

Decongestion and Disaster Resilience in Malé City

ESCAP Guidelines

September 2026

Background and Approach

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) is responding to a request for technical assistance from Malé City Council to improve urban mobility, reduce congestion and strengthen the city's transport system resilience to natural disasters.

The guidelines presented in this document have been developed as a technical contribution to this process. They draw on evidence collected through an Urban Mobility Survey conducted in the Greater Malé Region, which provided insights into travel patterns, private vehicle ownership, parking practices, public transport use, active mobility, and accessibility. The findings of the survey were subsequently discussed during a consultation workshop with relevant transport stakeholders to further inform the development of this document.

The proposed measures are organized into a phased implementation framework. The sequencing is intended to reflect the relationships between individual interventions: some measures provide the conditions needed for subsequent measures, while others can be implemented in parallel or progressively expanded based on their results. The framework is intended to support a transition towards more efficient use of limited road space, greater use of public transport and active mobility, improved parking management, and a more resilient urban transport system.

The guidelines presented below are tentative expert recommendations and will be further discussed with the corresponding implementing entities. The proposed sequencing and timeframe should likewise be regarded as indicative. Actual implementation will depend on institutional capacity, available resources, regulatory and legislative requirements, and stakeholder priorities and engagement. The measures and their scope should also be adjusted on the base of regular monitoring and evaluation.

The guidelines should consequently be understood as a living technical framework rather than a fixed set of prescriptions. Their purpose is to provide a data-driven, informed basis for further discussion, prioritization and decision-making by the competent entities in Malé City.

Key Elements Summary

Several cross-cutting elements exist across the proposed measures:

- **Coordination among key transport stakeholders:** Implementation should be supported by a standing coordination mechanism bringing together the main transport stakeholders in Malé City to help align priorities and avoid overlapping initiatives.
- **Strengthened enforcement:** Effective implementation will require more consistent and better-coordinated enforcement of new and existing parking and vehicle registration regulations to ensure compliance.
- **Alignment between parking restrictions and public transport improvements:** The introduction and subsequent expansion of parking restrictions should be aligned with improvements in public transport service, including its frequency, overall connectivity, and reliability. These improvements will reassure the public that a viable transit alternative will be provided to mitigate the impact of parking restrictions.
- **Safety, accessibility and resilience as cross-cutting principles:** All interventions should consider their potential impact on accessibility and avoid unintentionally creating barriers for vulnerable transport users, who should be appropriately represented and consulted in planning and implementation.
- **Continuous monitoring and adaptation:** Implementation should be supported by clear indicators and regular monitoring of parking occupancy, traffic conditions, public transport performance, vehicle ownership, compliance and user responses. Measures should be reviewed and adjusted based on evidence and stakeholder feedback rather than treated as fixed interventions.

STEP 1: Prepare and introduce initial parking measures

ID	Guideline	Description	Rationale	Duration (months)	Priority
G01	Establish a multi-stakeholder coordination mechanism for urban mobility and transport resilience	Establish a standing coordination mechanism bringing together the key institutions and stakeholders responsible for transport management. The mechanism should provide a common platform for coordinating the implementation of the guidelines, resolving cross-cutting issues, sharing information and consulting relevant stakeholders throughout implementation. If such mechanisms are already in place they should be expanded to include other key transport stakeholders.	To ensure that decongestion and disaster resilience measures are planned and implemented in a coordinated manner, recognizing that many interventions require action by multiple institutions. A common coordination mechanism can help align priorities, clarify responsibilities, avoid duplication and ensure that decisions affecting one part of the transport system are considered in relation to others.	37	Very high
G02	Identify no-parking zones for phased implementation	Identify locations where parking restrictions should be introduced progressively. Prioritise areas where alternative parking is already available (G05), followed by key public transport routes and major congestion points where parked vehicles significantly obstruct traffic (G10).	To establish a sequence for introducing restrictions (G05, G10) and remove parking from strategically selected locations to free road space for traffic and public transport.	3	High
G03	Coordinate enforcement strategy of parking restrictions	Establish a coordinated enforcement approach covering responsibilities, enforcement methods, priority locations and times, and penalties. Align enforcement arrangements with the phased introduction of new restrictions, including reduced penalties for the first month following implementation.	To ensure that parking restrictions are applied consistently and predictably, preventing situations where restrictions exist but are not effectively enforced. It also establishes the enforcement capacity required as restrictions are progressively expanded.	34	High
G04	Public awareness campaign	Inform residents and businesses about the objectives of the parking reform, the locations and timing of the new restrictions, the implementation sequence, and available parking alternatives. Provide clear information prior to each stage of implementation to help users understand the changes and available mobility alternatives.	To build public understanding of the reform, reduce confusion and resistance, and give road users time to adapt their parking behaviour before restrictions take effect.	12	Very high
G05	Introduce time-sensitive no-parking zones (I)	Introduce no-parking restrictions during strategically selected periods in priority locations (eg: restrict street parking near Velanaage Office building 6pm to 6 am or non-office hours), initially focusing on areas where alternative parking is readily available (eg. Sosun magu- near ADK hospital and/or Male' Ring road near carnival/Salman Mosque). Gradually expand the restricted periods and/or locations based on observed impacts and enforcement capacity.	To begin reducing parking-related obstruction while allowing the public, businesses and enforcement authorities to adapt to the new parking regime. The initial phase also provides an opportunity to monitor impacts and address operational issues before restrictions are expanded to additional locations (G10).	4	Very high

STEP 2: Strengthen public transport and expand parking measures

ID	Guideline	Description	Rationale	Duration (months)	Priority
G06	Introduce traffic circulation measures to improve bus transit	Review traffic circulation on key bus corridors and introduce measures such as one-way systems where appropriate to reduce conflicts and delays. Ensure that changes to traffic circulation do not create new bottlenecks on surrounding streets.	To improve bus reliability and journey times, making public transport a more competitive alternative and creating the conditions for further parking restrictions along bus corridors.	5	High
G07	Expand bus network coverage through additional connecting routes	Introduce additional routes or short connecting services, prioritising links between major residential areas, schools, offices and other key destinations that are poorly connected by the existing network. Build up on the newly introduced traffic circulation arrangements (G06) to facilitate these connections.	To improve network coverage and distribute passenger demand across the network, reducing pressure on existing routes and providing viable alternatives to private vehicle trips.	5	Medium
G08	Public transport promotion campaign	Promote the improved bus service, highlighting increased frequency, improved reliability, new connections and any changes to routes or stops. Provide clear information on schedules, routes and interchange options.	To ensure that improvements to the bus network lead to increased use by informing the public about the available alternatives.	12	Medium
G09	Increase bus frequency	Increase service frequency on existing routes, prioritising corridors with high demand and persistent overcrowding or long waiting times. Consider using smaller buses to increase service frequency without requiring additional road space.	To provide a more frequent and reliable alternative to private vehicle use before further parking restrictions are introduced.	4	High
G10	Introduce time-sensitive no-parking zones (II)	Expand time-sensitive parking restrictions to key bus corridors and other locations where roadside parking obstructs traffic flow or bus operations (eg: restriction on parking to only 1 side of the road in Orchid Magu, Ameer Ahmed Magu - near Islamic Center - and Chaandhanee Magu - near iskander and Aminiyya School). Prioritise periods of high congestion and bus demand, building on the initial restrictions introduced under G05.	To free road space on priority bus corridors, improve traffic and bus flow, and further reduce congestion. The restrictions are introduced after public transport alternatives have been strengthened, reducing the impact on affected road users.	5	Very high

STEP 3: Introduce parking alternatives and paid parking

ID	Guideline	Description	Rationale	Duration (months)	Priority
G11	Ramp up alternative parking solutions	Expand available off-street and designated parking, including through better use of existing facilities, shared parking arrangements and, where appropriate, additional parking capacity in strategic locations. Prioritise areas where no valid alternatives are available and where previous restrictions have displaced parking demand.	To provide viable alternatives to roadside parking and reduce the risk that further restrictions simply shift parking pressure to surrounding areas.	25	High
G12	Integrate parking management requirements into new developments	Expand requirements for new developments to incorporate appropriate parking measures based on location, expected demand and access to public transport. Requirements could include designated off-street parking, controlled access, visitor parking, loading areas and measures to prevent new developments from generating additional on-street parking demand.	To prevent new developments from increasing pressure on already congested streets and undermining parking-management measures. Integrating parking requirements at the planning stage also helps ensure that parking demand is managed as the city develops, rather than addressed only after congestion and parking problems emerge.	25	Medium
G13	Develop a parking management and pricing strategy	Establish a city-wide framework defining where parking should be permitted, restricted or priced, together with principles for pricing by location, duration and time of day. Develop a simple and accessible payment system, preferably with digital payment options.	To establish a consistent basis for introducing and adjusting paid parking (G15), rather than introducing charges on an ad-hoc basis.	6	High
G14	Improve parking information, permits and enforcement mechanisms	Introduce clear and consistent signage indicating parking rules, time limits and applicable fees. Establish simple procedures for permits and payment, and strengthen monitoring and enforcement mechanisms, including digital tools where appropriate.	To make the parking system easy to understand and use, while ensuring that parking restrictions, permits and payment requirements can be effectively enforced.	6	High
G15	Introduce paid-parking	Introduce paid parking progressively in areas where parking demand remains high despite previous restrictions and improved alternatives. Prioritise locations (Majeedhee magu near heenaamaage parking area, Ameer Ahmed Magu - between velaanaage and Hotel Jen, Near IGMH and/or Viligilli Ferry terminal for extended period of parking) where parking contributes to congestion. Monitor occupancy and user responses and adjust pricing or operating periods accordingly.	To manage parking demand and further reduce unnecessary private vehicle trips to high-demand areas.	6	Very high

STEP 4: Cap number of private vehicles and disincentivize ownership

ID	Guideline	Description	Rationale	Duration (months)	Priority
G16	Enforce higher registration/annual fees for second vehicle ownership	Apply progressively higher registration or annual fees to households or individuals registering additional private vehicles, with appropriate exemptions where justified.	To discourage unnecessary ownership of multiple private vehicles and reduce the growth of the vehicle fleet without restricting essential vehicle ownership outright.	6	Medium
G17	Strengthen enforcement of private vehicle registration and parking requirements	Strengthen verification that newly registered vehicles have access to a legally designated parking space. Introduce periodic checks to ensure that the declared parking space remains available and is actually being used for parking. Where appropriate, establish a limit on the number of vehicles that can be registered against the same parking space.	To ensure that existing parking requirements effectively constrain vehicle ownership. Stronger verification and monitoring can prevent multiple vehicles from being registered against the same parking space and subsequently occupying public road space.	9	High
G18	Establish regular vehicle inspection and compliance monitoring	Strengthen periodic inspection of vehicles for roadworthiness, safety and emissions compliance, supported by reliable registration and inspection records. Introduce stricter corrective measures for vehicles that fail to meet established requirements.	To identify unsafe, highly polluting or otherwise non-compliant vehicles and provide a reliable basis for their progressive removal.	11	High
G19	Incentivize vehicle retirement	Conduct a promotional campaign and introduce incentives for owners to voluntarily retire older or underused vehicles, particularly following the introduction or expansion of parking restrictions and paid parking. Incentives could include reduced fees, scrappage schemes or support for switching to public transport.	To encourage vehicle owners to reconsider keeping a private vehicle when the cost and convenience of ownership decrease, while providing a gradual and socially more acceptable pathway towards reducing the vehicle fleet.	8	Medium
G20	Establish mechanisms to manage and cap long-term growth of the private vehicle fleet	Establish mechanisms to control the long-term increase of private vehicles, drawing on measures such as progressively stricter registration criteria and mandatory retirement of vehicles that fail established age, safety or emissions requirements.	To prevent continued growth in number of private vehicles from undermining congestion-management measures and to establish a sustainable long-term limit on private vehicle ownership.	9	High

STEP 5: Improve walkability and accessibility

ID	Guideline	Description	Rationale	Duration (months)	Priority
G21	Improve sidewalks and bus stop conditions	Repair, widen and improve sidewalks, managing physical obstructions such as improperly routed drainage pipes(including dewatering pipes). Improve bus stops with adequate space, shelter, seating and protection from heat and rain, while ensuring safe and continuous pedestrian connections to them.	To create a continuous, comfortable and accessible walking environment and make walking a more practical option for short trips and access to public transport.	10	High
G22	Improve pedestrian security and road safety infrastructure	Improve street lighting, pedestrian crossings, signage, and other safety infrastructure. Consider expanding the use of security cameras and other measures to address safety concerns in priority areas.	To reduce pedestrian exposure to traffic and improve the actual and perceived safety of walking, particularly during evening hours and in areas with high pedestrian activity.	10	High
G23	Introduce dedicated cycling infrastructure	Develop dedicated cycling lanes on suitable corridors, prioritising connections between residential areas, schools, offices and other major destinations (eg: From Hiyaa Towers / Amaan Towers to the main bus-stop near those residential blocks). Ensure that cycling routes are continuous and include safe crossings and connections to existing roads and pedestrian infrastructure.	To provide a safe and practical alternative to private vehicle use for short and medium-distance trips and enable the effective introduction of cycling alternatives (G25).	10	Medium
G24	Promote walking, cycling and other forms of active mobility	Conduct targeted awareness campaigns highlighting the health, environmental, economic and mobility benefits of walking and cycling, while informing residents about improvements to pedestrian and cycling infrastructure and available services.	To encourage a gradual shift in travel behaviour and increase use of the improved walking and cycling infrastructure.	8	Medium
G25	Introduce bicycle sharing services	Establish bicycle-sharing services at strategically located stations or designated parking areas (eg: Social housing complexes in HM Phase 1 and 2 - Hiyaa, Amaan, Vinales and China Flats, and parking near Tata Social Housing Flats on Ameeneemagu), prioritising connections to public transport, major office and residential areas, schools and other key destinations.	To provide a convenient alternative for short-distance trips and first- and last-mile connections, complementing public transport and reducing reliance on private vehicles.	6	Medium

STEP 6: Increase disaster resilience

ID	Guideline	Description	Rationale	Duration (months)	Priority
G26	Strengthen disaster-resilience governance , continuity planning and accessibility-loss monitoring	Develop a 'dedicated transport and mobility continuity' annex to the <i>Malé City Disaster Management Plan (2025)</i> , defining agency roles and designating a single lead authority empowered to mobilise flood-pumping without inter-agency delay. Establish accessibility-loss monitoring, recording disruption duration, frequency and affected routes, as the evidence base for prioritising and tracking resilience measures.	To give the city an agreed institutional basis for maintaining mobility during hazard events, closing the coordination gaps identified in consultation and making accessibility loss measurable rather than anecdotal.	10	Very high
G27	Introduce and protect priority emergency access routes	Identify, designate and protect emergency access routes along flood-prone corridors and the approaches to critical facilities, prioritising the four hospitals and the IGMH approach. Support with temporary no-access zones restricting private vehicles on these corridors during declared flood conditions, keeping emergency and public-transport routes clear.	To guarantee continued access to essential healthcare and emergency services during flooding, addressing the hospital access-envelope problem and preventing private-vehicle obstruction on critical corridors.	12	Very high
G28	Strengthen drainage, pumping and anticipatory flood response	Prioritise drainage upgrades, pumping capacity and monitoring on the most flood-affected corridors, and automate the current manually-operated flood pumps to remove activation delay. Deploy advance sandbagging and temporary barriers triggered by Met Office early warning, supported by impact-based forecasting for Malé City.	To reduce flood depth and duration on the corridors most critical for mobility, eliminate the manual pump-startup bottleneck, and shift flood response from reactive to anticipatory.	20	High
G29	Build modal redundancy and continuity of service	Develop a plan ensuring at least one accessible transport mode remains operational during flood conditions, recognising the flood-tolerant electric bus fleet, and increase ferry frequency on critical links beginning with the airport connection as an alternative channel when road access fails.	To ensure that when the dominant surface modes fail simultaneously, residents retain a functioning and accessible transport option, addressing the modal-redundancy gap evidenced by the UMS.	12	High
G30	Extend resilient infrastructure and city-wide warning systems	Introduce or reintroduce a Malé City-wide emergency siren and public-alert system; expand the city hydrant network to strengthen emergency water access; and build resilience and contingency provisions into the ThilaMalé Bridge and its approaches proactively, before completion, against both pluvial and coastal-swell hazards.	To provide durable, city-scale protective infrastructure and to embed resilience in the major new connectivity asset from the outset rather than retrofitting it later.	22	Medium