



GUIDANCE FRAMEWORK

For Public Transport Operations in
Africa during COVID-19 Pandemic



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CONTENTS

INTRODUCTION	7
PART 1: Setting the context	9
PART 2: FRAMEWORK GUIDELINES	12
ANNEXURE: Transport-specific measures adopted by African nations	25
REFERENCES	38

INTRODUCTION

The COVID-19 global pandemic has affected 54 countries in Africa, with 139,272 cases, 3,995 deaths and 58,348 recoveries reported as of May 31, 2020. Out of these 54 countries, 47 are clubbed under the WHO Africa Region — these have reported 98,625 COVID-19 cases. South Africa is the most severely affected, with 30,967 cases.¹

Another estimation by the Africa Centres for Disease Control and Prevention's (Africa CDC) COVID-19 dashboard says the continent has 142,289 cases, 4,084 deaths and 59,864 recoveries as of May 31, 2020. The northern parts of the continent have reported the highest number of cases, followed by the western, southern, eastern and central regions.²

The first COVID-19 case in Africa was reported in Egypt on February 14, 2020. Since then, cases have been reported from across the continent, beginning with national capitals and other major cities and spreading to smaller cities and towns.

Experts are of the opinion that so far, African countries have experienced a slower and lower transmission rate of the virus compared to the most affected countries in other parts of the world. The WHO Regional Office for Africa has attributed this to demographic factors as more than 60 per cent of Africa's population is less than 25 years of age. In addition to this, what has helped stem the spread are quick decisions by governments to impose confinement measures including social/physical distancing, contact-tracing and isolation, and increased emphasis on hand-washing³, sanitisation and wearing of masks and facial covers.

But there is no room for complacency. A WHO Regional Office for Africa study based on prediction modelling and one billion population in the WHO Africa Region has warned of 83,000 to 190,000 deaths and 28 million to 44 million infections in the continent due to COVID-19 in the first year of the pandemic if containment measures fail.⁴

One of the sectors that the pandemic has affected severely is public transportation — it has made transport systems more vulnerable and high-risk. According to the Brussels-based International Association of Public Transport (UITP), this is because public transport systems have large numbers of people travelling in a confined space with limited ventilation, no systems to identify potentially sick people, and common surfaces such as ticket machines, handrails, door knobs etc which could easily transmit the infection.⁵

Naturally, public transport is being counted among the key sectors prioritised for interventions for COVID-19 control. Air travel was the first in the sector to be banned by countries, followed by restrictions on inter-city and intra-city travel using road transport. While buses and rail systems are mostly used for inter-city travel on the continent, intra-city travel modes include buses, light rail transit (LRT), informal public transport modes (*matatus*, minitaxis, minibuses, *danfos* etc) and intermediate public transit or para-transit (IPT) modes such as taxis, commercial motorcycles (*boda-bodas/okadas*), *tuk-tuks/bajajis* (three-wheeled vehicles) etc.

Over three months have passed since the first reported case in Africa, and many African countries have now begun easing lockdown restrictions and allowing transport services to resume. This has led to an urgent need for clear guidelines to operate transport systems during the COVID-19 pandemic and after.

This document is an effort in that direction. It attempts to create a detailed guidance framework on essential preventive measures to be adopted by governments, transport operators and commuters in terms of hygiene, social/physical distancing, and safety of operators (especially drivers, conductors and staff at transport stands/stops/terminals) and commuters. It also highlights the fiscal measures required to sustain transport operations with limited passenger occupancy and to offset the revenue losses and ensure longer term financial sustainability. As African cities have both formal and informal public and para-transit systems, appropriate guidelines for them have also been recommended.

This guidance document is divided into two parts. **Part 1** sets the context by examining the actions taken by African governments and the emerging challenges in different countries in terms of disrupted mobility and transport services. It is important to understand this context to be able to plan for post-pandemic recovery.

Part 2 details out the guidelines for public transport and para-transit systems, looking at the preventive measures to be undertaken to minimise and combat the spread of the virus in transport systems and networks and make transport operations safe for commuters, transport operators and service providers. To compile these comprehensive guidelines, Centre for Science and Environment (CSE) has referred to detailed guidance frameworks that various key governmental agencies have put in place for India, where the issues and concerns are very similar to those in African countries. These agencies include the Central Road Research Institute, an affiliate body of the Government of India; GIZ-India; and specific guidelines adopted by state governments and bus transport corporations in India.

The COVID-19 pandemic is a global crisis of unprecedented proportions. Nations must fight it together. Herein lies an important opportunity for South-South cooperation and knowledge and experience sharing for cross-learning and action. Tapping the global learning curve to inform and strengthen action, therefore, will be critical in this struggle against the virus.

PART 1

SETTING THE CONTEXT

Mobility and public transport in African countries during and after the pandemic — challenges and action points

According to the UN Economic Commission for Africa, as on May 4, 2020, 42 African countries had imposed partial or full lockdowns to control the raging pandemic; 38 of these lockdowns lasted for at least 21 days. One of the direct impacts of the lockdowns has been an improvement in air quality reported from many cities.

But while lockdowns might be beneficial from a health perspective, their impact on the economy is negative — they can suppress the spread of the virus, but they also threaten lives and livelihoods and exacerbate poverty.⁶ The Economic Commission for Africa (ECA) estimates that a one-month full lockdown across Africa could cost the continent about 2.5 per cent of its annual GDP, equivalent to about US \$65.7 billion per month.

Rwanda was the first country in Africa to impose a lockdown on March 21; 11 more nations followed with full lockdowns, while an additional 10 adopted partial lockdowns of cities or high risk communities.⁷ The WHO Africa Region admits that the lockdowns helped. Matshidiso Moeti, WHO's regional director for Africa, says: "National and regional lockdowns have helped to slow down the spread of COVID, but it remains a considerable public health threat."⁸

According to the WHO Regional Office for Africa, preliminary data indicates that countries that implemented nation-wide lockdowns found the weekly increase in the number of new cases to have dropped significantly from a 67 per cent rise in the first week after the lockdown to a 27 per cent rise in the second week. Furthermore, the initial analysis indicates that countries which implemented partial and targeted lockdowns along with effective public health measures may have been even more effective at slowing down the virus.⁹

But the lockdowns have triggered a huge slide in national economies, and almost every country is smarting under the impact. A move towards easing the restrictions has begun — however, there remains a looming threat that COVID-19 cases might increase with easing of lockdowns. As the WHO Regional Office for Africa warns: "Lockdowns are being eased in some parts of Africa, but we cannot just revert back to how things were before the outbreak. If governments abruptly end these measures, we risk losing the gains countries have made so far against COVID-19."¹⁰

Transport is one of the sectors that has been severely affected due to the pandemic-induced lockdowns. Public transport systems have faced either complete bans, or strictly restricted operations with reduced passenger occupancy. This has undermined people's confidence in these systems. As nations start easing the restrictions, they have decided to continue with three mandatory measures that had been introduced during the lockdowns — wearing of face masks/coverings in public, hand hygiene and social/physical distancing. As transport systems involve people and their movement, these very measures will necessarily form

an essential part of the post-lockdown strategies for public transport operations and management.

In the post-lockdown scenario, in the years that the virus would continue to live amongst humans and threaten them till a cure is found for it, a ‘new normal’ will come into effect in the way people live, in the way they commute and work. It will offer countries and their planners an opportunity to rethink and redesign their public transport systems into more sustainable and safer models.

Governments have already initiated the processes of framing and implementing guidelines and protocols. But beyond this immediate emergency action, the bigger question that confronts all is the viability and sustainability of these systems in the long run.

What are the challenges they face, and what can governments do to overcome them? Ensuring continuity of road transport operations during and after a pandemic has been one of the toughest and most challenging tasks for African countries. They have a combination of regulated formal modes and a huge unregulated segment (the informal public transport modes). The informal modes are efficient and used by a majority of commuters in African cities and towns, but they need to be streamlined during the pandemic time to meet the safety guidelines and to improve service quality. Governments have to ensure that the basic safety precautions are strictly adhered to by transport operators, their staff and their customers. While African governments have been doing their fair share of sensitising people to practice and follow these mandatory measures, they must also enforce the safety precautions and involve transport operators, associations and unions to deliberate on new approaches, innovations and solutions for smooth functioning.

Governments need to strike a balance so that transport systems can operate and enable movement of essential workers and others, while maintaining hygiene and social/physical distancing at the same time. Transport ministries and departments have carried out consultations with public transport operating agencies and unions, associations such as SACCOs, and cooperatives of informal transport modes to seek their support and to sensitise them about the pandemic and importance of guidelines and protocols.

The other big challenge has been revenue losses suffered by the sector as a whole. Complete or partial bans on plying of public transport and extremely low passenger capacities have brought transport operators and agencies to their knees. There have been reports of some nations supplying fuel at lower prices to facilitate operation of these modes, while in other countries, transport operators have increased their fares to compensate for the losses. Some countries have directed transporters against overcharging while in some, the transport departments have given approval for a fare hike till the situation becomes normal.

It is important that governments plan and announce financial stimulus packages for revival of the sector, as well as to enable it to cope with the new normal. Globally, nations — Hong Kong is a good example — have started working on bailout packages linked to mandatory reforms.

While this humanitarian crisis has to end quickly, countries also need to draw lessons from it to build the strategies for the new normal. This crisis has afforded an opportunity for countries and cities in Africa — as in the rest of the world — to prioritise, invest and augment sustainable transportation modes. The global

What should be the key approaches for a new strategy?

Preventive measures: The Centres for Disease Control and Prevention (CDC) recommends hand washing with soap and water for 20 seconds and use of sanitisers and disinfectants.¹¹ Applying these guidelines and protocols to transport operations might prove to be tougher and more challenging for African countries (compared to developed economies) due to their typical socio-economic and informal economy contexts. For instance, the basic practice of hand washing is a challenge in many cities — especially in areas with vulnerable populations who have little access to clean and running water. According to the UNICEF, two in every five persons in Africa do not have access to basic hand washing facilities. Sub-Saharan Africa, along with southern and eastern Asia, has the lowest coverage of improved sanitation in the world.

Similarly, while social/physical distancing is critical, the living conditions of vulnerable communities packed into dense informal settlements and slums without basic services makes it difficult to sustain. With very large numbers of people using formal and informal public transport systems to commute, ensuring social and physical distance would be a major challenge for the continent's governments and transport management systems.

Commuter safety: For safety of commuters, it has to be ensured that all passengers and transport staff wear face masks/coverings in public places and while travelling; vehicles are regularly cleaned, sanitised and disinfected; and passengers maintain hygiene and wash their hands with soap and water or sanitiser before boarding a transport mode. This means provision of washing facilities and availability of sanitisers at bus stations/terminals and bus stops. It also means enforcing social/physical distancing for passengers while standing in a queue at bus stations/terminals and bus stops before boarding as well as inside the transport mode. Thermal screening facilities for passengers should also be installed to check temperatures.

Safety of transport operations staff: While these measures will ensure passenger safety, it is also critical that transport operators ensure the safety of their staff, drivers and conductors. This can be done by providing them with good quality protective masks, gloves, face shields, personal protective equipment (PPE) and sanitisers; ensuring a safe physical distance (at least 2 metres) between a driver and passengers while travelling; and provision of e-ticketing/payment to minimise contact with conductors. While all public and private operators are mandated to follow hygienic and physical distancing measures, there are apprehensions about the informal transport modes as they are cramped vehicles and are used to overloading passengers (in Kenya, for instance, the government has been reiterating to matatus, boda-bodas etc the importance of following the mandated measures).

learning curve shows that cities across Europe, the US, Australia and Asia — while promoting hygiene and sanitation in public transport systems — are also re-engineering the mobility pattern by scaling up cycling and walk lanes with the help of soft barricades. This is being done by taking away space from motorised lanes and parking and repurposing it. Bus lanes or bus priority lanes are being promoted to increase service capacity of existing bus fleets. This is being complemented by work-from-home strategies including staggered timing and roster-based attendance system to reduce the demand for travel and cut down on unnecessary trips.

Africa is at a clear advantage here. A large number of people in African cities already use public transport or walk and cycle to commute — in Addis Ababa, for instance, public transport and walking constitute 91 per cent of the travel share. Therefore, well designed, safe and accessible footpaths / sidewalks / walkways / pedestrian ways and cycle / bike lanes and bike share services can certainly complement and take care of short-distance trips, thus shouldering the passenger load of the over-burdened public transport systems in African cities. Urban design interventions can help create public spaces which are accessible on foot or cycle / bike.

See Annexure: Transport-specific measures adopted by African nations

PART 2

FRAMEWORK GUIDELINES

For public transport operations during the pandemic

This guidance document is part of a South-South knowledge-sharing initiative and has drawn upon several guidelines developed by different authorities and agencies in India and Africa for public transport and other transport mode operations. Special care has been taken to customise according to the imperatives of the cities in the Africa region. Some of the key reference guidelines are that of the Central Road Research Institute¹², a government affiliate in India; GIZ-India¹³; guidelines framed by State Transport Corporations and Departments of Transport in Indian cities; and several initiatives taken by different governments and agencies in cities/countries of Africa. In addition, countries can consider the guidelines and measures suggested by their respective governments.

HYGIENE AND SAFETY MEASURES

Maintaining hygiene is the most basic and essential requirement — starting from the beginning of the trip and throughout during any transport operation. Hygiene and safety measures should be mandatory for all, including passengers, driver and conductors, transport operators, and staff at the transport stops/terminals.

Face masks/coverings/gloves

Mandatory use of face mask/covering by all passengers in public places including bus/minibus/taxi stops/stations/terminals, LRT/metro stations and platforms and parking places of para-transit (IPT) modes such as taxis, autorickshaws (*tuk-tuks*), e-rickshaws and during the entire duration of the journey in these respective transport modes.

Mandatory use of N95 face mask and protective gloves by all bus/LRT/metro operators and staff including drivers and conductors at stops/stations/terminals etc and during the entire duration of the journey to minimise direct contact with passengers. These can be provided by the government or the transport operations agency, as applicable.

Drivers of informal transport and IPT modes should also wear face masks/coverings. Protective gloves, if possible, should also be worn by them. Bus staff must keep clean extra face masks with them for elderly passengers, children and other vulnerable groups who are travelling without one.

Hand-washing facilities and sanitisers

Provision of hand-washing facilities including portable ones at bus/minibus/taxi terminals to facilitate washing of hands by passengers after entering the terminals and before boarding the bus. LRT/metro agencies should also provide for hand-washing facilities and hand sanitisers at entry and exit gates.

Hand sanitisers should be provided to the bus staff to be used for passengers who board buses from bus stops. Similar arrangements should be made for transport operators and staff including drivers and conductors at the bus terminals as well.

Hand sanitisers should be provided to drivers, conductors and other transport staff for their own use as well. Hand sanitisers should be fixed at entry and exit gates of buses to enable passengers to sanitise their hands in case they happen to touch the seat, window, rod, railing, knobs and other exposed surfaces.

Personal protective equipment (PPE)

As bus drivers and conductors are the most exposed, the government or the bus operating agencies should provide PPEs for their safety and protection. LRT/metro drivers should also be provided with PPEs.

Thermal screening

Thermal screening is important and enables early detection (of high body temperature) and screening of COVID-19 cases. Thermal scanners should be installed or provided at the entry gates at bus terminals and LRT/metro stations. Thermal screening should be mandatory for all passengers entering the bus terminals and LRT/metro stations.

Conductors should check body temperature of passengers boarding from a bus stop with the help of a portable thermal scanner.

Security officers deputed at the entry gates of LRT/metro stations should also measure body temperature of passengers using a portable thermal scanner. Passengers found with high body temperatures as prescribed for COVID-19 cases should not be allowed to enter the bus and LRT/metro premises.

Mandatory thermal screening should be prescribed for transport operators and staff, drivers and conductors as well. Staff found with high body temperatures as prescribed for COVID-19 cases should not be allowed to join duty and advised to get a test done and go on quarantine.

Regular health check-up of transport staff

Regular health check-up of bus and LRT/metro staff should be made mandatory as a precautionary measure.

Those staff members found having high body temperature or COVID-19 related symptoms should be advised to consult a doctor and get a test done immediately. The ones which test positive should be quarantined for 14 days; proper treatment should be provided whenever required and they should be allowed to rejoin their respective duties only after having fully recovered and with a COVID-19 negative test result.

OPERATIONAL MEASURES

Disinfection and sanitisation

All bus stops/depots/terminals along with their amenities should be frequently and properly disinfected and sanitised to prevent infection.

A daily schedule for this should be laid down by the depot/terminal administration and strictly adhered to by the housekeeping staff responsible for this work. This should be regularly monitored by the administrative staff.

Buses or any transport modes along with all their parts — especially the ones which might be frequently touched by passengers such as seats, windows, railings, door and window knobs etc — should be disinfected and sanitised much in advance before the first trip every morning. This process should be repeated

again preferably after completion of every trip. Informal transport modes should practice this at least three times a day. Adhering and monitoring the daily schedule will be beneficial for safety of passengers and transport staff as well.

A certificate displaying the last disinfection and sanitisation done should be displayed on the windshield of the transport system/s to assure passengers of the safety measures being undertaken.

LRT/metro systems should also regularly disinfect and sanitise the premises, platforms, entry and exit gates, ticket vending machines, token/card scanning machines, escalators, lifts and staircases, outside and interiors of coaches etc. IPT operators should be mandated to regularly disinfect and sanitise their vehicles before the beginning and end of each trip.

Social/physical distancing

Social/physical distancing is one of the most important criteria to avoid crowding at transport stops/terminals and in transport modes during travelling. A 1-1.8 metre physical distance is mandated as an ideal distance between two passengers or between passenger and driver/conductor and should be strictly adhered to.

Social/physical distancing in transport systems can only be followed by limiting the passenger capacity. This would mean reducing the passenger capacity by almost 50 per cent to ensure proper social/physical distancing.

A conductor's role as a 'crowd manager' is important in this context in ensuring social/physical distancing inside vehicles and at halt locations.

Floor markings at bus terminals and stops ensuring one-metre physical distance between passengers to queue up and stand should be clearly indicated and painted and made mandatory. This can initially be done by marking designated places with painted circles/boxes or pasting stickers on the floor of terminals and stops with instructions to stand at the designated places and wait for their turn. Monitoring and enforcement by marshals and staff deployed for this task should be done.

In LRT/metro platforms passengers should queue themselves at the earmarked commuter spaces only. This space can be earmarked using a yellow retro-reflective tape of size 1.8 metre x 1.8 metre.

In order to avoid crowding of passengers at bus stops, buses should be instructed to stop at five metres' distance from one another at marked locations to allow passengers to alight and board ensuring physical distancing.

Designated spaces of 1.8 metre x 1.8 metre size using yellow retro-reflective tapes should be earmarked for passengers queuing up for buying tickets in front of ticketing kiosks and information desks at LRT/metro platforms.

Passengers commuting by LRT/metro services should be advised to avoid touch-based token or smart card scanning machines. Introduce contactless systems.

In formal transport systems such as buses, LRT and trains that have GPS facility and CCTV cameras, social/physical distancing inside the systems can be monitored and tracked remotely through traffic control centres. Alerts can be issued and communicated to the respective conductors in case of buses and

marshals and other deployed staff at the stations in case of non-adherence of the social/physical distancing mandatory requirement. In informal systems, the conductor inside vehicles and marshals and staff deployed at bus stops will be solely responsible to ensure compliance with social/physical distancing rules.

Social/physical distancing is also to be followed at workshops. Buses should be parked in such a manner so as to avoid crowding of staff during maintenance and repair work and inspection.

Social/physical distancing norms are to be followed in para-transit (IPT) modes such as taxis, autorickshaws (*tuk-tuks*) and e-rickshaws. Proper social/physical distancing norms should be followed while boarding and alighting passenger(s) in IPT modes and also in parking them.

Social/physical distancing norms should be visible by yellow tape or sticker or paint or any other suitable material.

Limiting passenger capacity

Different transport modes are mandated to limit the number of passengers to almost 50 per cent depending on their passenger capacity or as advised by governments.

The maximum passenger capacity permitted in a standard bus of 12 metres should be 18 to 20 passengers; in minibuses, it should be 12 to 14 passengers.

A 14-seater informal *matatu* or a *minitaxi* should be allowed to carry 7 to 8 passengers, and a 25-seater vehicle can carry 15 passengers only. In vehicles with seating capacity of 30 or more such as LRT or trains, 50 to 60 per cent of the passenger capacity can be allowed.

In case of taxis, only three passengers including the driver should be allowed. A three-wheeled vehicle — *tuk-tuk* or *bajaji* mainly allowed in downtown of cities — should carry one passenger to ensure physical distancing.

Commercial motorcycles, *boda-bodas* or *okadas* with passengers should be restricted as they can compromise physical distancing between the driver and passenger. These can, however, be used for carrying commercial goods. Each LRT/metro/train coach should carry nearly half of its passenger capacity. This would mean only 25 passengers can board and be seated in each coach during one complete trip.

Social/physical distancing norms should be followed in LRT/metro feeder buses also by allowing only 18 passengers in an 18-metre bus and 12 in a 12-metre feeder bus.

Passenger capacity should also be limited at bus stops/stations to avoid crowding.

Marking of seats

Seats in public transport modes indicating where passengers need to be seated and the ones to be kept vacant, should be clearly marked. Alternative seats with a tick mark should be allowed for seating and the ones with a cross sign would mean seats to be left vacant to ensure physical distancing. Stickers with 'not to occupy' can also be pasted on seats which are to be left vacant.

While travelling in buses, social/physical distance is to be maintained and one passenger per seat should be the norm. Passengers should be seated diagonally from the front and back passengers. It would be advisable not to allow standees in these systems.

In case of LRT/metro services, number of vacant seats in each coach can be displayed on display boards at respective stations or coaches.

Proper signs (marked with a circle or a box) for standing should be marked inside the systems for passengers to stand and follow while alighting from the systems.

Separate entry and exit door for passengers

In case of buses, rear door should be used for boarding and front door for alighting passengers. A safe physical distance of 1 metre to 1.8 metres should be maintained while boarding and alighting a bus and waiting at the bus stops/terminals.

In LRT and metro systems as there is a single entry and exit gate in the middle of every coach, staggered timing for passenger alighting and boarding should be proposed. To ensure social/physical distancing passengers should be allowed to exit first from the coach followed by the ones entering the coach. Marshalls at the platform can manage and ensure safe entry and exit of passengers from a coach maintaining safe distance between two passengers.

For passengers reaching their respective destinations in LRT/metro coaches should be advised to stand close to their respective seat and not crowd in front of the exit gate and wait for their turn so that passenger standing nearest the exit gate alights first. This will not only help in maintaining social/physical distancing but will also make alighting smoother.

While this is easier in formal modes, it is quite challenging in informal modes due to availability of one gate only which is used both for entry and exit. But with reduced passengers travelling on these informal modes the conductor will have to ensure that the alighting passengers adhere to the instructions and stand at the earmarked places inside vehicles while getting down; passengers boarding should be allowed one by one keeping a mandatory distance of 1 metre.

Separate driver area in bus systems (if possible)

It is advisable to cordon off or restrict the driver's area from the rest of the bus to minimise physical contact and maintain physical distancing between driver and passengers. This can be done using temporary measures such as using transparent screens, tapes or other cost-effective material.

In case of informal systems, the seats opposite and behind the driver's seat should be left vacant to separate the driver area.

A plastic sheet for partition or physical separation between driver and passenger can be used in taxis, autorickshaws (*tuk-tuks*) and e-rickshaws (IPT modes).

Increase in dwell time of bus/mini-bus and LRT/metro/train services

To facilitate easy boarding and alighting for passengers at bus stops, dwell time for each bus/mini-bus service can be slightly extended to take social/physical distancing into account. While it should be three times the normal dwell time for buses at bus stops, the BRT station with uninterrupted flow can have two

times the normal dwell time. This will also enable alighting and boarding one after another maintaining social/physical distancing.

Dwell time for each LRT/metro/train service could be increased by two minutes than the normal dwell time.

Maintaining adequate supply and frequency of bus/mini-bus fleet

Ensuring social/physical distancing in bus/mini-bus fleet will create more transport demand and hence availability of fleet with frequent services will be essential to avoid passenger crowding at bus stops and terminals. Ensuring no reduction in supply and frequency than normal operation will be the critical factor. In addition, deployment of more buses at regular intervals in the high demand routes will have to be done to ensure smooth functioning of the systems. These arrangements should be reviewed by transport operators on a daily basis and changes should be made wherever possible for smooth operations. Additional buses can be hired if needed.

Ticketing

Manual paper tickets should be avoided as far as possible and instead electronic ticketing machines should be provided to the conductors for ticketing use.

E-ticketing or digital payment can be initiated and encouraged in formal systems such as buses, LRT and trains using smart cards, debit/credit cards, digital wallets, mobile phones and other e-payment apps and methods.

Though e-ticketing in informal modes has been initiated in only few countries like Kenya, it will be challenging in others where cash ticketing still exists. The options, therefore, are to either encourage or devise systems for digital payments and accept cash only from those who can't afford digital payment or to have a flat fare for all passenger trip lengths to minimise cash exchange.

Monthly/quarterly passes (paper as well as digital) for a lump sum amount as decided by the transport agency is also an option. Passengers should also be encouraged to apply for an online pass to minimise interaction between passenger and transport staff/conductor.

Common ticketing card can also be explored to ease ticket payments across various transport modes.

The agencies can consider providing free travel to senior citizens and disabled to ensure hassle free movement for them.

Passengers travelling by IPT modes should be encouraged to make digital mode payment.

Air circulation and use of air conditioners

As COVID-19 virus can survive for long periods in low temperature, it is advisable to avoid use of air conditioners in buses. In non-AC vehicles, windows can be kept open for cross-ventilation and air circulation as the virus can survive in air for some time.

In informal transport modes, windows along with the sealed window at the backside of the vehicle can be kept open for air circulation.

Dedicated bus lanes for faster movement and maximise fleet utilisation

Countries having bus rapid transit (BRT) systems already have existing dedicated bus lanes. Other countries should also explore, prioritise and plan for bus only lanes to enable faster movement of buses and maximise fleet utilisation and carrying capacity. More bus priority lanes should be allocated.

Long-term strategies to augment integrated public transport and services should be thought through and planned.

Change scheduling of buses to avoid stops in containment zones.

Minimise use of escalator/lift in LRT/metro stations

At the entrance of LRT/metro platforms gates should be marked with a solid yellow line for allowing only one passenger to tap his/her token or card and enter the staircase or escalator or lift.

Passengers in LRT/metro stations make frequent use of escalator/lift to enter platform for boarding. While escalators are self-operated, passengers should be advised to ensure social/physical distancing between two people and avoid touching or holding of handrails of escalators. A gap of five steps between one passenger and another in an escalator is ideal and should be followed.

The LRT/metro authorities should make provision for self-operation of lifts using sensors to minimise, avoid touching and pressing of lift buttons by passengers. Passengers should adhere to social/physical distancing norms in lifts as well with minimum number of passengers in the lift at one time.

Except medical emergencies and unavoidable circumstances passengers should be advised to make use of staircases as much as possible adhering to social/physical distancing. Staircases are safer options than lifts and escalators.

MEASURES FOR SUSTAINABLE COMMUTING

Augmentation of walking and cycling infrastructure and preventive measures for pedestrians and bike users

As every public transport trip begins and end with a walk trip, it is imperative to look at these sustainable transport modes such as walking and cycling as an opportune and safer modes during COVID-19 times. Agencies must plan and augment the relevant infrastructure needed for safe access and overall safety of these users. African cities have a majority of people just walking to reach their respective destinations. Most of them are captive walkers who cannot afford the formal or informal transport systems fare and are bound to walk long distances. This is an opportunity therefore to rebuild and redesign our mobility strategies and reduce overall health risk and toxic exposure for health and convenient access for all income groups including urban poor in the longer term.

Augmentation of pedestrian infrastructure

It is imperative for authorities to create and provide well designed, properly lit and safe footpaths/walkways for captive walkers and public transport users. The concept of universal accessibility should be kept in mind while designing the infrastructure.

Bollards can be temporarily put to prevent motorised users from entering the footpaths/walkways. Relevant authorities should explore and evaluate the option of reducing road width temporarily by placing bollards, traffic cones or paints and increasing the footpath/walkway width by 2.5 metres on both sides.

Strict enforcement with penalties imposed on defaulters by the enforcement agencies to deter other motorised users for using pedestrian infrastructure.

Infrastructure for short trips by walking and cycling

Public transport commuters should be encouraged to use walking and cycling for their short distance trips, thereby easing the burden on public transport services. But this would require a well-designed and safe walking and cycle infrastructure for users. Places close to public transport stations, commercial areas, educational / institutional areas, recreational areas etc should be selected in the initial phase to develop footpaths / walkways and cycle lanes. This infrastructure should cater to differently abled people as well.

In places where there is lot of demand for walking and cycling, lanes on both sides can be temporarily reserved to create footpaths / walkways and cycle lanes by reclaiming streets.

Public bike sharing (PBS) schemes

PBS schemes can be explored in cities with high public transport use and for providing last mile connectivity to commuters. These can be initiated as a pilot at select public transport stations / terminals.

After installing and setting up the PBS infrastructure instructions on hygiene and preventive measures essential during COVID-19 should be given to the PBS users to be strictly followed.

The PBS stations should have all essential protective gears such as helmets for users. All PBS users should wash or sanitize their hands before riding the bike. Face masks/covering should be made mandatory during the ride. Portable washing facilities and sanitisers should be provided at the PBS stations for users.

Regular disinfection and sanitisation of bikes and helmets should be done before and after every ride and also of the PBS stations to ensure hygiene and safety.

Provision of advance booking of bikes via apps and other online platforms and ticketing through e-payment or digital platforms should be encouraged.

During the pandemic, public bike sharing has to be operated with caution and hygiene. Individual biking is preferred”.

SENSITISATION AND COMMUNICATION MEASURES

Sensitisation and making people/passengers aware of the health impact of the COVID-19 and following instructions and preventive measures as put out by the government from time to time to control the spread of the pandemic is crucial. This should begin at the initial phase by putting up clear, logical and effective information in various channels such as newspapers, TV channels, mobile phones, social media platforms etc. and continued throughout.

Public information and dissemination on COVID-19 symptoms and precautionary and preventive measures to be undertaken

Posters, brochures, public advertisements and video messages on COVID-19 symptoms, do's and don'ts, hygienic, safety, social/physical distancing and other measures to be followed should be done, disseminated and communicated to the public through various mediums and channels from time to time.

General public should be made aware about the COVID-19 symptoms and

advised not to travel in public transport if they show any symptom and consult a doctor or a medical practitioner.

Information on benefits of wearing face masks/coverings and how to use these to protect oneself and others and hygiene measures such as hand washing and sanitizing with hand sanitizers should reach out to masses.

Advisory on government decisions taken for transport operations

Government should issue advisories from time to time and these should be communicated and disseminated widely.

The government, transport ministry/department and transport operating agencies should keep general public informed about decisions being taken from time to time regarding transport operations. The decisions can be widely announced and disseminated for the benefit of the public through their websites and other mediums.

Awareness about social/physical distancing

The public should be made aware about how to do social/physical distancing and keeping at least 1 metre to 1.8 metres physical distance from one another in public places and transport terminals/stops, and while travelling.

Special information/announcements for vulnerable groups

The public, especially vulnerable groups including the elderly, children, pregnant women etc should be strictly advised to avoid travelling during peak hours as much as possible to ensure their health and safety.

Frequent announcements for passengers at bus stops/terminals and LRT/metro stations

Frequent announcements should be made at bus stops/terminals and LRT/metro stations to make passengers aware about the precautionary and preventive measures including social/physical distancing to be undertaken.

A helpdesk kiosk and control centre should be set up and their staff should facilitate passengers in getting information about the transport services and their respective timings.

Repeated announcements should be made and staff should be deployed to ensure social/physical distancing is being followed at all transport terminals and stations.

Helpline for passengers

Transport helpline number facilitating passengers with queries and complaints about transport systems should be displayed at all public places, transport terminals and stops and inside transport systems. This can be accessed through whatsapp and social media platforms as well.

Display of guidelines and essential information inside vehicles

Guidelines on precautionary and preventive measures such as mandatory use of face masks/coverings, hygiene, social/physical distancing etc should be displayed inside the public transport vehicles as well for wide dissemination.

Information on bus routes, services etc

Information on bus routes, availability of buses with time-table indicating tentative departure and arrival time, e-payment or digital payments in transport

modes should also be disseminated widely. Passenger information system (PIS) can also be adopted in countries wherever resources are available to facilitate easy movement of passengers.

Awareness and training for transport operators

Similarly, the transport operators and staff should be made aware about do's and don't's, and should be well equipped and trained to carry out the transport operations following necessary regulations and safety precautions.

EMERGENCY AND ADDITIONAL MEASURES

Emergency measures play an important role in cutting down necessary travel and reducing burden from the already strained public transport systems in our cities.

Emergency and additional measures benefitting strained public transport systems

Work from home

- Work in shifts

Staggered office timings

- Roster-based attendance
- Use of digital platforms

Emergency measures can leverage short trips

Emergency measures can leverage more short trips to walking and cycling as much as possible to alleviate pressure on strained public transport systems and prevent conditions that push people towards personal vehicles.

Cities need emergency scaling up of protected footpaths and cycle lanes with flexible barriers to enable all income groups to access workplace and meet other needs within a reasonable radius of residence.

Growing interest in contact-free and safe commuting should be leveraged.

FINANCIAL MEASURES

With reduced ridership during COVID-19 and mandatory limiting of passengers along with implementation of other preventive and social/physical distancing norms, it is tough for transport operators — especially public transport, informal transport and IPT sectors — to continue operations with increased cost burden, massive revenue losses and collapsing systems. Sustainability of transport operations in the long run is a big question mark. Therefore, fiscal and bailout packages will be imperative to revive public transport systems and operations during post lockdown COVID-19 time.

Fiscal and bailout packages to revive public transport

Reform-based fiscal package and fiscal instruments to support revival of transit systems and reduce cost burden on bus based systems is the need of hour. Governments are building trust and confidence in safe public transport by adopting and stringent implementation of hygiene and preventive measures such as social/physical distancing for protection and to revive public transport.

Governments are also working towards bailout packages to address and overcome the immediate concerns and for revival of the system. London for example is working towards a bailout package of emergency fund worth 1.6

billion UK pound along with loan package while reducing cost burden through various other measures.

The Hong Kong experience

Hong Kong is already providing a broad range of financial support benefiting customers as well as public and private operators. The country is providing 20 per cent fare subsidy to its commuters for six months. They have also introduced employment support scheme for transit operators where government is providing 50 per cent wages, capped at HK \$9,000 per month for six months. Further, fuel subsidy is being provided to franchised buses, ferries, trams, taxi and public light bus operators. This also includes one-time subsidy to private bus, school bus and hired car owners. These strategies therefore are linking economic recovery with the transit systems and associated reforms.

What is India doing

Steps taken by transit agencies in India to operate services during and post-lockdown

With the easing of the lockdown, transit agencies in India — including bus systems and metro systems — are preparing for restricted operations to provide safe services. The immediate focus is on safe and hygienic operations. A glimpse of what some of the leading cities are doing:

BENGALURU METROPOLITAN TRANSPORT CORPORATION (BMTCL), BENGALURU

Measures for passenger safety:

- Periodic sanitisation of buses and other premises
- Maintaining proper ventilation (open windows) within buses
- Limiting vehicle capacity to 50 per cent (30 persons per bus); no standees allowed¹⁴
- Buses to operate in high density routes from 7 am to 7 pm (except in containment zones)¹⁵
- Queue marks for waiting passengers at stops
- Boarding from the rear door and alighting from the front door
- Provision of hand sanitisation during boarding / alighting
- Mandatory use of masks for all

Measures for crew safety:

- Restricted entry at office premises, depots, canteens etc
- Compulsory temperature monitoring and use of hand sanitisers
- Daily health monitoring and reporting
- Provision of necessary safety equipment — masks, gloves, sanitisers etc
- Special allowance for the crew working during this crisis period
- Training programmes on crowd management, yoga classes etc; training programmes also conducted by officials of the department of health and family welfare

Communication and outreach campaigns:

- Spreading awareness through posters, audio plays on do's and don'ts, hygiene, and physical distancing measures at bus terminals and within the bus etc
- Spreading awareness about the requirement of proper disposal of used masks and gloves

Innovation and digital reform:

- No cash-based ticketing within buses
- Restructured flat fare system to reduce cash transactions and contact between conductor and passengers
- QR code-based daily passes — issued by the conductor; weekly and monthly passes issued at bus stations or terminals
- Bus priority lanes¹⁶

Delhi bus services (Delhi Transport Corporation (DTC) and the cluster bus system of DIMTS)

Hygiene and safety measures:

- Periodic sanitisation of buses and other premises like terminals, depots etc
- For crew safety — body temperature screening of staff; provision of face masks and mandatory use while working; provision of hand sanitisers at different places of work, including when on duty in the bus
- For passenger safety — mandatory wearing of masks; maintaining physical distancing at stops and terminals; one passenger per seat row (on each side) with seating in a zigzag pattern; halting of buses for sufficient time to allow smooth boarding and alighting of passengers; entry through rear door and deboarding through the front door; disinfecting of buses daily before they begin their trips; controlled boarding at stops; conductor to issue ticket / pass to passengers by approaching them at their seat; home guards to be deployed at major stops to control and maintain physical distancing; and screening of passengers at the stops before boarding

Operational measures:

- Emergency operation plan with buses to operate from 7 am to 7 pm only
- Maximum 20 people allowed at a time in a bus
- Generating public awareness through social media posts, newspaper advertisements etc; inform the public about the last disinfection done of the bus by displaying the date of disinfection inside the bus¹⁷

Capital Region Urban Transport (CRUT), Bhubaneswar

The Odisha state government had allowed bus transport operations with 50 per cent passenger capacity. But the services failed to take off.¹⁸ Here is what the state and the city of Bhubaneswar are planning to do:

- On May 24, the government announced relaxations — intra-state and city buses are now allowed to operate with full passenger seating capacity,¹⁹ but no standees²⁰
- Inter-state bus operations have to adhere to the agreement with neighbouring states; passengers are mandated to wear face masks; passengers showing visible symptoms will be denied travel permission²¹
- Private operators can start operations after discussions with the state government and regional associations²²
- No cash transactions allowed; e-ticketing facilities for tickets and passes already in force
- As a temporary measure, drop boxes planned where people can drop their fare amount; for the longer term, introduction of closed-loop card planned for ticketing²³

Chennai public transport systems

The state government of Tamil Nadu is planning to reopen public transport systems after the lockdown ends. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the German agency for international cooperation, and the Institute for Transport and Development Policy (ITDP) have developed SOPs (standard operating procedures), which have been submitted to the state government. These mandate:

- Bus operations should begin with only 50 per cent passenger capacity (18 to 20 passengers in a standard bus of 12 metres and 12 to 14 passengers in medium-sized buses)
- Demarcated seats for seating
- Rear door boarding and front door deboarding for passengers
- CCTV cameras to be installed in buses to monitor social/physical distancing
- Driver's seating area to be separated by a transparent screen

The preventive measures include daily checking of body temperature of drivers and conductors before joining duty; mandatory use of face masks / protective clothing and gloves by conductors; provision of hand sanitisers with conductors; flat fares to minimise cash exchange; monthly / quarterly passes; encouraging digital ticketing; use of apps like Paytm, Chalo etc to pay for and manage travel; and free bus rides for senior citizens.²⁴

Metro services

Delhi Metro (not yet operational)

- All the passengers to maintain one-meter physical distancing at stations as well as within the metro
- No standing passengers to be allowed; passengers will be seated after vacating alternate seats
- Thermal screening of passengers at all metro stations
- Trains will not stop at crowded stations
- Frequency of trains may vary depending on the situation
- Passengers must follow all the government advisories while traveling in the Metro²⁵
-

Mumbai Metro

- Seating capacity shall be restricted to 100 and standing to 75 in every coach
- Alternate seat marking for passengers
- Planning to stop use of plastic tokens; disposable paper tickets to be introduced
- Will encourage people to go digital — book tickets through apps, use smart cards etc²⁶

ANNEXURE

Transport-specific measures adopted by African nations

NIGERIA

- **March 9:** A Presidential Task Force (PTF) is created to develop a National Response Strategy for COVID-19.
- **March 29:** The President orders restrictions to be imposed on all movement in Lagos and FCT for a 14-day period starting March 30 at 11 pm, based on the advice of the Federal Ministry of Health and the Nigeria Centre for Disease Control (NCDC). Similar restrictions are applicable to Ogun state due to its proximity to Lagos and the high volume of traffic between the two states. Travel to or from other states to these cities is also stopped.
- **April 13:** The initial 14-day lockdown period is extended from 11.59 pm for two more weeks in Lagos, Ogun and FCT. Citizens are reminded to maintain social / physical distancing (at least a 2-metre distance) and personal hygiene (washing hands regularly with soap and water or using an alcohol-based sanitiser if no water and soap is available). Many state governments initiate similar restrictions and measures.
- **May 4:** Nigeria approves a phased and gradual easing of lockdown in FCT, Lagos and Ogun. Nation-wide (except in Kano state) measures are introduced, such as overnight curfew from 8 pm to 6 am (except for essential services); ban on non-essential interstate passenger travel until further notice; partial and controlled interstate movement for goods and services from producers to consumers; and mandatory use of face masks or coverings in public along with maintaining physical distancing and personal hygiene and regular hand washing. A two-week total lockdown is imposed on Kano.

The FCT Minister announces overnight curfew in FCT from 8 pm to 6 am, along with sector-specific guidelines during the phased easing of lockdown. Guidelines for public transport are also issued. Buses are allowed to operate with 50 per cent passenger capacity from 8 am to 4 pm daily. Face coverings are made mandatory in public. All bus stops and motor parks are directed to maintain hygiene, with their officials and the operators to provide temperature checks for passengers and hand sanitising points at bus stops. Ban on commercial motorcycles, *okadas* within the FCC including Kubwa and Dutse Alhaji, will continue. Tricycles are allowed to ply in the designated areas only with three people including the driver. Taxis can carry four people including the driver. The ban on interstate travel continues.²⁷

- **May 18:** The PTF head says that the country is not yet ready for total lifting of lockdown. Therefore, the first level of easing is continued for two more weeks (May 18 to June 1). The President approves the PTF recommendations that include measures, exemptions, advisories and scope of entities allowed to reopen under phase one of the eased lockdown period; maintain the existing lockdown in Kano for two more weeks; imposition of precision lockdown in states / metropolitan / high-burden LGAs (that are reporting a rapidly increasing number of cases) as and when the need arises and complemented with provision of palliatives and continued re-evaluation

of impact of the interventions. FCT, Lagos and Ogun states are directed to follow the initial easing of restriction directives for two more weeks along with ban on interstate travel and curfew from 8 pm to 6 am.²⁸

Lagos: Lagos has introduced transport guidelines for the period after the easing of the lockdown. From May 4, all commercial and commuter operations within Lagos have been allowed between 6 am to 7 pm daily with mandatory use of face masks and hand washing before and after each trip for all commuters. All interstate operations and movements remain suspended. Motorcycles or *okadas* for commercial use are not allowed to ply. All transport operators and companies are required to compulsorily and regularly disinfect their vehicles, parks and garages. They have to collaborate with the State Ministry of Environment and Water Resources on the standards of disinfectants approved for use by the state government. All abandoned vehicles in the various mechanic villages need to be evacuated within a week to keep the surroundings clean, failing which the state's committee on abandoned vehicles will tow them away.²⁹

All commercial passenger vehicles are mandated not to exceed 60 per cent of their capacity and follow physical distancing rule at parks and in buses. The Bus Rapid Transit (BRT) and Lagos Bus Services Ltd (LBSL) have been directed not to carry more than 21 passengers, and no standing passengers will be allowed. Air conditioning in buses has been banned. While *danfos* (yellow buses) cannot carry more than eight passengers (two in a row), tricycles are to carry just two passengers at the back. Truck owners, drivers and individuals transporting food, raw materials and other agricultural products into the state are required to carry seven people only with mandatory use of face masks by the driver and all passengers. Private car owners have also been asked to observe physical distancing.³⁰

Water transport operators are now allowed to operate till 6 pm only with ferry passengers wearing life jackets, face masks / covers and observing physical distancing. A Special Task Force comprising the police, the Lagos State Traffic Management Authority (LASTMA), the Vehicle Inspection Service (VIS), and the Abandoned Vehicles and Parks Monitoring Committee will monitor compliance and enforcement.³¹

ETHIOPIA

- **March 16:** Early to mid-March onwards, Ethiopia initiates measures to contain the pandemic. The COVID-19 National Ministerial Committee led by the Prime Minister announces a set of 10 measures for two weeks. It includes a national hygiene and preventive measures movement launched from the federal level to local levels; allocation of government budget for distribution of masks, soap, alcohol solutions and other items in critical locations; availability of government buses free of charge to help control crowding in public transport; special buses designated for public servants and private transporters with follow similar instructions; maintaining hand hygiene and avoiding unnecessary physical contact as per the Ministry of Health guidelines, among others.³²
- **March 30:** A week later, enforcement measures for social distancing are announced. Four regional states — northern Tigray region, Oromia, Amhara and Southern Nations, Nationalities and Peoples region — impose transport ban.³³

- **April 8:** The Prime Minister declares a state of emergency for five months under Article 93 of the Constitution.
- **April 11:** The directive on implementation of the state of emergency is made official by the Attorney General, along with announcement of measures to be implemented in the proclamation. These measures include those related to public transport — mandatory wearing of face masks and scarfs in public places, standing at a distance of 2 metres from others, and limiting passenger capacity. Any movement around border areas except for cargo, dry and liquid transport services, are banned. Cross-country buses, taxis and city buses are not allowed to carry more than 50 per cent of the seating capacity. The Addis Ababa light rail transit is allowed to transport 25 per cent of its capacity, while the Ethio-Djibouti train can carry 50 per cent.³⁴ The Ministry of Transport is quoted in a news report that curbs on public transport, including Addis Ababa's rail network, have reduced the daily number of travellers by more than half.³⁵
- **April 16:** The Federal Ministry of Transport announces resuming of cross-country public transport services in all its six federal bus stations in Addis Ababa. Oromia, Amhara, SNNP, Tigray and Afar regional states as well as Dire Dawa City Administration are the regional states that had banned cross-country public transport vehicles. The Ministry lays down measures to be followed by transport-providing companies including cross-country and medium-distance bus companies, workers and commuters. These measures include provision of gloves and face masks by transport unions and law enforcement members in bus stations; wearing of gloves and face masks by drivers, assistants and cashiers at all times; service providers to ensure measures to test for temperature and adherence to COVID-19 State of Emergency regulations; bus service providers to work with bus station managers to spray buses with disinfectants before departure; and dissemination and raising awareness about COVID-19. Commuters are advised to follow physical distancing, wear face masks, wash hands, use hand sanitisers provided at bus stations, and keep bus windows open for air circulation inside buses.³⁶
- **May 6:** As part of the emergency regulations, the Addis Ababa Transport Authority makes wearing of face masks mandatory for all passengers travelling in minibuses from May 8 onwards. Recently, the police have arrested 1,300 people in Addis Ababa for not wearing face masks.³⁷

KENYA

- **March 12-13:** With the first COVID-19 case confirmed in Nairobi on March 12, the Ministry of Health announces precautionary measures on March 13 to be undertaken by all citizens. It directs public transport providers to provide hand sanitisers for passengers, undertake regular cleaning of the vehicles³⁸, and maintain social distance requirements by reducing passenger numbers in the vehicles. Only eight passengers are allowed in 14-seater *matatus*³⁹; only one in *boda-bodas*, with mandatory wearing of face masks by both riders⁴⁰; 15 in 25-seater vehicles; 60 per cent maximum seating capacity in 30-seater vehicles and above; and 60 per cent in SGR and commuter train services.⁴¹ In case transport operators failed to follow these rules, their Sacco licenses are to be revoked⁴², vehicles bonded and charged in court under the Public Health Act, and impounded.⁴³ The Inspector General of Police is directed to ensure enforcement.⁴⁴ An appeal is made to

the *matatu* industry and other transport providers not to increase fares.⁴⁵ Repeated appeals are made to comply with the orders.

- **April 6:** Movement in and out of Nairobi, Mombasa, Kilifi, Kwale and Mandera counties is banned for 21 days.
- **April 25:** A night time curfew from 7 pm to 5 am is imposed and extended for 21 days.

Recently, the President has announced that Kenya cannot live in lockdown forever and restrictions will have to be lifted — if cases increase, the Kenyan people would be held responsible for not following the precautions seriously.

RWANDA

Rwanda has deployed portable wash bins at bus stops for passengers to wash their hands before boarding buses. According to the guidelines issued by the Rwanda Utilities Regulatory Authority (RURA), all public transport vans are required to provide hand washing or sanitising equipment to passengers boarding their buses, and bus companies have to clean their vehicles with disinfectants. Non-compliance with these guidelines have been made a punishable offence.⁴⁶

- **March 21:** Rwanda imposes a two-week nation-wide lockdown, which is later extended twice till April 30.
- **April 30:** An extraordinary cabinet meeting chaired by the President decides to partially ease the lockdown with implementation of 10 guidelines from May 4 for a period of two weeks. These include curfew and restrictions on movement from 8 pm to 5 am daily except for those with special permission; ban on inter-city travel (however, public transport such as buses are allowed to ply with social distancing carrying less than the usual number of passengers, while motorbikes are allowed to carry goods only). Private transport is allowed within the same city. Wearing of face masks in public and other protective guidelines including social distancing are also laid down.⁴⁷

The guidelines are being implemented. Passenger vehicle seats are clearly marked by the RURA with check tick marks on seats where passengers can sit and cross mark on seats where passengers are not allowed to sit. Passenger vehicles that were carrying 70 passengers will now be allowed to take only 32; those carrying 29, will now carry not more than 12 passengers. Passengers have to wear face masks, wash their hands and keep one-metre social / physical distance between one another while boarding and alighting from a bus. Transport service providers are asked to avoid cash transactions and use cashless payment technology. In order to balance revenue losses by transport operators carrying fewer passengers, the RURA has announced increased tariffs in Kigali and in southern, northern, eastern and western provinces of the country.⁴⁸

GHANA

Ghana imposed a three-week partial lockdown in Greater Accra Metropolitan Area and Kasoa and the Greater Kumasi Metropolitan Area — this was lifted on April 20. Public transport was allowed to ply during the partial lockdown with social distancing measures. Intra-city public transport operators such

as buses, *trotros* and taxis have been mandated to continue operations with social distancing. The measures include public transport operations with minimum number of passengers maintaining appropriate social distancing and maintenance of enhanced hygienic conditions in all vehicles and terminals with provision of hand sanitisers, running water and soap for washing hands.⁴⁹ In addition, no inter-city vehicle movement for private and commercial purposes except for those providing essential services is allowed. Motorbike riders are not allowed to carry any additional person or rider with them.⁵⁰ Wearing of face masks is being encouraged.

SOUTH AFRICA

- **March 26:** South Africa, one of the worst affected countries in Africa, imposes a nation-wide lockdown. A five-phase plan is formulated to gradually ease the lockdown.
- At present, the country is at level 4 with limited businesses open and a curfew from 8 pm to 5 am daily.⁵¹ COVID-19 alert level 4 directions for transport operations have been issued. Work is underway for alert level 3, which the country is expected to adopt soon.

The operating time of various public transport modes such as buses, minibus-taxis, charter and shuttle services has been revised in level 4 lockdown to ease movement of people. Metered taxis and e-hailing services are also included. All these modes are allowed to ply from 5 am to 7 pm with a one hour grace period in the afternoon to complete their trips and drop off passengers. Except this permitted time, public transport modes are not allowed to ply between 8 pm till 5 am. While sanitisation of vehicles and social distancing with passenger capacity at 70 per cent in public transport vehicles such as buses and minibus-taxis will continue, wearing of face masks during public transport use has been made a mandatory requirement now.⁵²

Shuttle and chauffeur services, charter services and e-hailing and metered taxis are allowed to carry 50 per cent of their passenger capacity. However, shuttle and chauffeur services are permitted for people undertaking essential work and for those economic sectors that have been allowed returning back to work under level 4. Chartered services are also applicable for those with essential work especially mining sector employees working in three shifts and finishing work outside the public transport permitted time. A five-seater vehicle is permitted to carry 2 passengers and a driver.⁵³

Travel between provinces, metropolitan areas and districts is banned except those who have to commute daily to and fro for work. However, people who were out of their residence before the lockdown period have been allowed to travel to their homes between May 1 to 7 as per the Department of Cooperative Governance and Traditional Affairs (CoGTA) regulations. Long distance bus and taxi operators carrying such people were directed to comply with 70 per cent passenger capacity, wearing of face masks by all passengers and sanitisation of vehicles at the completion of each trip. Cross-border passenger movement has been banned with only essential cargo to move across the land borders. Vehicle services, emergency services and roadside assistance is permitted.⁵⁴

In the rail sector, only freight rail has been permitted, while Gautrain and PRASA services will be reintroduced gradually. Based on the detailed plans of passenger rail operators, commuter rail will begin gradually with limited service and strict measures for social distancing.

Detailed operational indicators have been laid down for Gautrain, which will be gradually reintroduced covering eight of the nine stations in all rail-based services except airport service. All operators have to apply an appropriate load factor according to 50 per cent standard coach occupancy. Based on the one square metre distancing system for one passenger, areas are to be earmarked on the station for passengers to stand and queue; accordingly, alternate seating arrangement has to be made. The operating staff will work from 5 am to 12 noon and 3 pm with an appropriate peak service. At 6 pm, the last trains will depart to clear the system by 7 pm. The Gautrain will operate for the said time to facilitate travel of operating staff. Maintenance staff along with maintenance vehicles are allowed during curfew hours from 10 pm to 4 am.

PRASA services will also be reintroduced gradually with effective social distancing, cleaning and disinfection of surfaces, trains and stations. Compulsory testing of the rolling stock is to be undertaken during the level 4 period and can only resume with a limited service once the National Coronavirus Command Council declares the risk-adjustment to level 3, with the return of the Pienaarspoort line in Tshwane and the Southern line in Cape Town.

Metrorail commuter services are not being introduced yet. These will begin once the authorities are satisfied that the risk of transmission can be managed on a corridor-by-corridor basis. Long distance trains are also restricted in level 4.⁵⁵

Cape Town: The Transport Directorate of the City of Cape Town has released an advisory on precautionary measures for public transport users. Commuters have been advised to practise meticulous personal hygiene while travelling, try to avoid full or overcrowded buses and wait for another bus, avoid peak-hour period to limit contact with other commuters, and open the windows in buses while travelling. Several measures at public transport interchanges (PTIs), minibus-taxi facilities, MyCiTi stations and on MyCiTi buses have also been planned. Signage and posters informing and educating commuters about COVID-19 and personal hygiene to avoid being infected will be put up and distributed at facilities. More regular deep cleansing operations at the PTIs and minibus-taxi facilities have been planned. Taxi drivers need to clean their taxis inside out with a disinfecting liquid on a regular basis.⁵⁶

The measures implemented in MyCiTi bus service include instructions to residents to travel with their personal hand sanitisers and use them during and after the travel till the time the City is attempting provision of sanitisers to commuters; increased frequency of MyCiTi bus fumigation and cleaning practices on interior and exterior surfaces of the buses and wiping down on inside after both the morning and afternoon peak-hour periods daily; limiting the number of standing passengers on the bus to half of the standing capacity; and service frequency to be adjusted depending on the service demand. In addition, MyCiTi passengers have been advised to load as much money on their MyConnect cards as possible to avoid frequent queuing at kiosks; taxi passengers have to ensure they have the correct taxi fare amount to minimise contact with the taxi conductor; and all commuters must ensure surface hygiene as far as possible during the commute.⁵⁷

UGANDA

- **March 18:** The President announces 13 measures to be taken which include continuation of public transport systems such as buses, minibuses, taxis, *boda-bodas* etc, but with SOPs and hygiene related to washing hands with soap and water or using sanitisers and regularly disinfecting surfaces.
- **March 21:** A decision is taken to stop all public passenger transport vehicles. However, private vehicles with only three people are allowed.⁵⁸
- **March 25:** A decision is taken to ban all public transport for a period of 14 days to minimise movement.⁵⁹
- **March 30:** Additional measures are announced, including ban on private vehicles, as it was observed that some private vehicle owners were misusing the directive and using their vehicle as a taxi carrying two passengers from one place to another charging exorbitant fares.
- The government imposes a total lockdown for 14 days.⁶⁰ The lockdown is extended to three more weeks.

Recently, the President announced that face masks will be distributed to all aged six and above and these must be worn at all times in public. Public transport will resume around June 2 after everyone has a face mask. But public transport in the border districts of Uganda will remain restricted for another 21 days. *Boda-bodas* and *tuk-tuks* will not be allowed to carry passengers due to social distancing norms. Private cars will be allowed to ply as per the earlier direction of only three people including the driver and subject to wearing of face masks by all. The curfew has been extended for another three weeks.⁶¹

MAURITIUS

After a nation-wide lockdown, on May 12, the government announced easing of lockdown restrictions with gradual resumption of public transport operations from May 15. Protection and measures such as wearing of face masks, washing hands and respecting social distancing is to be continued. Protective masks will be distributed free. Elaborate and strict guidelines and regulations for both commuters and public transport operators have been laid down. Public transport, buses and metro will be allowed to operate from 5 am to 9 pm and 6 am to 7 pm, respectively. The elderly and those aged under 18 are advised to avoid use of public transport during peak hours (6 am to 10 am and 2.30 pm to 7 pm).⁶²

There will be a restriction on the number of passengers per seat in buses. In case of the metro, 81 passengers are allowed to travel in each journey. While three passengers are allowed in a taxi, taxis with seven seats can carry four. Transport operators are mandated to wear face masks and gloves. There will be regular disinfection of buses, metro stations, etc. Commuters have also been advised to pay the exact travelling fare to minimise contact.⁶³

COTE D'IVOIRE

- March 4:** The High Council of Employers of Road Transport Companies of Cote d'Ivoire recommends limiting of passenger capacity in taxis and mini-cars and hygienic measures to be followed from March 23. Taxis including municipal taxis and metered taxis have been allowed to carry four passengers including the driver. Other measures include a ban on use of middle seats in mini-cars commonly called '*Ghaka*'; inter-municipal taxis with seven seats allowed to carry five passengers; mandatory washing of hands for all passengers with soap of hydro-alcoholic gel before boarding; and drivers and the staff to wear mufflers or face masks.⁶⁴
- March 22:** The public transport company of Abidjan (SOTRA) announces measures to guarantee safe trips — these include disinfection of buses; hand washing by commuters with hydro-alcoholic gel; and limiting the passenger capacity in buses to 50 per bus. Passengers are encouraged to wear face masks, avoid contact inside buses and boat-buses, patiently board buses and boats, and embark only on essential trips.⁶⁵
- March 23:** The President declares a state of emergency all over the country with additional measures — night-time curfew is imposed from 9 pm to 5 am from March 24; inter-urban, inter-communal and intra-municipal transport restricted; unauthorised movement between Abidjan and the interior of the country prohibited; progressive containment of populations initiated by geographic area, according to the evolution of the pandemic. Security forces are made responsible for enforcing these measures strictly.⁶⁶
- April 9:** Wearing face masks in Greater Abidjan is made mandatory. In addition, restriction is imposed on non-essential trips and the number of passengers in public transport and private vehicles.⁶⁷
- April 14:** Minister of Transport signs a decree regulating movement of people on board vehicles or boats. The decree mandates wearing of protective face masks by drivers and apprentices of all transport vehicles; limiting passenger capacity in different vehicle categories (such as four passengers including driver allowed in private vehicles and metered taxis, municipal and inter-municipal taxis (commonly known as *wôrô-wôrô*), six passengers including driver in nine-seater private vehicles and eight-seater inter-communal taxis (commonly called *wôrô-wôrô*), nine passengers including the driver in 14-seater private and public transport vehicles, 10 passengers including the driver in 15-seater private and public transport vehicles, 11 passengers including the driver in 17-seater private and public transport vehicles, 12 passengers including the driver in 18-seater private and public transport vehicles, 15 passengers including driver in 22- and 23-seater private and public transport vehicles, 20 passengers including the driver in 26-seater private and public transport vehicles, 24 passengers including the driver in 32-seater private and public transport vehicles, 27 passengers including the driver in 36-seater private and public transport vehicles, no change in passenger capacity in the case of 37 to 45-seater private and public transport vehicles and 45 passengers only in 50 and 50 plus-seater private and public transport vehicles) and inland waterways boats (such as only 35 people including the pilot on any 50-seater boat / floating boat commonly known as *pinasse* and 45 people including the pilot in the case of more than 50-seater boats / floating boats); all passengers including drivers / pilots are directed to wear a protective face mask before

boarding and till their final destination. Owners of vehicles / boats / floating boats are liable for any violation of the order. This decree is applicable in autonomous regions and districts and its non-compliance can lead to a prison sentence of 10 days and a fine of 50,000 Francs or one of these. Vehicles / boats / floating boats exceeding the mandated passenger capacity will be impounded or immobilised by the police. The Director General of Land Transport and Traffic, Director General of the National Police and the Superior Commander of the National Gendarmerie are each responsible for the execution of this order.⁶⁸

- **May 7:** President announces measures for Greater Abidjan. The curfew is extended from May 8 till May 15 with revised timing of 11 pm to 4 am. Systematic control on wearing of face masks in public places and land and river lagoon public transport vehicles is also called for.⁶⁹
- **May 28:** National Security Council meeting presided over by the President decides to extend some measures till June 14. These include state of emergency and maintaining the isolation of Greater Abidjan, among others.⁷⁰

BOTSWANA

- **April 2:** President imposes a state of public emergency in accordance with Section 17(1) of the Constitution till further notice. Extreme social distancing is to be practised for 28 days.
- **May 1:** Wearing of face masks / coverings made mandatory in public places, businesses and common areas of residential buildings as per Section 3 under the Emergency Powers Act.
- **May 8:** Government announces gradual easing of lockdown. The President, in accordance with Regulation 30G of the Emergency Powers (COVID-19) Regulations, 2020 authorises lifting of transport restrictions. Taxis, *combis*, call cabs, staff buses etc are allowed to operate from May 8 to 21 within a 60-km radius of the place of operation subject to conditions. These include to abide with Covid-19 protocols; public transport associations to certify readiness of vehicles to operate as per the Covid-19 protocols; cleaning of interior and exterior of vehicles with water and soap or sanitisation two to three times a day; mandatory wearing of face masks for passengers in public transport; loading capacity for mini-bus permitted at 70 per cent of seating capacity with social distancing; a mini-bus licensed to carry 16 passengers can carry only 10; loading capacity for taxi services on special or 60 per cent of the seating capacity; loading capacity for a bus at 70 per cent of seating capacity with social distancing; mini-bus permitted to carry a maximum of 22 passengers to carry 15; a bus permitted to carry a maximum of 65 and above passengers can carry 46; and public transport operators are required to keep a register of all passengers on board for inspection by the Director of Health Services or a law enforcement officer.
- **May 11:** Gaborone, the capital city, is declared a 'high-risk area'; residents are advised to limit their movement. Pink permits issued for permitting movement into and outside the city are also suspended. Only those holding essential service permits are to be allowed to travel into and outside Gaborone.

- **May 20:** Government announces an end to extreme social distancing indicating end of three phases of lockdown. A zoning strategy — under which the country is divided into zones to restrict movement of people — is announced.⁷¹
- **May 27:** Country is planning to end the 48-day lockdown at midnight. People moving across the designated zones will need permits to travel.⁷²

SENEGAL

- **March 23:** Senegal declares a nation-wide state of emergency. Decree No 2020-830 outlines restrictive measures and directs boarding of passengers in public and private buses, minibuses and coaches to be done with respect to seats and at a distance of at least one metre between passengers.⁷³ The competent administrative authorities are given the power to regulate or prohibit the movement of people, vehicles or goods in certain places and times.⁷⁴ A committee headed by the Minister within the Ministry of Infrastructure, Land Transport and Opening up (MITTD) is constituted to monitor the coronavirus situation and its impact and to develop a response strategy.⁷⁵
- **March 24:** A temporary driving ban order is issued prohibiting inter-urban movement of people and goods at all times and imposing curfew from 8 pm to 6 am in all districts.⁷⁶

In view of the state of emergency, the MITTD announces several restrictive measures pertaining to inter-city and urban transport operations, haulage and highways operations. While inter-urban passenger transport is banned, intra-city/urban transport is allowed to operate but with limited passenger capacity, social/physical distancing, hand hygiene and other restrictive measures. These measures include boarding of passengers in public and private buses, minibuses and coaches to be done with respect to seats and at a distance of at least one metre between passengers; limiting 50 per cent of the passenger capacity; entry and exit in urban transport stations to be followed as per the health and safety guidelines; prohibition of commercial activities inside bus stations; transport operators to enforce all necessary hygiene rules (washing of hands and use of sanitisers) while handling transport cards, banknotes and coins; and operators to disinfect and clean their vehicles at least once a day and provide masks, gloves and hand sanitisers. Passenger capacity has been limited in private vehicles as well — the number in urban taxis or private vehicles is limited to three including the driver (instead of five allowed earlier), and only one passenger in a two-wheeled vehicle. Highway operators are instructed to implement personal protection measures and avoid contact with users; provide masks and gloves to personnel in contact with users; and reduce manual routes. Failure to abide with these regulations can attract penalties.⁷⁷

The Executive Council of Urban Transport in Dakar (CETUD) has followed the urban transport operations-related restrictive measures of the MITTD.⁷⁸ According to a CETUD official, buses are still operating in Dakar from 7 am to 6 pm adhering to measures such as passengers wearing mandatory face masks, social distancing (respecting physical distance of one metre), no standees, and no overloading. However, inter-city transport remains prohibited. The government has allocated a grant to operators to compensate for their losses.

- **May 11:** The President announces relaxation in the state of emergency from May 12. Curfew timings are revised to 9 pm to 5 am, instead of the earlier

8 pm to 5 am. Markets and other businesses can open on certain days (not allowed to open on all six days) and must be closed one day for cleaning.⁷⁹

- **June 4:** Due to public protests, the Interior Minister announces relaxation in curfew timings (curfew now begins at 11 pm) and lifting of transport restrictions across the country.⁸⁰

MALAWI

Malawi has taken proactive steps of social distancing in public transport even before the first confirmed COVID-19 case in the country. The Transport Minister had announced a 60 per cent reduction in passenger capacity to be done in all public service vehicles; a direction was issued to passengers to wash their hands before boarding a bus or a minibus taxi.⁸¹

- **April 1:** The Matatu Owners Association of Malawi and Road Traffic Directorate officials jointly decide to reduce passengers to two per seat and to open the sealed windows at the back of minibuses. Failure to comply with these measures could lead to loss of license and vehicle road permit.⁸² Media reported that *matatus*/minibus operators increased fares to compensate the revenue loss.⁸³
- **April 18:** Malawi announces a three-week lockdown till May 9. Though transport services are suspended during the lockdown period, public transport including minibuses, tricycles, taxis, bicycles, motorcycles and taxis are allowed to cater to essential services staff and emergencies from 5 to 9 am and 4 to 7 pm. Locomotive passenger transport is allowed between Lilongwe and Nayuchi only. However, locomotive goods transport can ply following sanitary and hygienic guidelines. Water transport services are permitted to operate between Nkhatabay and Likoma.⁸⁴ The lockdown has now been suspended by the High Court following a plea by the Human Rights Defenders Coalition.

ZIMBABWE

- **March 30:** Total nation-wide lockdown is announced for three weeks. Exemptions are given to the state and health workers on duty only.⁸⁵
- This is followed by a two-week partial lockdown. Only public buses are allowed to operate; and commuter Omni buses, *kombis*, taxis etc are banned. The Zimbabwe United Passenger Company (ZUPCO) bus operators are directed to ensure that their buses are disinfected twice daily, and passengers wear face masks, get their temperature checked and hands sanitised before boarding a bus.⁸⁶ Social distancing is also a mandatory requirement to be maintained in all buses. Intercity public transport remains banned.⁸⁷ Media reports indicate that ZUPCO buses are unable to fulfil the demand with many passengers waiting at terminals for buses — which exposes them to the pandemic.
- The government has now allowed licensed private conventional buses to resume operations. Buses and *kombis* are carrying 32 and nine passengers respectively in one trip. ZUPCO has invited more operators to join the franchise.

NAMIBIA

March 17: Namibia declares a state of emergency till September 2020. All bus and taxi operators are directed to adopt all the WHO and Ministry of Health and Social Services health measures and guidelines.⁸⁸ They are allowed to carry 50 per cent of their passenger capacity to ensure social distancing. According to the directive, a 16-seater minibus is allowed to carry 10 passengers only and 22 and 28-seater minibuses 14 passengers each. Passenger capacity is restricted for sedans and seven-seaters as well to three and four passengers, respectively.⁸⁹ The Ministry of Works and Transport has permitted buses and taxis to increase fares by 15 per cent to reduce financial losses incurred due to adhering to limiting passenger capacity. This fare increase is said to be temporary and will be applicable only during the period till vehicles are allowed to play with full capacity.⁹⁰ After the fare hike passengers travelling from the north and north-eastern regions to Windhoek are being charged N\$500 for a one-way ticket (up from N\$300-N\$400).⁹¹

CAMEROON

An inter-ministerial consultation called by the President of Republic of Cameroon to assess the coronavirus situation in the country on March 17, 2020 identified 13 key actions to be implemented from March 18 onwards. In addition to hygiene and social distancing measures, the 2 measures pertaining to transport included urban and inter-urban travel to be undertaken only in cases of extreme necessity and bus, taxi and motorbike drivers to avoid overloading and compliance to be ensured by the law enforcement officers.⁹² While the government announced partial relaxation of social distancing rules on April 30 those related to public transport were still in place. Public transport including buses and taxis, with ‘the mandatory number of passengers’ on board were allowed but passengers were still needed to adhere to social distancing and wearing protective masks.⁹³

DJIBOUTI

Lockdown enforced in Djibouti City on March 7,⁹⁴ and nation-wide lockdown from March 23. Public transport banned. Traffic allowed only for administrative functions. Social distancing and sanitisation encouraged and mandated. Announcement of gradual lifting of lockdown from May 11 with resumption of public transport operations,⁹⁵ but lockdown extended by a week till May 17.⁹⁶

EGYPT

Overnight curfew from 9 pm to 6 am. Number of operational metro coaches increased. Public transport operators directed to carry only 50 per cent of passenger loads.⁹⁷ State of emergency extended for three months from April 28 onwards.⁹⁸

SOMALIA

Night curfew from April 15 (7 pm to 5 am) in Mogadishu. Public transport to carry lesser number of passengers — 15-seater minibuses to carry only 10 passengers.⁹⁹

DEMOCRATIC REPUBLIC OF CONGO

Wearing of face masks mandatory. Inter-provincial travel banned from March 24. Total lockdown of Kinshasa was for four days from March 28, and again for 14 days from April 7.¹⁰⁰

CHAD

N'Djamena and other major towns under lockdown from May 8. Additional curfew from 8 pm to 5 am. Domestic travel restricted for two weeks. Goods vehicles allowed to enter towns from 10 pm.¹⁰¹

SUDAN

Three-week curfew in Khartoum from April 18, 2020. Extended first for 10 days from May 9, and again for two more weeks from May 19. Travel ban between the capital and states and domestic travel restrictions still in force.¹⁰²

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