

# GENDER SENSITIVE REFORMS IN PUBLIC TRANSPORT

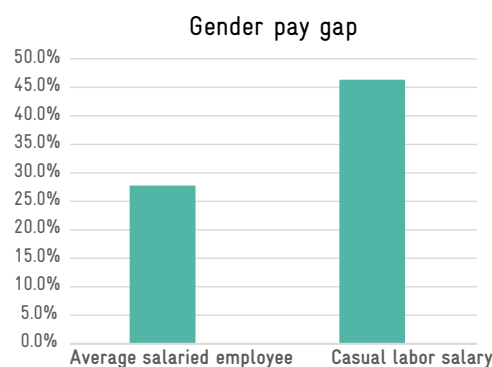
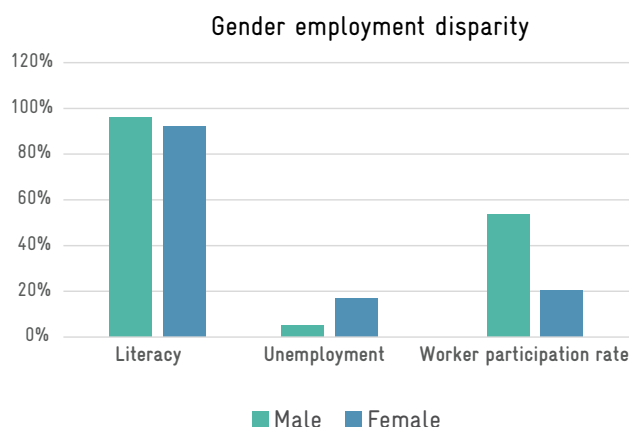
# A CASE OF KERALA



## PURPOSE OF THE STUDY

Differing social and economic roles taken up by women and men are reflected in their travel patterns. Short trip-length, dependency on public and non-motorized transport, restricted travel time, and trip chaining are general characteristics of women's travel patterns. Moreover, their chosen mode of travel depends on parameters such as affordability, coverage, frequency, safety and, comfort. While this purports the need for a gender-sensitive transportation systems, the approach to planning in India uses standardized mobility solutions for both genders. Disaggregated data is rarely collected and analysed for transportation planning and operations. This has resulted in a gender-neutral transportation systems. Further, under-representation of women in technical jobs of the sector is echoed in the infrastructure systems as well, which lacks women's perspective.





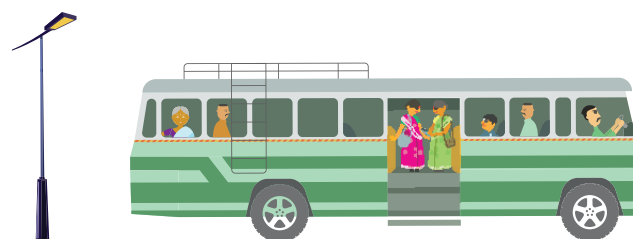
Unsafe public transportation systems have often been identified as one of the barriers to women's participation in the labour force, in addition to domestic and childcare responsibilities. In India, the state of Kerala leads the country in parameters such as sex ratio, female literacy rate. It also leads the country in the Human Development Index with a score of 80 (UNDP report 2018). While the female literacy rate of the state is the highest in the country with 92%, the work force participation rate is only 20%, compared to 54% for men. Further, women in the casual labor force are paid 46% less compared to men. Agricultural and specific service sector sees highest female employment. Whereas sectors with technical knowledge, such as electricity, water, transport, storage and communication, see the lowest female employment. Even with such high literacy rate, around 22 lakh women are job seekers (Kerala State Planning Board–Economic Review, 2020). Surveys have shown that urban women spend around 5 hours each day on care work, which is never accounted for in the economy. In monetary terms, this amounts to an income of Rs 218 million per day. While breaking the social and cultural barriers is dependent on multiple factors, public transport safety can always be improved, which might help many women in taking up opportunities they miss.

Considering these factors, the Kerala State Transport Department initiated this study for improving women's safety in public transport with support of the Indo-German cooperation project 'Integrated Sustainable Urban Transport Systems for Smart Cities' (SMART-SUT), as part of the Indo-German Green Urban Mobility Partnership (GUMP) funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and jointly implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and the Ministry of Housing and Urban Affairs (MoHUA).

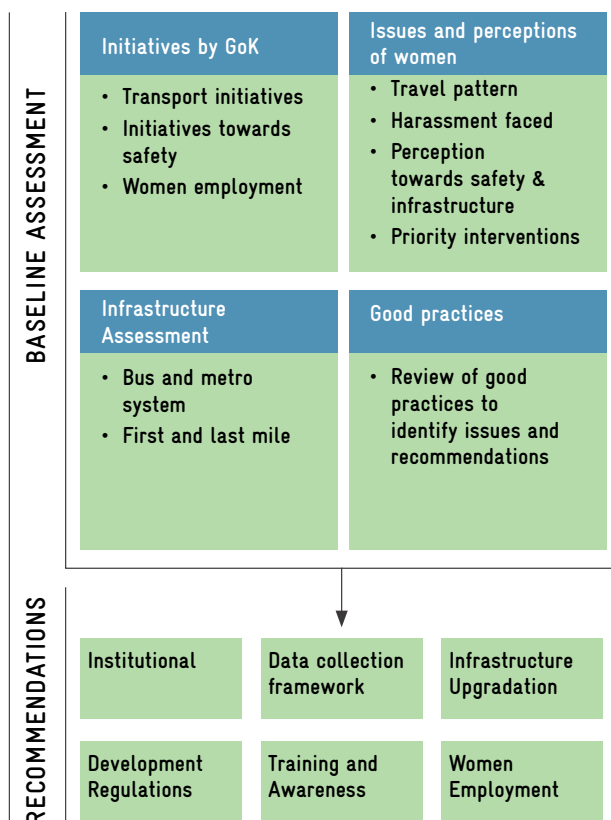
## METHODOLOGY OF THE STUDY

This study aims to provide suggestions to the State Transport Department towards making transportation systems inclusive and safer. Qualitative and quantitative data to understand issues and priorities of women towards safer transportation systems were collected through various tools. Issues were identified through the assessment of initiatives taken by the State Government, stakeholders' consultation, focus group discussions (FGDs) with different women groups, perception surveys and transport infrastructure assessment. Around 1,600 women were consulted in the cities of Kochi, Kozhikode and Trivandrum through FGDs and surveys. The stakeholders consulted were:

1. Transport Department
  2. Kerala State Road Transport Corporation (KSRTC)
  3. Motor Vehicles Department (MVD)
  4. Social Justice Department (SJD)
  5. Kudumbasree<sup>1</sup>
  6. Kerala Police
  7. Kerala Metro Rail Limited (KMRL)
  8. NGOs such as Sakhi and Anweshi, which works for women empowerment
- Measures taken up by cities across the globe and India were reviewed, and reforms towards the identified issues were framed taking those into consideration.



<sup>1</sup> Kudumbasree is a society formed by the Government of Kerala towards poverty eradication and women empowerment



## KERALA GOVERNMENT'S INITIATIVES

The state has been the front-runner in the country in taking up measures towards women's equality and empowerment. The SJD has taken up the Gender Equality and Women Empowerment Policy which focusses on inter-departmental coordination, data collection and development of gender responsive infrastructure. The Kerala Police has also taken initiatives such as Vanitha police, pink patrols and control room, and installation of CCTV cameras, which focus on the inclusion of women and surveillance of public areas. KSRTC and MVD are developing SURAKSHA-MITRA command and control centre with real time tracking of buses, and with provisions of panic buttons in them. KSRTC, from 1992, opened the services of conductors and drivers for female candidates as well. Female conductors comprise of ~15% of the total conductors. They have also introduced mandatory gender sensitization trainings and night shelter facilities for women at terminals. The Facility management Centres of Kudumbasree have collaborated with KMRL, providing trained women as frontline workers.

With respect to transport initiatives, the State is moving towards developing an inclusive, sustainable and coordinated transport sector, with the approval

of Electric Vehicle Policy and Kerala Metropolitan Transport Authority Act, subsequent to which the Kochi Metropolitan Transport Authority and K-SWIFT<sup>2</sup> has been formed. These policy changes envisage development of mobility plans, procurement of new buses, and development of new infrastructure systems. This can be looked at as an opportunity for transforming the sector and developing a women-centric transport system.

## OUTCOMES OF FGDs AND PERCEPTION SURVEY



The objective of the FGDs were to understand issues making transportation systems unsafe for women. While the metro infrastructure was appreciated, issues in the bus system, and the first and last miles were highlighted. The key factors affecting women's safety were found to be:

- Absence of women's perspective in infrastructure design of buses, bus stop and bus terminal
- Deserted streets after dark
- Low presence of women on streets, bus stops and buses during odd hours
- Overcrowding of buses in peak hours
- Poor crew conduct of privately operated buses
- Low presence of women as front-line staff
- Low rate of registering a complaint with police due to its lengthy process, and the feeling that no action would be taken

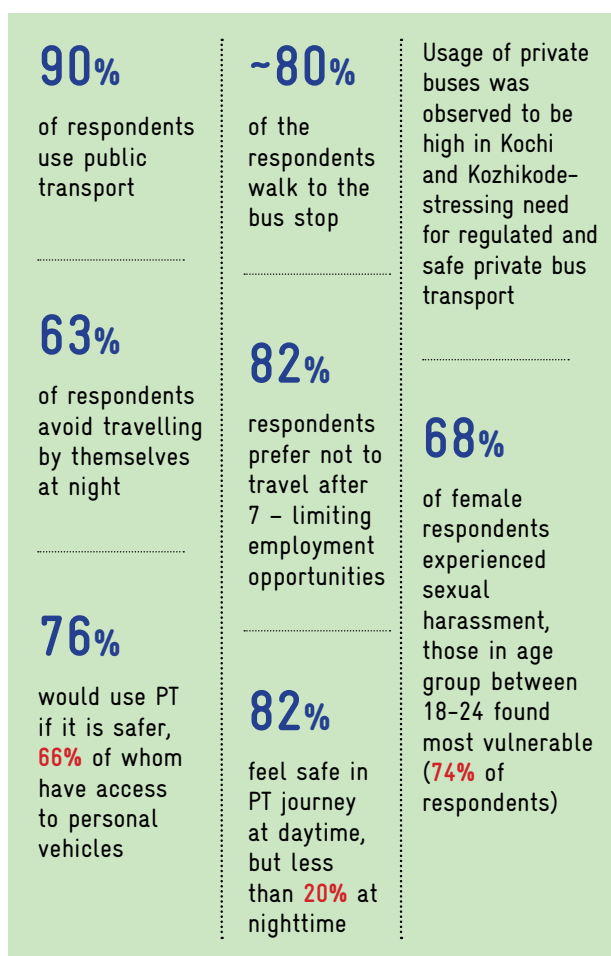


<sup>2</sup> K-SWIFT is a company formed by KSRTC for separating long distance and city bus service. The company will also look into adoption of the EV policy.



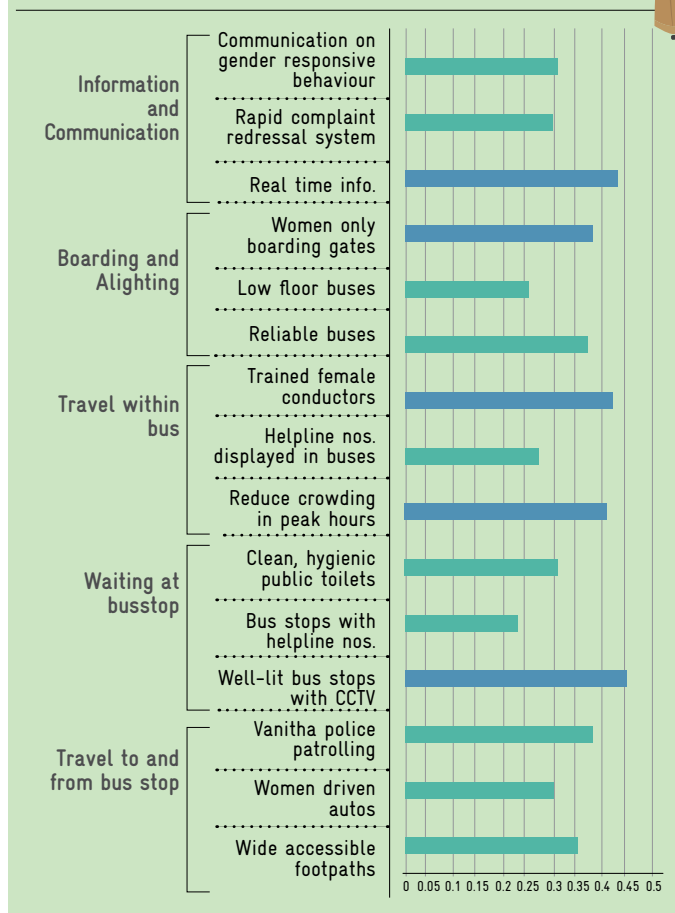


The outcomes of the FGDs were used to design the perception survey, focussing on women's perception towards 1) safety in public transport journey, 2) infrastructure, 3) travel patterns, and 4) priorities for improving safety in PT journey. The key outputs are given below:



The actions prioritized by the surveyed women in consideration with the existing infrastructure systems focussed on 1) information and communication systems, 2) gender responsive infrastructures, 3) data-based planning, and 4) inclusion of women in the transport sector. The following figure shows the top priorities and their Importance–Satisfaction rating at each leg of the journey. Higher the IS rating, higher the dissatisfaction with a particular service quality attribute.

## IMPORTANCE SATISFACTION RATING



## INFRASTRUCTURE ASSESSMENT

The buses, bus stops, bus terminals and the last mile was assessed with a gender lens, considering parameters such as visibility, openness, crowd, gender presence, and security. Issues identified through the assessment is as given below:

Buses	<ul style="list-style-type: none"> <li>High footboard</li> <li>Shutter windows</li> <li>Inadequate lighting</li> <li>Narrow gangway</li> </ul>
Bus Stops/ terminals	<ul style="list-style-type: none"> <li>Inadequate crime preventing elements</li> <li>Poor lighting</li> <li>Unmaintained facilities</li> <li>Absence of PIS and helpline numbers</li> </ul>
Last Mile connectivity	<ul style="list-style-type: none"> <li>Narrow deserted streets during odd hours</li> <li>Low women presence</li> <li>Poor visibility in secondary streets</li> <li>Lack of elements supporting of eyes on streets</li> </ul>





Issue in traversing the bus Narrow gangway



Uncomfortable bus stop designs and absence of vending zones



Absence of segregated pathways Absence of crime preventing elements



Non-maintained facilities at bus terminals



High compound walls negating concept of eyes on street

## LEARNINGS FROM GOOD PRACTICES

Initiatives by Transport for London (TfL), Bogota, Delhi Transport Corporation and Capital Region Urban Transport (CRUT), Bhubaneswar, were reviewed. The key learning from these practices are as given below:

1. Cities have used different data sets to strategize actions towards women safety.

a. TfL uses big data analytics and perception survey to analyze customer travel patterns, and issues faced by users of different communities based on which actions targeted towards safety and security, accessibility, affordability, workforce participation and, information and communication have been taken.

b. Bogota has undertaken safety audits of the cycle network to identify unsafe spots and take up interventions such as improving street lighting, relocating bus stops, locating vending zones and developing active areas

c. CRUT collects gender disaggregated tickets through electronic ticketing machines (ETMs) to take evidence-based decisions.

2. Inter-departmental coordination has been taken

up for preparation of master plans and taking up long term campaigns

3. Increasing women employment in transport sector towards ensuring women-centric development:

a. TfL has developed internship programmes with targeted advertisement to different communities

b. TfL releases an annual workforce diversity report, which captures data on women employment at all levels, which is analysed to take strategic actions

c. DTC has relaxed the qualification criterion to encourage women as drivers and supports women in getting heavy motor vehicle license and provides bus driving training

4. Infrastructure upgradations through analysis of the perception surveys by TfL for improving women's safety:

a. Improving bus stop accessibility- improving street lighting and footpaths on connecting streets, installation of helpline numbers and map showing pedestrian paths within 500m of the stop

b. Disseminating real time information of transport systems through application and web

c. Redesigning bus stops and terminals

d. Introducing low floor buses

## KEY REFORM AREAS

Kerala Government has taken several policies, as well as institutional and infrastructural initiatives, to improve women's safety, transport systems and



to include women as frontline workers. However, there is still a need to take coordinated actions towards developing plans and infrastructure systems, considering women's perspective, taking data driven actions and regulating operation of private buses. Accordingly, the reforms suggested for State Transport Department are:

1. Metropolitan Transport Authorities (MTAs) as nodal agencies for gender mainstreaming in transport sector
2. Gender disaggregated data collection
3. Inclusion of women in the transport sector
4. Developing gender responsive infrastructure
5. Gender sensitization through trainings and awareness programmes

## RECOMMENDATIONS

### MTAs as nodal agencies for gender mainstreaming in transport sector

The Kerala Metropolitan Transport Authority Act mandates formation of Metropolitan Transport Authorities for Kochi, Trivandrum, and Kozhikode for the planning, coordination, development, and regulation of urban transport in the urban areas. Basis which Kochi Metropolitan Transport Authority (KMTA) was formed in November 2020. The Authority comprises of the transport agencies, municipal corporation, police, and experts in the field of urban and transportation planning. Given the role, mandate, and involvement of various agencies in KMTA, the authority is well suited to fit the role as a nodal agency in Kochi to take up the responsibility of monitoring, coordinating, and evaluating interventions towards gender mainstreaming. This can be duplicated in other cities, upon formation of MTA. The responsibilities envisaged for MTA towards gender mainstreaming are as given below:

1. Coordinate with various agencies for gender-disaggregated data collection
2. Evaluation of data collected on an annual basis for framing strategies
3. Inclusion of a section on gender statistics in the annual report (with key data and interventions taken for women by KMTA)
4. Discuss and mandate the agencies to take up pro-active actions towards women employment in transport sector
5. Inclusion of gender disaggregated data collection framework for proposed

comprehensive mobility plans for Kochi city, with one special section on women mobility highlighting their issues and recommendations

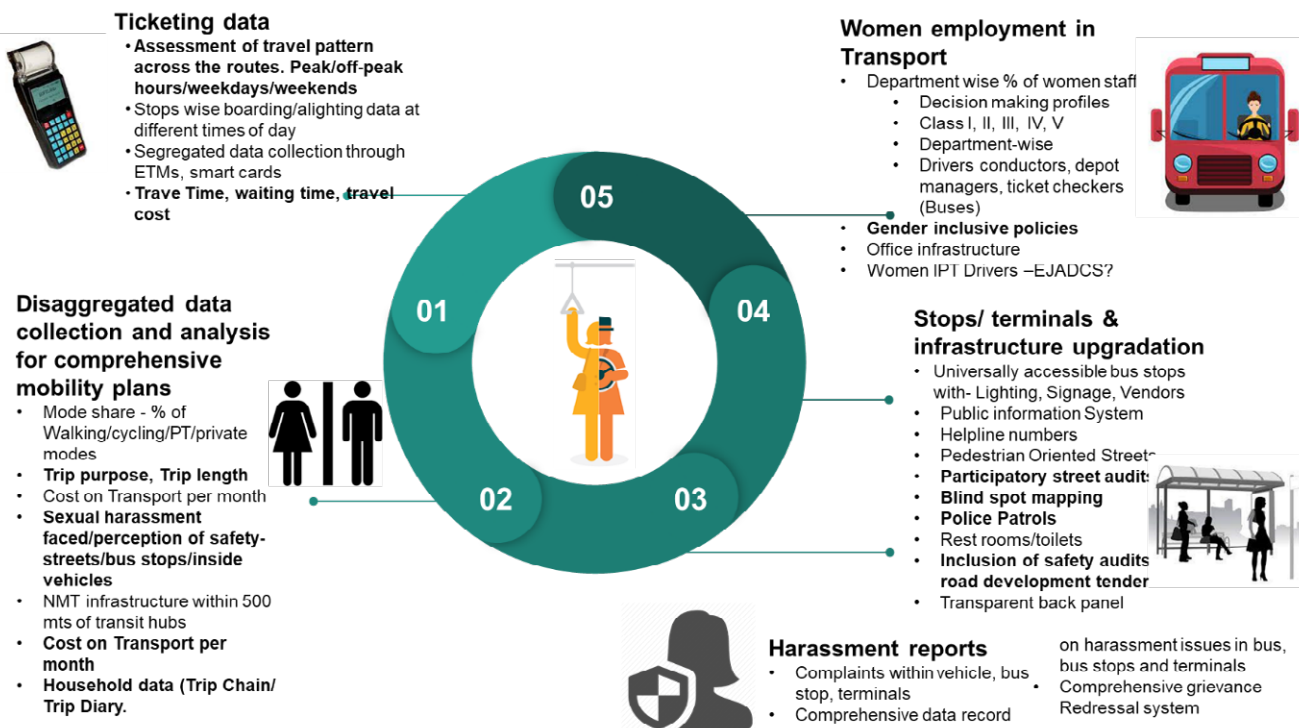
6. Set targets for transport agencies for employment of women in the next 5-10 years
7. Organise regular trainings and awareness programs
8. Undertake safety audits
9. Coordination with other agencies towards preparation of Master Plans and development of infrastructure ensuring inclusion of women's perspective.

### Gender disaggregated data collection

Public transport planning is generally undertaken at an aggregate level, which fails to recognise the travel patterns of women. Because of this, agencies fail to take up evidence-based action. Collection and analysis of segregated data from 1) comprehensive mobility plans, 2) public transport ticketing data, 3) infrastructure components, and 4) women's employment records, can help in planning of women-centric public transportation systems. The MTAs can be mandated with the responsibility of coordination with agencies for data collection, and its evaluation for strategizing actions.

A detailed framework with indicators and the mode of data management and analysis can be developed and monitored by the MTAs, based on which specific actions can be taken. Assessment of ticketing data will help in 1) Planning of women-only bus services for certain routes, or the reservation of women's seats, if required, 2) deployment of patrols on specific routes and bus stops based on footfalls at specific times of the day. Studies have shown certain locational and time-specific trends for the occurrence of harassment in public places. Comprehensive records of harassment cases can help in identifying such trends. Assessment of streets within 500m of major bus stands can help in improving last mile connectivity. Improvements in terms of footpaths, street lights and vending zones can be undertaken. A record of all improved bus stops and terminals can help in assessing future infrastructural investment requirements. Safety at bus stops and terminals can be improved with components such as helpline numbers, CCTV cameras, PIS, vendors, lighting and dustbins. Analysis of data collected under CMP at a disaggregated level can generate information on female mode share, trip purpose, trip length, travel cost, and key trip generators and attractions. The following image showcases the data sets and indicators that can be collected and monitored by MTAs.





## Women inclusion in transport sector

Suggestions towards women's participation in the transport sector at different levels are as given below:

1. Collaboration of KSRTC and MVD with Kudumbasree and other self-help groups for recruitment of women as conductors with the provision of suitable training
2. Mandatory provisions in the agreement between MVD and private operators to include certain percentage of women conductors and drivers
3. Infrastructure arrangements such as clean toilets, rest areas, nursing facilities, creche and day-care centres, proper grievance redressal system and pick and drop facilities for early/late shifts for women drivers and conductors
4. Relaxation in the requirement of qualifications for women drivers in KSRTC. Providing incentives such as a few months trainings for driving of buses. Assistance for obtaining heavy vehicle driving license. Modifications to the driver's seat for all the newly procured buses to make it more comfortable for women, and to adjust it for lower heights. These changes shall be made keeping in mind the average height of the women in the state
5. Assistance by EJACDS (Ernakulam Jilla Auto-Rickshaw Driver's Co-operative Society) to women interested to become auto-drivers, for loans, registration of autos, training for driving autos and obtaining license

6. KSRTC can introduce internship programs with advertisement targeted towards female students/scholars helping to enhance women's participation in the transport sector.

## Gender Sensitization through training and awareness programs

### Training programs

Code of conduct agreement between MVD and private operators: Training is mandatory for drivers and conductors in KSRTC towards gender sensitization. However, there is no compulsory training for the staff of private operators. Towards this, MVD can have code of conduct regulations for behaviour towards passengers by conductors and drivers, and set protocols to be followed if there are any cases of harassment, as part of the agreement between the private operator and MVD. This can develop accountability and a response protocol in case of any reports of harassment.

Mandatory gender sensitization trainings during renewal of driving license or obtaining a driving license shall also be in place. This will ensure the training of private operators' staff as well. Trainings modules about gender sensitization, roles and responsibilities towards safe mobility of passengers, legal aspects towards the miscreant in case of harassment, and SOP to be followed in case of any incident on coach should be framed. Collaborations with Social Justice Department/ Kudumbasree can be explored for combined training of the KSRTC, private operator staff and police officials.

## Awareness programs

The lack of awareness in passengers of both gender regarding helplines, procedures for reporting of incidents, rights of women etc., makes it difficult to implement gender mainstreaming in the overall planning of the city. Awareness programs towards zero tolerance of sexual harassment, encouraging the reporting of harassments, nightly walks, and encouraging women to take up employment opportunities should be thought of.

## Development of gender responsive infrastructure systems

The Transport Department envisions transformation of the state's transport system with transition to low carbon fuel buses and use of technology for data collection and dissemination. Women's considerations in this transformation can result in safe transportation systems without any additional investment. Procurement of low carbon fuels with tender clauses specifying design elements from urban bus specifications-II (UBS-II) approved by Ministry and Housing and Urban Affairs, can make women's travel comfortable and safer (Slide 1 (mohua.gov.in)). These include:

- Floor height: 400/650 mm
- Hydraulic power steering with adjustable height and angle
- Minimum door aperture- 1200 mm
- Minimum clear door width- 1000 mm
- Ramps for wheelchair at gates wherever required
- Minimum Gangway- 700mm
- Passenger area lighting: >100 lux and <150 lux
- Minimum height of window: >950 mm
- Panic buttons to communicate to control room
- Two-way communication of driver with control room

Street development directed by urban street design guidelines can ensure elements of visibility and openness on streets. Safety audits of streets and transit stations can help identify unsafe spaces, and intervene as per requirements

## WAY FORWARD

Unsafe public transportation systems have impacted women's mobility and their opportunities. Social and cultural norms, multiple agencies working in silos, underrepresentation of women, paucity of data and the absence of considerations about women while designing of infrastructure systems are found to be the issues making transportation systems unsafe for women.

The State Transport Department is working towards transforming the urban transport systems with the formation of Metropolitan Transport Authorities, using technology for data collection, analysis, and dissemination, and moving towards low carbon transportation systems. In this transformation, the MTAs have the potential to take up steps that can make transportation systems safe for women. Initiatives such as 1) collection of gender disaggregated data, 2) regular monitoring and evaluation of the data collected for strategizing actions, 3) coordination with agencies for developing women centric plans and infrastructure, 4) women's participation in transport sector at different levels, 5) developing conducive environment for women to work in transport sector, and 6) regular trainings and awareness programs towards gender sensitization, can help in developing women-centric public transportation systems. Moreover, transportation systems safe for women ensures everyone's safety.



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