WOMEN AND TRANSPORT
IN INDIAN CITIES

Executive Summary

The coming decade will be a defining moment for India as its urban areas are estimated to constitute around 40 per cent (600 million) of its total population by 2030. According to the High Powered Executive Committee (HPEC), around INR 23 lakh crores[2] is required over 2015–2030 for India's urban transport infrastructure. The recently announced Green Urban Mobility Scheme (GUMS) expects to invest around INR 70,000 crores[3] over 2018–2023 on sustainable transport. The national government has initiated missions and schemes to invest in urban transport and infrastructure; and created indicators and service level benchmarks to establish a city's baseline and goal for improvement.

While there is momentum by different levels of government in addressing women's safety in public transport, urban transport investments are largely gender blind with a limited understanding of the interrelationships between gender and transport inequities. Sustainable urban development will remain elusive without integrating women and girls' safety, comfort, convenience and affordability in urban transport.

Ultimately, transportation is the fulcrum that allows women to participate in the workforce, which can create a societal shift to transform the entire world economy. This policy brief fills a key gap in urban transport literature in India by recommending gender responsive transport indicators, supported by benchmarks to set goals and monitor outcomes and outputs at the city level. Additionally, it provides good practice case studies for implementation guidance. The brief will be relevant for policy and decision makers at the national, state and city levels, advocacy organizations and professionals.

[2] USD 490 billion at 2009-10 prices

[3] USD 10.9 billion at 2017 prices

Recommendation 1 - 4: Prepare and Implement Gendered Mobility Plans

- Measure gendered mobility patterns.
- Set goals and create a mobility plan underpinning women and girls' concerns.
- Prepare an implementation plan.
- Monitor implementation progress and evaluate outcomes.

The comprehensive mobility plan can be assessed by the following indicators:

Table 1: Outcome indicators for comprehensive mobility plans

Indicator		Measure	Recommended Benchmarks
1	People near transport (PNT), disaggregated by gender	Percentage of women and girls living within 500m walking distance of public transport in the city and metropolitan region, with a frequency of at least 6 schedules per hour	At least 80 percent of women and girls
2	Mode shares, disaggregated by gender	Percentage of walking, cycling, public transport (buses and metro-rail separately), intermediate public transport, motorized two-wheeler and four wheeler trips by women and girls	At least 80 per cent of all trips are by public and non-motorized transport At least 40 percent of all public and non-motorized transport trips are by women and girls
3	Median non-motorized trip time, disaggregated by gender	Women and girls' median walking and cycling trip time	Women and girls' walking trips are less than 15 minutes Women and girls' cycling trips are less than 25 minutes
4	Median motorized trip distances, disaggregated by gender	Women and girls' median motorized trip distances	Stabilized at 2017 levels or lesser
5	Cost on transport per month	Monthly household expenditure on transport	Not more than 10 per cent for low-income households
6	State and city transport allocations and expenditures on transport	State and city transport budget that benefits women and girls	Specific allocations and expenditures in the state and city transport budget for women's safety in urban transport
7	Improved air quality	Reduction in air pollutants (to achieve CPCB ambient air quality norms) due to women and girls' use of sustainable transport	City achieves or exceeds air quality standards set by the CPCB. 50 percent of the reduction in air pollutants from transport because of women and girls' use of sustainable modes of transport

Recommendation 5: Create Safe and Comfortable Walking Environments for Women and Girls

- Create a walking friendly street network with median urban block lengths of 100-150m.
- Design footpaths and pedestrian crossings as per IRC 103: 2012 Guidelines for Pedestrian Facilities, which proposes three zones—a dead zone, a pedestrian zone and a multi-functional zone for footpaths along with a level of service approach for determining the width of footpaths.

This can be measured with the indicators in Table 2.

Table 2: Indicators for street network and pedestrian infrastructure

Indicator		Measure	Recommended Benchmarks
Street Network			
1	Median block length	Median block length bounded by publicly accessible roads on all sides	100 – 150m
2	Level and perception of safety, comfort and convenience, disaggregated by gender	Experience and perception of safety, comfort and convenience of walking	At least 80 per cent of women and girls perceive the street network to be safe, comfortable and convenient. Each aspect will be evaluated separately.
Pedestrian Infrastructure			
3	Walking friendly streets	Percentage of city roads with right of way greater than 12m with universally accessible, shaded footpaths with minimum 3.5m width or Level of Service B (as per IRC 103: 2012 Guidelines for Pedestrian Facilities), whichever is greater	At least 80 per cent
4	Well-lit streets	Percentage of street network with uniform and consistent lighting for footpaths and cycling infrastructure • 25 lux for shopping areas • 30-40 lux for non-shopping areas	Entire street network

Recommendation 6: Increase Women's Cycling Shares

- Create cycle tracks to provide safer cycling environments and reduce motor vehicle speeds where cycles share the carriageway with motor vehicles.
- Conduct education programs to teach women how to ride and repair cycles.

This can be assessed with the indicators in Table 3

Table 3: Indicators for cycling network and infrastructure

Indicator		Measure	Recommended Benchmarks
Cycling Network and Infrastructure			
1	Streets with dedicated, continuous, even, shaded, well-lit cycle tracks without encroachment	Percentage of streets 20m and above with dedicated, continuous, even, shaded, well-lit cycle tracks without encroachment. The following are recommended: • Minimum 2m for one-way cycle tracks • Minimum 2.5m for one-way cycle tracks with cycle rickshaws • Minimum 3m for two-way combined cycle tracks	At least 80 per cent
2	Shared streets with traffic calming elements	Percentage of shared streets with design speeds less than 30kmph	At least 80 per cent

Recommendation 7: Increase Women's Safety and Use of Public Transport

- Propose routes and frequencies that cater to destinations visited by women (such as schools, markets) and their time of travel; reduce trip chaining fare burden.
- Conduct safety audits and level of service analyses to improve last mile connectivity and to design bus stops, IPT stops, train/metro stations, terminals and interchange stations.
- Procure public transport fleet as per UBS II specifications with lower handlebars, wider gangways, space for strollers, access ramps and women doors.
- Create campaigns to generate awareness on sexual harassment laws, communicate a zero tolerance approach to sexual harassment, encourage women to report harassment, and encourage bystanders to assist women and girls.
- Provide real time information on arrival and departure of public transport and major destinations around the public transport stops frequented by women and girls.

This can be measured with indicators in Table 4.

Table 4: Indicators for a public transport system

Indicator		Measure	Recommended Benchmarks
Overall System			
1	Availability of buses	Number of buses per lakh population in the urban and peri-urban areas of the city/ metropolitan region. These must have at least 35 per cent seats reserved for women or as per demand in peak hours, whichever is more	At least 50 buses per lakh population
2	Load factor of the bus	Ratio of the number of passengers in the bus to the capacity of the bus	Load factor should not exceed 100 per cent of the total capacity in peak hours
3	Level and perception of safety, comfort and convenience, disaggregated by gender	Experience and perception of safety, comfort and convenience of the public transport journey i.e. from origin to public transport stop, waiting at the stop, boarding and alighting, traveling inside the vehicle and travel from public transport stop to destination, conducted annually or bi-annually	At least 80 per cent of women and girls perceive the public transport journey to be safe, comfortable and convenient. (Each aspect must be evaluated separately)
4	Waiting time, disaggregated by gender	Women and girls' waiting time for public transport in peak and off-peak hours in urban and peri-urban areas of the city/metropolitan region	<5 minutes in peak hours <10 minutes in off peak hours
Infrastructure (Stations, Terminals, Interchanges)			
5	Universally accessible, sheltered stations	Percentage of sheltered stations/ stops with level boarding and alighting	At least 80 per cent of shelters/ stations All terminals and interchange stations
6	Well-lit stations	Percentage of sheltered stations/ stops with uniform and consistent lighting of 30-40 lux	All stations

7	Information and communication	Percentage of stations with real time information, route maps, functional help line numbers and emergency numbers	All stations
8	Public toilets	Gender disaggregated data on availability of adequate and universally accessible public toilets within 250m walking distance of a public transport stop[4]	**Terminal Stations and Bus Terminals** Men: 4 water closets for first 1000 persons and 1 for every additional 1000 persons or part thereof; Urinals: 6 for every 1000 person and 1 for every additional 1000 persons or part thereof Women: 10 water closets for every 1000 persons and then 1 per 1000 persons after **Within 250m walking distance of a public transport stop** Men: 1 per 100-400 persons; For over 400 persons, add at the rate of 1 per 250 persons or part thereof. Urinals: 1 for 50 persons or part thereof Women: 2 for 100-200 persons; over 200 persons, add at the rate of 1 per 100 persons or part thereof
Vehicles			
9	Public transport fleet as per Urban Bus Specifications II	Percentage of the public transport fleet with space for persons on wheelchairs and strollers, lower grab bars, minimum 700mm gangway, doors with a clear width of at least 1000mm	Entire public transport fleet
10	Information and communication	Percentage of public transport fleet with route maps, functional help line numbers and emergency numbers and real time information	Entire public transport fleet

[4] This standard must be considered for intermediate public transport, where it serves the majority of public transport trips.

Recommendation 8: Engender Public Transport Authorities

- Create a Gender Advisory Committee (GAC) within public transport authorities to:
  - Make gender equality a core duty of the public transport authority.
  - Review all public transport plans to ensure gender responsive planning, implementation and evaluate impact.
  - Create and implement a capacity building program for gender responsive planning, design, implementation, monitoring and evaluation of public transport.
  - Define protocols to prevent and address sexual harassment in public transport.
  - Enable recruitment, retaining and promotion of women at all levels within public transport authorities.
  - Facilitate gender sensitization trainings for drivers, conductors, depot managers and leadership.

This can be measured with indicators in Table 5

	Indicator	Measure	Recommended Benchmarks
Employees			
1	Women employees in the public transport authority	Percentage of women employees in the public transport authority at different levels	At least 50 per cent women at junior, mid and senior management levels across different functions (Eg. drivers, conductors, depot managers, engineers, urban and transport planners etc) or reflecting the city's female population ratio, whichever is greater
Trainings and Complaint Redressal			
2	Standard operating procedures	Standard operating procedures created for preventing and addressing sexual harassment	Public transport authority has created standard operating procedures, which is included in the core training curricula for drivers, conductors and depot managers
3	Drivers, conductors and depot managers, who have received gender sensitization trainings	Percentage of drivers, conductors and depot managers who have received training on gender sensitization and standard operating procedures annually, along with quarterly follow-ups to discuss challenges and share learnings	All drivers, conductors and depot managers
4	Complaints and redress mechanism is created	Gender disaggregated data on complaints filed and redressed by the public transport authority	At least 80 per cent of the complaints filed by men and women are addressed within 14 days

Recommendation 9: Make Intermediate Public Transport Safer for Women and Girls

- Recognize IPT as a mode of public transport
- Make police verification of drivers (and conductors) mandatory, create standard operating procedures and conduct gender sensitization trainings with the drivers (and conductors) to prevent and address sexual harassment in their vehicles. This can be mandated by the Regional Transport Organization (RTO), when issuing permits and approving IPT routes
- Design IPT stands to provide sheltered, safe and well-lit waiting areas with route signage and information on complaint and emergency helpline numbers

This can be measured with indicators in Table 6.

Table 6: Indicators for intermediate public transport

Indicator		Measure	Recommended Benchmarks
Overall Journey			
1	Level of safety, comfort and convenience in the intermediate public transport journey, disaggregated by gender	Annual or bi-annual surveys to assess sexual harassment, comfort and convenience in the intermediate public transport journey i.e. from origin to shared IPT stop, waiting at the stop, boarding and alighting, traveling inside the vehicle and travel from IPT stop to destination. For direct auto-rickshaw or taxi services, interaction with drivers and travel inside the vehicle will be critical	At least 80 per cent women and girls perceive the intermediate public transport journey to be safe, comfortable and convenient. (Each aspect is evaluated separately)
IPT Infrastructure			
2	Sheltered stops with consistent and adequate lighting	Percentage of sheltered stops with consistent lighting of 30-40 lux	All stops
IPT Vehicles and Drivers			
3	Intermediate public transport fleet	Percentage of intermediate public transport fleet with functional help line and emergency numbers and name and photograph of the driver published inside and outside the vehicle. The route maps must be shown where applicable (as in the case of mini buses etc.)	Entire intermediate public transport fleet

4	Drivers (and conductors) verified by the police	Percentage of drivers (and conductors) without criminal records, verified by the police	All drivers (and conductors)
5	Standard operating procedures	Standard operating procedures created for preventing and addressing sexual harassment	Standard operating procedures are created, which is a prerequisite for issuing permits
6	Drivers (and conductors) who have received gender sensitization trainings	Percentage of drivers (and conductors) who have received training on gender sensitization and standard operating procedures last year. This is accompanied with quarterly follow-ups to discuss challenges and share learnings	All drivers (and conductors)