also target the consolidation of built-up areas to optimize land use and infrastructure efficiency. Initiatives to increase women's representation in the transport sector through recruitment programs highlight broader efforts towards inclusivity and equity in urban development. Overall, Port Moresby's policy framework aims to foster sustainable growth, improve transport infrastructure, and enhance the quality of life for its residents.
- More recently, in July 2023, ADB's technical assistance for Papua New Guinea was prepared for a sustainable urban mobility plan (SUMP) for Port Moresby, promoting low-emission transport and public health. It assessed zero-emission transit and plastic waste in road construction, enhancing urban livability and fostering a circular economy.



Policy measures recorded

BRT	Complete Streets design development	Cycling/ Bike Lanes	Development density or intensiveness	Employment in transport, communication, and storage
EV charging infrastructure	General e-mobility	Gender responsive planning	General active mobility	General data repositories and data collection
General driving permits	General Institutional/ governance	General parking measures	General public transport	General Public transport administration
General transport finance	General transport planning	Passenger Transit hub	Public transit expansion	Public transport information
Road space repurpose to allow access for other modes	Traffic calming	Transit Oriented Development	Urban passenger rail infrastructure improvement	Vehicle air pollution emission standards
	Vehicle speed	Walking measures		

Measures recorded from National level policies

BRT

long-term plans will consider a bus transit-way or light rail system

(Port Moresby Towards 2030)

Cycling/ Bike Lanes

Implement an integrated and safe system of pedestrian pathways, that could accommodate cycle lanes if the need arises, linking high activity areas.

(National capital district urban development plan)

Gender responsive planning

Increase representation of women in the transport sector, including introduction of a programme for recruiting women as drivers and crew

(Port Moresby Towards 2030)

Traffic calming

Increase enclosure of the road which naturally decreases driving speeds and makes walking more comfortable

(Port Moresby Towards 2030)

asiantransportobservatory.org

"ATO translates data into insights, policies, and investments"

ATO Team	info@asiantransportobservatory.org
Jamie Leather	jleather@adb.org
Andres Pizarro	andres.pizarro@aiib.org
Manuel Benard	manuel.benard@aiib.org
Alvin Mejia	alvinmejia@asiantransportobservatory.org
Sudhir Gota	sudhirgota@asiantransportobservatory.org
Mel Francis Eden	meleden@asiantransportobservatory.org
Adwait Limaye	adwait@asiantransportobservatory.org
Benjamin Soco	benjaminsoco@asiantransportobservatory.org

X: @transportATO
Linkedin: bit.ly/ATOlinkedin