

Global Roadmap of Action Toward Sustainable Mobility

PAPER 3 | Gender



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GLOBAL ROADMAP OF ACTION

Toward Sustainable Mobility

GENDER



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LIST OF ACRONYMS

ABC	Awareness and Behaviour Change
ATAG	Air Transport Action Group
BMZ	German Federal Ministry for Economic Cooperation and Development
BRT	Bus Rapid Transit
CAF	Development Bank of Latin America
CBP	Corporate Partnership Board
CO2	Carbon Dioxide
DFID	Department for International Development
EIGE	European Institute for Gender Equality
EU	European Union
FIA	Fédération Internationale de l'Automobile
GBV	Gender Based Violence
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GMR	Global Mobility Report
GRA	Global Roadmap of Action
GTF	Global Tracking Framework
HDV	Heavy Duty Vehicle
ICAO	International Civil Aviation Organization
ICT	Information and Communications Technology
IECD	International Convention for Engineering and Design
IIED	Institute for Environment and Development
ILO	International Labor Organization
IMF	International Monetary Fund
IMMT	Intermediate Mechanized Means of Transport
IRF	International Road Federation
ITDP	Institute for Transportation and Development Policy
ITF	International Transport Forum
LGBT	Lesbian, Gay, Bi-sexual and Transgender

MaaS	Mobility as a Service
MENA	Middle East and North Africa
NGO	Non Governmental Organization
NMT	Non-Motorised Transport
NUA	New Urban Agenda
OECDs	Organisation for Economic Co-operation and Development
ReCAP	Research for Community Access Partnership
SDGs	Sustainable Development Goals
STD	Sexually Transmitted Disease
STEM	Science, Technology, Engineering, Mathematics
SuM4All	Sustainable Mobility for All
TNC	Transportation Network Company
TUMI	Transformative Urban Mobility Initiative
UITP	International Association of Public Transport
UK	United Kingdom
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNHABITAT	United Nations Human Settlement Programme
US\$	United States Dollar
USA	United States of America
WB	World Bank
WGT	Women, Girls, Transgender
WIEG	Women in Informal Employment Globalizing
WISE project	Women Increasing Sustainable Energy Access and Use project
WRI	World Resources Institute

FOREWORD

Sustainable Mobility for All (SuM4All) is an umbrella platform that brings together 55 public and private organizations and companies with a shared ambition to transform the future of mobility. Its unique value lies in bringing key influential actors to work together. It serves as the principal platform for international cooperation on sustainable mobility, a center of excellence, and a repository of policy, knowledge and resource on sustainable mobility. Its mission is to play a leading role in the ongoing transformation of the global mobility system, and support countries in their transition towards sustainable mobility.

Established in 2017, SuM4All's first task at hand was to find common ground on what countries wanted to achieve. We all agreed that transport was a key contributor to economic development and core to people's quality of life. We also agreed that the transport that we have is not the transport that we want—congestion in cities, segregation among rural and urban communities, carbon emissions, air and noise pollution, and traffic mishaps that are symptomatic of a systemic problem with mobility. We set our ambition high for the mobility of the future: we need an equitable, efficient, safe and green mobility.

The consensus on what sustainable mobility meant set us on our next task to establish the imperative for action. The Global Mobility Report 2017 benchmarked countries' performances on mobility relative to four policy goals. The findings of that report were alarming: not a single country in the world—developed or developing—has achieved sustainable mobility.

With evidence at hand, SuM4All embarked on a major drive in 2018 to develop a comprehensive policy framework to assist decision makers in cities and countries as well as practitioners at development banks to identify gaps, necessary steps, and appropriate instruments to attain the Sustainable Development Goals, and improve the sustainability of their transport sector.

We are pleased to share the outcomes of these efforts that embody the collective knowledge of all its members and more than 180 experts, and feedback from more than 50 public decision makers and 25 large private corporations. The Global Roadmap of Action builds on six policy papers, including this Gender paper, whose content is made accessible and usable to all in a web-based tool for decision making.

Sustainable Mobility for All Steering Committee
(On behalf of our 55 Member organizations)
July 2019, Washington, D.C.

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EXECUTIVE SUMMARY

Transport is not gender neutral, despite women making up half of the global population. Women are not a homogenous category; they vary significantly in socio-economic status, ethnicity health, education, civil status, age, geographical location and cultural aspects.

Female mobility patterns differ from men's: women tend to have shorter commuting distances, make more non-work-related trips, use public transport and taxi services more often than men, and frequently travel accompanied by children. Women in both low- and high-income countries face many mobility challenges.

The Global Tracking Framework (GTF) was difficult to apply to gender because of a lack of disaggregated data. Indeed, the only data on female employment in the transport sector that was continuous in nature included logistics and communications, making it problematic to set base lines. However, based on this limited data, countries were ranked, and Sweden was identified for a case study as being one of the more progressive countries.

This paper also finds that the transport sector still lacks diversity especially in decision making where women are underrepresented in all levels—political, diplomatic, financial, economic, and commercial sectors—and for all modes of transport. Moreover, women face many barriers relating to employment in the transport sector.

Limited access to opportunities and concerns about sexual harassment are estimated to be the greatest obstacles to women's participation in the labor market. For example, in developing countries these two aspects are estimated to reduce female labor force participation by 16.5 percent. Additionally, 19 countries (out of 189) legally restrict women from working in the same way as men, and globally only 75 countries mandate equal pay for equal work in all sectors.

Moreover, only 32 countries have legislation on sexual harassment in public spaces, including transport.

Gender is a crosscutting theme, and the participation of women at all levels of transport decision making, planning, management and operations must be increased. Four main entry points were identified in this paper where action is required, these are:

- Women as decision makers at all levels in the transport sector to achieve 30 per cent by 2030.
- Women as transport users;
- Women as transport workers; setting a long-term target of 50 per cent females working in the sector.
- The gendered impact of transport infrastructure;

Actions relating to providing women, girls and transgender with accessible, affordable, safe and efficient mobility are divided into five categories—legal, infrastructure design, operational dimensions, training (governments and operators), and engagement with civil society.

Four main sets of interventions and policy measures that can be taken to improve women's mobility are documented in the catalogue of policy measures.

- Improving data collection
- Increasing diversity and Inclusion
- Addressing legal and social barriers
- Engaging in policy dialogue capacity building and raising awareness

No internationally agreed target captures the ambition for change. Without doubt, integrating and engaging women and girls will support the achievement of many of the SDGs

INTRODUCTION

Gender¹ as an important element in sustainable mobility is a welcome addition to the SuM4All process. The four-policy-goal framework of the GMR now includes it² as an important cross-cutting dimension of sustainable mobility, and as a subset of universal access.

Transport provides many benefits that both men and women should enjoy equally. Based on evidence and due, not least in part, to the current approaches to transport planning, management and operations, this is not the case and women usually benefit less.

Women make up half of the global population³, yet transport is often biased toward the needs of adult men in how it is planned, implemented, and managed. Female mobility patterns are known to be different from men's: women tend to have shorter commuting distances; make more non-work related trips; use public transport and taxi services more often than men; and frequently travel accompanied by children or elderly relatives. Men of equivalent socio-economic levels tend to travel individually, have more access to private transport, and are more frequently vehicle owners and drive more. Thus, how walking and public transport are integrated into national and local transport systems strongly influences women's mobility, their quality of life and their welfare.

Many women suffer a number of restrictions to their freedom of movement due to cultural or social norms that are linked to simply being female. In addition, being LGBT, elderly, or disabled and female means you are more frequently targeted for discrimination. These constraints may also be experienced by the less able, the elderly and children and are found in both low and high-income countries. They affect women as users as well as those that work in the sector.

Gender equity and equality are now seen not only as a fundamental human right but is also a cornerstone of a dynamic and prosperous economy. These arguments also fuel the numerous compelling and diverse reasons that can be made at economic, social and environmental levels⁴ to support the case for investing in gender and transport.

Thus, the intersections of transport and gender matter for equality, equity and human rights reasons; as well as for economic, societal and environmental reasons.

Sustainable transport has a role beyond the basic function of travel and by specifically including gender in SuM4All, inclusiveness can be underpinned, and actions undertaken that will benefit women as well as other groups.

Actions on gender in transport are likely to address the negative social impacts of poor-quality transport, contribute to gender mainstreaming activities and stimulate economic development. Further value can be added with alliances with closely related areas, such as agriculture and food production, energy, digital development and industry, resulting in win-win situations.

Women need safe and secure transport so they can access education and jobs so they can fulfil their care duties and contribute to economic development.

Four main entry points have been identified where action is required as part of SuM4All, and where indicators and goals are suggested. These are:

- Women as transport users
- Women as transport workers
- The gender impact of transport infrastructure
- Women as decision makers in the transport sector

ENDNOTES

- 1 Sex refers to attributes one is born with; gender refers to what happens after birth. Gender is the term used to illustrate the different roles played by women and men and the characteristics of their expected behaviors due to cultural, historic, and socio-economic contexts that define their responsibilities, opportunities and constraints and can go beyond their biological differences. Men who assume roles associated with females are included in this discussion on gender and transport.
- 2 In this report the use of the gender encompasses both the social and cultural roles and norms that women assume and corresponding roles from the LGBT (lesbian, gay, bi-sexual and transgender) communities. Although it is important to include transgender (and LGBT) aspects our intention should be to highlight the specific needs of this community that may need consideration rather than neglecting it entirely. To avoid always referring to women, girls and transgender, we have used the abbreviation of WGT to represent women, girls and transgender and in the majority of cases transgender is also included when the term women or gender is used in this report.
- 3 UN population <http://www.un.org/en/development/desa/population/publications/database/index.shtml>
- 4 World bank Gender Equality Brief May 2018 Conclusions p 18 <https://openknowledge.worldbank.org/bitstream/handle/10986/29865/126579-Public-on-5-30-18-WorldBank-GenderInequality-Brief-v13.pdf?sequence=1&isAllowed=y>

1. DEFINING THE GOAL

Gender was not included as a separate pillar in the GMR (published in 2017), and as yet there is no internationally agreed target for capturing the ambition for change in gender and transport. Presently the transport sector is predominantly male-orientated across all modes. It is difficult to estimate the depth and breadth of this bias in transport as a sector, or to understand its effect, as there is little disaggregated data available to provide evidence at global, or even regional or national levels.

The World Economic Forum’s Gender Gap Report 2017 benchmarked 144 countries on their progress towards gender parity across four thematic dimensions. It found a global gap of 42 percent between men and women in labor force participation and earned income. Typically, women in most countries earn on average only 60 to 75 per cent of men’s wages.⁵ It is clear that these losses are not equally distributed between regions and income groups. The World Bank Group puts the cost of this inequality of earnings at US\$160.2 trillion globally, or US\$23,620 per capita.^{6,7} The International Labor Organization (ILO) states that global GDP could grow by an additional US\$ 5.8 trillion if the gender gap in male and female labor force participation is decreased by 25 percent by 2025.⁸

Globally only 52 percent of women participate in the workforce compared with 78 percent of men⁹ and in some countries this percentage is declining rather than growing¹⁰. Increasing their participation in the formal labor market— or at least a reduction in the gap between women’s and men’s participation—would result in faster global economic growth¹¹. Many women are active in informal occupations, especially in the developing world, and bringing them into the formal job market will significantly impact growth.¹²

When more women work in the formal economy, economies grow. Globally, a number of gaps have been identified, many of which are outside transport, but transport indirectly has a role to play in addressing them. Additionally, it is expected that integrating gender into transport more will also support achieving a number of international policy goals¹³, especially the Sustainable Development Goals (SDG)¹⁴ as almost every SDG contributes to the achievement of gender equality.

Nonetheless it is important to also recognize that women, like men are not a homogenous category or group. There are significant variations due to socio-economic status, ethnicity, health, education, civil status, age, geographical location and cultural aspects. Thus, for SuM4All no one goal has been determined but rather goals that when combined will deliver more than each one individually and also support the goals of other thematic areas identified as part of the GMR.

Sustainable transportation is a crucial element in enabling women and girls to access to economic and social opportunities, leading to inclusive societies and equitable growth. The case for gender and transport, and the economic, social and environmental cases for investing in girls and women are now very strong.¹⁵

1.1. Global trends and gender roles relevant to mobility

A number of important socio-economic trends underpin gender, transport, with poverty. These include the global influx of people into urban areas (in search of better economic opportunities), changes in family structures and social norms. Globally, women still take on the majority of the caring, domestic, child-rear-

ing, and community roles as part of their unpaid daily work, and these roles determine their travel behaviors to a large extent.

Globally, women are more likely to be poorer compared to equivalent men, in both developed and less developed regions. Additionally, older women are overrepresented among the older poor in the both developed and developing regions.

Another noteworthy trend over the past 30 years is an increase in female, single-headed households¹⁶ in both rural and urban areas¹⁷ in all areas of the world. Many households are headed by younger women aged between 20 - 40 years or by those over 55. Studies show that all women (single married or widowed) headed households, with young children, are more likely to be poor compared to similar households with lone fathers with young children.^{18,19} The children, especially girls, in these households also bear more responsibility within the household that frequently excludes them from schooling.

Constraints stemming from access to transport and mobility shape all women's individual access to public services—especially to education and health—and this lack of access to markets, employment, and skills affects their livelihoods. This has implications for the intergenerational transfer of poverty, or wealth and asset generation, and impacts not only the women's quality of life but also that of their families. Because of financial and time stresses, female household members who are responsible for caring for others restrict their independent travel, even locally, and many females, old and young, will curtail their mobility due to concerns about their personal security.

There are other interesting trends developing in higher socio-economic groups, that show women are becoming more motorized and driving more, partly for security (as well as other) reasons. In a number of developed world countries, more driving licenses are being given to women, than to equivalent-aged men,²⁰ The traditional notion that women drive fewer kilometers, or shorter distances, is therefore being eroded. In a travel survey done in the U.K.,²¹ the distance traveled by male car drivers decreased significantly during the period from 1981 to 2011, but it increased during

the same timeframe for female drivers. Also, the total number of trips by car for women has increased, which is the opposite to their male counterparts. In addition, as women tend to live longer than men, if they are already drivers, they drive well into their 80s, longer than their male counterparts.

Currently, there is little evidence of women in decision-making positions, in either the public or private sectors; almost no data on the numbers of women employed in the sector, directly or indirectly by mode, or in professional areas such as planning, engineering or technology. Additionally, there are few datasets on how women use transport either nationally or locally. Thus, it is difficult to properly estimate how mobile women really are, how active they are within the sector (or its sub sectors) at political or economic levels, or to gauge how attractive the sector currently is for employment to them. The working group was not able to establish the differences between women's level of transport access compared to men, or precisely gauge the extent that the availability or affordability of transport actually affects women's or the LGBT communities' access, including latent, unfulfilled demand.

It is fair to say that, despite small pockets of improvement, the present approaches to incorporating gender in the transportation sector are not likely to deliver the desirable equity and equality goals within the time frames set out by the Sustainable Development Goals and Agenda 2030. This provides an opportunity for the SuM4All initiative to help refocus the attention of the international transport community and national governments on the need to make changes, allocate funds, and build capacity in this area. Progress on equity and equality is not linear, and there are many intersections between gender and transport.

These trends and changes in social and economic structures present a number of challenges to transport. As mentioned, this is further complicated by the paucity of disaggregated data, which makes it difficult to set any baselines that would help to understand their gendered impacts, or to set meaningful goals. In addition, political changes and power struggles can also reverse progressive policies on women's empowerment and freedom, as has been seen in some countries.²² Moreover, sudden changes such as influxes of refugees from conflict zones (as experienced in the MENA region and parts of Europe) may alter the way

women are allowed to move, frequently putting extra strain on urban public transport networks, and presenting unforeseen challenges for women in both the host communities and among the refugees in terms of affordability, safety, and availability of transport.

1.2. Key challenges in gender and mobility

The many mobility challenges women face in both low and high-income countries stem from the following factors:

- Market and institutional failures (including limited access to information and networks), legal and fiscal impediments and restrictive social norms.
- Traditional unequal distribution of care responsibilities between men and women, time poverty and lack of empowerment.
- Gendered aspects of transport service provision and employment practices.
- Unequal access to and control over household productive assets, and lower transport budgets.

These challenges affect all women, but in differing ways, depending on a number of variables such as social and economic status—married, single, poor, middle class, slum dweller, or home owner— as well as age, location, ethnicity, and their occupations (salaried, self-employed, informal worker, entrepreneur, unemployed, or unpaid carer). Unfortunately, in today’s competitive world, disadvantages often mutually reinforce each other, and lead to poverty traps and vicious circles of disempowerment and exclusion and this is frequently the case for women. Impacts are felt in financial and societal terms, not only for those who experience this personally but it impacts households and families, communities, and ultimately feeds back into society as a whole. Furthermore, many barriers that women face present serious disincentives for them to take an active role in engaging with the transport sector, or take up careers that may lead them to become transport leaders of tomorrow.

Accessibility to and affordability of transport are key aspects that influence women’s mobility. International research studies²³ show that women’s accessibility to transport depends on a complex interaction of four main elements:

- **Financial accessibility** – as women usually have smaller travel budgets than men, they may not be able to take transport even when it is available, as it is too expensive. This influences the number of motorized trips that women may be able to afford or choose to make and the opportunities they can access. They are also more likely to forego a motorized trip if this means they can provide something for their children (food, clothes, books etc.).
- **Physical accessibility** – typical indicators (such as ‘a reasonable walking ‘distance²⁴) and ease of access of vehicles and carriages may be interpreted differently by men and women.
- **Cognitive accessibility** – unfamiliar travelling environments, unexpected changes in routes, schedules, and timetables and unsafe or poorly indicated interchanges have a larger impact on women’s travel decisions than they do for men. Men and women interpret information and use technology differently, and this impacts the adoption of new systems or developments such as autonomous cars or the ride-hailing services of transportation network companies. Women are often less willing to try new modes or routes, because they cannot afford to waste time trying different options.
- **Emotional accessibility** – a number of stresses come into play when women make the decision to travel outside their home. These are largely based on culture (religious or other), social norms and values, as well as their own emotional and real perceptions of their safety and security over the complete journey. These elements affect women differently (with age and life stage) and may vary according to the time of day (e.g. travelling in poor light or darkness is generally avoided), day of the week (such as avoiding certain days). Travel decisions are also influenced by third party events or the personal experiences of others, in a more profound way.

Beyond socio-economic aspects, these four aspects combined in particular constrain and restrict women’s mobility and behaviors.

The same transport option can thus be interpreted differently by women and men, affecting their decision to travel or not.

To date, it has been accepted practice to approach transport design and planning without considering gender. This gender blind–approach means sex or gender are not relevant, and outcomes of any improvements are assumed to benefit both women and men. However, if we consider the different ways that men and women use and access transport, we recognize that this neutral approach builds an unconscious gender bias into project design and how they are evaluated.

1.3. Defining the goal

Understanding demand is a crucial element of transport planning,²⁵ yet comprehensive quantitative and qualitative datasets on women’s needs are widely lacking. Thus, the current bias, conscious or unconscious, is toward meeting the needs of men as it is based on the data available, and also because men are usually the ones setting the objectives, allocating the funding, undertaking the planning, implementing projects, managing service provision, and setting employment parameters. Thus, the extent to which women will benefit from transport decisions and improvements is not able to be quantified.

A number of desirable goals are suggested for changing the current decision making, planning, and operational paradigm.

Collecting disaggregated data and identifying gender gaps in national development and transport strategies are seen as being essential.

Incorporating spatial information with attention to trip purpose, age, socio-economic status, ethnicity, etc. and based on gender would help to set high-quality baselines for data collection. Also, greater rigor in including gender aspects in evaluation and cost-benefit models would help identify the gender-specific benefits of transport projects.

Women currently tend to have more sustainable mobility habits²⁶ (as they walk and use public transport more than men) and this should be recognized and preserved. From the few statistics on women’s mobility currently available, it is not possible to determine how many women are effectively ‘immobile’ –i.e. those who at present do not move out of their local

neighborhood but would be willing or interested in travelling further if the transport options were better suited to their needs. We also do understand the impact if these women became mobile.

Assessments of transport needs by region, with reference to mode and urban/rural contexts and aligned with the broad national gender context, would develop a better understanding of the existing and latent potential for inclusive, sustainable mobility from a gender perspective. Without this information, it is difficult to develop meaningful indicators to demonstrate transport inclusiveness.

As transport does not currently fully integrate the needs of women in the way it is planned,²⁷ implemented or managed, deep changes are needed to the current ‘business as usual’ scenario. In setting the goals for gender and transport, it is clear that there are many interdependencies that need to be considered. At this time, it does not seem prudent to set a single goal, but to establish desirable outcomes for the chosen entry points (figure 1.1) that can be applied to all countries, and when combined, will help achieve the SuM4All objectives.

The following goals are articulated around the four entry points:

i. **Women as decision makers in the transport sector.**

Setting quotas and targets for public and private sector decision-making positions, and initiate programs with incentives to stimulate change to help build the pipeline of high-caliber candidates for middle and senior positions at the national and local levels. A stretch target of 30 percent female decision makers in transport by 2030 for more developed countries is possible. National monitoring can be done by gender-focused and transport institutions.

ii. **Women as transport users.**

Develop an evidence-based strategy for gender-sensitive, sustainable transport, to better address the differing mobility needs of women (and create disaggregated national mobility data sets) to set solid baselines. The data collection may be collected as part of a census, and the dataset

should be publicly accessible. At the policy level, ensuring that laws and regulations include, protect and respect women’s needs are combined with protocols against sexual harassment.

iii. **Women as transport workers.**

Aspire to achieve a 30 percent representation of women in employment across all sectors (with a stretch goal of 50 percent) supported by actions to attract, recruit, and maintain more women in the sector. Making this a requirement of reporting for public and private entities over 100 employees would also be a good start.

iv. **The gendered impact of transport infrastructure**

This can be approached from two perspectives – on the one hand how infrastructure is designed and built and on the other how it is procured. Developing standards and guidelines that include gendered needs, such as the width of sidewalks, lighting, rest areas and rest room needs and promoting gender equity in procurement and contracting practices would help. Additionally, including women’s voices in public consultations and rigorously reporting on gender indicators in the evaluation of all transport projects are currently not widespread.

1.4. Scale of the challenge: The gender context

In spite of institutional efforts to reduce gender inequalities, women in many countries still encounter significant disadvantages compared to men.²⁸ Gender stereotyping that traditionally portrays women as care givers remains widespread. Nearly a quarter of all women globally are defined by the International Labor Organization as ‘unpaid contributing family workers’ (ILO 2016). This includes caring roles such as looking after children and other family members, especially parents, when they are sick or infirm.

Addressing the issue of gender-based poverty, especially in conjunction with increased urbanization, is now a high priority in international, regional, and national agendas.

The intergenerational impact of this will affect out-

comes in many other areas of policy interest—including health, education, and employment. It is becoming increasingly clear that incorporating gender into transport has the potential to bring significant benefits to economic growth, social inclusiveness, and environmental protection. But if gender characteristics are neglected, there are equally significant risks – including the negative impacts on health and intergenerational equity. These risks are difficult to quantify, especially due to the major gaps in gender-differentiated data. However, other indicators can be used to show trends and determine areas of high-potential actions.

If we are to accelerate progress on the Agenda 2030 framework, transport has a major role to play. There are many interventions and policy measures that, when combined, will move the sector in the direction of greater inclusiveness and sustainability. However, progress will remain slow without clear guidance and commitment to gender mainstreaming, institutional strengthening, and gender budgeting.

This will impact gender and transport directly, and indirectly through increased empowerment and equity. But any positive impacts may be limited unless efforts are clearly linked to transport policy, institutions and resource allocation.

Gender should feature as an integral aspect of transport policy and planning, and likewise transport has to emerge in gender policy and actions. There are still a number of misconceptions and barriers held by transport professionals who continue to defend that gender is not really a transport issue—and that the embedded bias against women is a social or cultural issue, not a transport issue. Addressing gender within projects is often cited as being cumbersome by project developers or assessors – but in reality it is not any more difficult than other technical aspects. What is lacking is the experience and knowledge of how to do this combined, with protocols, strong guidance, resourcing, and the enforcement of gender action plans.

1.5. Changing the current paradigm

Men are in the majority of decision-making roles, and women are under-represented in all levels of decision making –political, diplomatic, financial, economic,

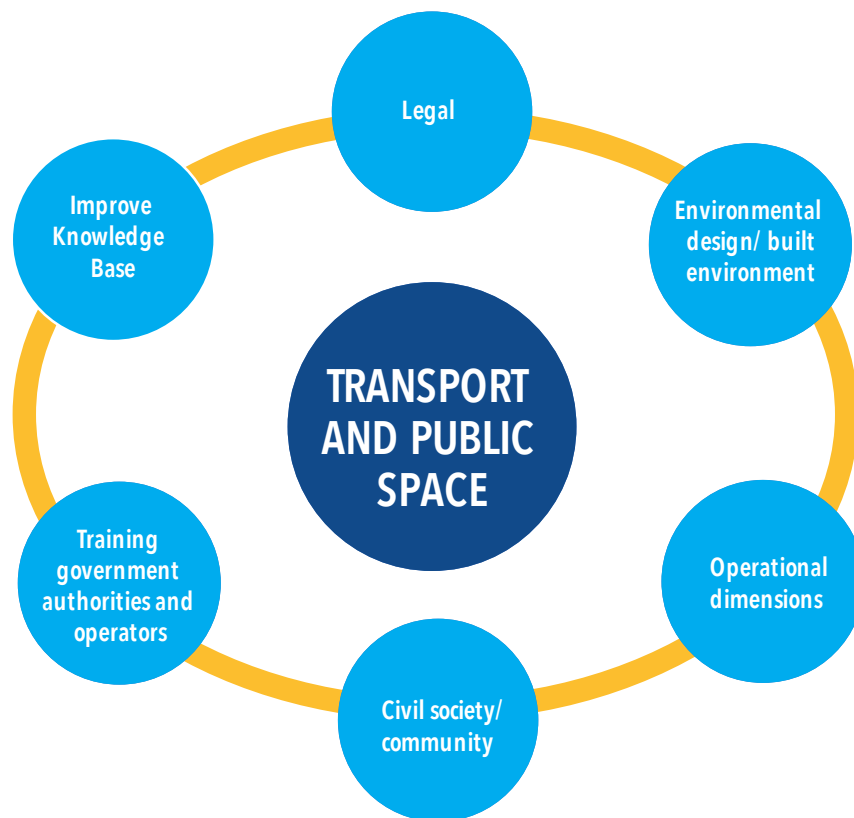
and commercial sectors for all modes of transport²⁹. There are few female Ministers of Transport (of the 59-member countries of the OECD’s International Transport Forum, only nine countries have female Ministers of Transport) and examples from the private sector of female Chief Executive Officers, Chief Operating Officers, or equivalent senior levels—in automotive, aviation, maritime, logistics, rail, infrastructure, or major construction companies—are few and far between. Yet the sector would benefit from a more diverse approach to solving the many challenges it currently faces.

Many jobs in transport are highly technical and despite progress in encouraging women to train in the science, technology, engineering, and math fields (STEM) subjects progress has been slow (UN Women 2015). Fields such as engineering, and technology are still stereotypically considered masculine fields,

resulting in a very narrow pool of available female talent. There is a ‘massive’ gap, in many of the technical skills,³⁰ and the pipeline of the ‘STEM’³¹ qualifications that nurture engineers, technologists, and other science-based career choices remains male dominated. According to Harvard Business Review, “women make up 20 percent of engineering graduates, but nearly 40 percent of them either quit or never enter the profession.”³² This can be changed by investing in specific programs that increase the numbers of girls that follow the STEM subjects into tertiary education levels. The results of this are being seen in some Asian countries, where as many girls are graduating in these subjects as men.

Women face many barriers related to employment in the transport sector, including (conscious and unconscious) bias, discrimination in the recruitment and selection processes, unfavorable working practices,

Figure 1.1: Entry points for improving female and transgender user experience in transport



Source: Authors

restricted career interruptions and re-entry for family reasons, and barriers to promotion (typified by the 'sticky floor' and 'glass ceiling' syndromes³³). In addition, working conditions often lack of basic female facilities (such as segregated bathrooms, changing, and rest areas) and shifts or schedules that do not fit easily with family duties. Discrimination and violence in the workplace further dissuade women from working in transport.

Currently, most senior positions are occupied by men, and as few women are to be found in the pipeline, they are rarely considered for top roles. Yet there is evidence to suggest that in the right conditions³⁴ women can excel in such positions and that diversity adds significant value. Many jobs within the sector (especially in the service area) are well suited to female skill sets but current working practices make them unattractive.

There is also a lack of awareness about the range of careers beyond those associated with STEM subjects³⁵, such as policy development, urban planning, customer care, legal etc. The European Commission's

'Women in transport - EU Platform for change'³⁶ aims to strengthen women's employment and equal opportunities in the transport sector to help overcome this.

As there are roughly equal numbers of adult women and men in the world, decisions made about all levels of transport should reflect these different perspectives, and not take the opinions of one group as a proxy for the other.

In conclusion, there is much that can be done, but the current paradigm is biased against women. Change needs to come both from within the sector and outside the sector, if we are to better address the gendered needs of transport. Changing current practices and increasing the diversity within the sector, combined with investing in data collection, capacity and knowledge on gender at national and local levels, and improving gendered aspects of education, legal protection and enforcement is urgently required. As these aspects are interdependent, success depends not on one or the other, but on both.

ENDNOTES

- 5 World Bank Gender Data Portal. <http://datatopics.worldbank.org/gender/key%20gender%20employment%20indicators> & in Europe, only 10% of the bus drivers are women and women employed in the transportation sector earn 20% less than men (WISE project EU 2012).
- 6 Unrealized Potential, Unrealized Potential: The High Cost of Gender Inequality in Earnings <https://openknowledge.worldbank.org/handle/10986/29865>. (May 2018)
- 7 See for example, McKinsey (2015): Power of Parity, OECD (2012): Closing the Gender Gap: Act Now, Strategy& (2012): Empowering the Third Billion, Citi GPS (2015): Women in the Economy and IMF (2013): Women, Work, and the Economy: Macroeconomic Gains from Gender Equity.
- 8 International Labor Office (2017). World Employment and Social Outlook: Trends for women 2017. Retrieved September 2017 from https://www.ilo.org/global/research/global-reports/weso/trends-for-women2017/WCMS_557245/lang--en/index.htm
- 9 IMF Women 4growth <http://www.imf.org/external/themes/gender/> & <http://www.imf.org/external/pubs/ft/fandd/2012/03/revenga.htm>
- 10 Verick S., 2014, Women's labour force participation in India: Why is it so low? ILO1 http://www.ilo.org/wcms-sp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/genericdocument/wcms_342357.pdf
- 11 Indeed, CAF, the Latin American Development Bank, estimates that improving women's participation in the work force in Latin America, could add an additional 34% to the region's GDP (CAF, 2017).
- 12 World Bank Policy Research Working Paper 8451 Shared Prosperity <http://documents.worldbank.org/curated/en/881491526993639155/pdf/WPS8451.pdf>
- 13 Such as the New Urban Agenda
- 14 Especially Goal 5 is to achieve Gender Equality and Empower Women and Girls.
- 15 World Bank Gender Equality Brief May 2018 Conclusions p 18. <https://openknowledge.worldbank.org/>

- bitstream/handle/10986/29865/126579-Public-on-5-30-18-WorldBank-GenderInequality-Brief-v13.pdf?sequence=1&isAllowed=y
- 16 <https://data.worldbank.org/indicator/SP.HOU.FEMA.ZS?end=2014&locations=DZ-AR&start=1970&view=map>
 - 17 Cities through a “gender lens”: a golden “urban age” for women in the global South?, Environment & Urbanizations (2013) International Institute for Environment and Development (IIED) Vol 25 (1): p. 9-29 Table on female heads of household in Latin American region compiled from various sources by Chant, Sylvia (2011) & “Gender and the prosperity of cities”, Final draft of lead chapter prepared for UN–Habitat State of Women in Cities 2012/13, UN–Habitat, Nairobi, 182 pages.
 - 18 Oxfam <https://www.oxfam.org/en/even-it/why-majority-worlds-poor-are-women>, Chile http://observatorio.ministeriodesarrollosocial.gob.cl/layout/doc/casen/CASEN_Mujeres_pobreza_y_Trabajo.pdf, UN Women & Legal Momentum USA <https://www.legalmomentum.org/women-and-poverty-america> http://observatorio.ministeriodesarrollosocial.gob.cl/layout/doc/casen/CASEN_Mujeres_pobreza_y_Trabajo.pdf
 - 19 It is recognized that a single father also struggles with the same challenges but is also more likely to have more disposable income, as there is still a wide gender pay gap.
 - 20 USA, UK and Australia are examples
 - 21 <https://www.forbes.com/sites/sarwantsingh/2014/05/23/women-in-cars-overtaking-men-on-the-fast-lane/#4b462ccc68d2>
 - 22 For example, women’s participation in the workforce was growing until 2005, but has since regressed.
 - 23 Transport systems and their impact con gender equity Lecompte M-C., Bocarejo J-P., 2017 WCTS; Gender issue and transport - Applying an integrated approach Peters D., 2006 Keynote for METROPOLIS conference, Gutierrez A., Libro Territorio e Circulacao 2015 & presentation at Ella se mueve final conference Buenos Aires 2017 (CAF FIA Foundation).
 - 24 Such as 500 metres.
 - 25 Transportation Planning Principles and Practices, Victoria Transport Policy Institute. <http://www.vtpi.org/planning.pdf>
 - 26 Women use and rely on public transport and walking, and have less access to motorized transport than men. Even when they own and use private transport, they tend to drive more compact, fuel efficient cars for lower distances.
 - 27 Gender and Transport European Institute for gender Equality (EIGE) Gender Mainstreaming Platform: <http://eige.europa.eu/gendermainstreaming>
 - 28 Especially in access to education, representation in politics, and workplace discrimination.
 - 29 The Wilson Center states that globally only 19 percent of public service leadership positions were held by women in 2018, and that females only make up 18 percent of staff in infrastructure ministries—energy, transport and communications—compared with 38 percent in sociocultural ministries.
 - 30 A notable example of where women have been able to successfully enter aviation is in air traffic control and in the USA they represent some 26% of civil aviation air traffic controllers (Turnbull, ILO).
 - 31 STEM - Science Technology Engineering and Mathematics also called MINT (Maths, INformation Technologies) in some places
 - 32 <https://blogs.worldbank.org/category/tags/gender-equality>
 - 33 ‘Sticky floor’ effect means that women are overlooked for promotion (horizontal segregation and discrimination) and ‘glass ceiling’ means that they are not able to break into senior ‘C’ suite decision making positions (vertical segregations and discrimination).
 - 34 Studies have shown that diversity, in the management teams and the boardroom, adds value to an organization. The Forbes report entitled Global Diversity and Inclusion: Fostering Innovation Through a Diverse Workforce (2011) identified diversity and inclusion as key drivers of internal innovation and business growth - something no company can hope to succeed without. McKinsey & Company reports that companies with diverse executive boards also enjoy significantly higher earnings and returns on equity than those featuring a single demographic. https://www.forbes.com/forbesinsights/innovation_diversity/
 - 35 The Corporate Partnership Board (CPB) of the International Transport Forum comprises a group of companies with in excess of 2.25 million employees globally. It launched a workstream on gender on International Women’s Day, March 8th, 2019 and this was a point of discussion in their workshop on hiring and retaining a Gender-Diverse Workforce, and how to make the sector more attractive to women.
 - 36 https://ec.europa.eu/transport/themes/social/women-transport-eu-platform-change_en

2. THE STATE OF PLAY IN GENDER AND TRANSPORT

Reducing gender disparities in mobility is important for sustainable transport. The Global Tracking Framework, used to estimate how far a country is from achieving the various targets in the Global Mobility Report, could not be applied to gender because of a lack of disaggregated data.

The only data on female employment in the transport sector³⁷ that was continuous included logistics and communications, making it difficult to set baselines uniquely for transport.

Given the paucity of data, and based on the key entry points presented, proxy indicators have been used to characterize two important aspects of gender and mobility—women as transport users and women as transport workers.

2.1. User perspectives

Female mobility patterns are known to be different from men's. In both high- and low-income countries, women walk more than men, tend to have shorter commuting distances, trip chain more and make more non-work-related trips. They also use and rely on public transport³⁸ and taxi services more than men. Additionally, they also tend to travel by bus more than rail once they have a family.³⁹ Indeed,⁴⁰ gender can be considered to be one of the key socio-demographic variables that influences travel behavior and mode choice, regardless of socio-economic status.

Furthermore, sexual harassment toward women, whether they are walking on the streets, taking buses, or riding trains, is a major problem⁴¹ in both developed and developing countries. The fear of harassment⁴² in public spaces not only limits women's and girls' mobility but consequently limits their access to other services especially jobs, health care facilities,

and education. A recent study by the International Labor Organization showed that "limited access to and safety of transportation is estimated to be the greatest obstacle to women's participation in the labor market in developing countries, reducing their participation probability by 16.5 percentage points."

Currently there is no single indicator at the global level to measure female use of transport. Using personal safety and security as a proxy for indicating women's freedom of movement is considered to be the best global data available and linking this to whether the country has legislation on harassment in public spaces (World Bank⁴³). At present 177 economies do not prohibit sexual harassment in public places (which includes public transport).

2.2. Employment, women, and transport

According to the International Labor Organization (ILO), globally women participate in labor markets (all sectors) on an unequal basis compared with men⁴⁴. At present more than 2.7 billion women globally are legally restricted from having the same choice of jobs as men (all sectors). 19 economies currently impose restrictions on women's employment in transport sector⁴⁵.

There is little global disaggregated data available on employment in transport, and what is available is mixed with other subsectors⁴⁶ such as communications, ICT, or logistics. Data gaps at global and regional levels—either by urban, rural, intercity, or international subtopic, or by mode—aviation, maritime, freight and logistics, road, and rail. make it particularly difficult to benchmark the level of women active in the sector today, gauge their potential or compare if one or another mode or sub-sector is more or less attractive to women.

In 2006, the transport sector⁴⁷ in Europe employed around 5 million male workers, making up 84 percent of the total transport workforce and 4.7 percent of the entire male workforce across all sectors. There were 960,000 females representing only 15.9 percent of the transport workforce and 1.1 percent of the overall female workforce across all sectors. Among men employed in transport, 90 percent worked in land transport, about 5 percent in transport over water, and 5 percent in air transport. About 41 percent of aviation employees are women, mainly in nontechnical roles including flight crews and catering. About 5.5 percent of airline pilots worldwide are women;⁴⁸ shipping—both offshore and onshore—remains a male-dominated sector; and only 1 percent of seafarers are women. Onshore, women hold 55 percent of global maritime junior-level positions, compared with 9 percent of executive-level positions, despite shortages in the labor supply.⁴⁹

Transport jobs are known to be a very male-dominated and employment opportunities for women are most often found in the lower-paid and administrative areas (with limited career opportunities). Studies⁵⁰ have found that for occupations within transport—for example, office administration, catering, cleaning or other-low paid tasks—female workers are over represented although these positions are not considered to be in ‘typical transport jobs.’

Countries with regulations focusing on workplace equality are more likely to have higher levels of female employment in all sectors including transportation, as equal rights in employment are seen as a key enabler to women joining the work force. In emerging and developing countries, women often choose to (or have to) work in the informal economy⁵¹ to fit in with their care and domestic roles. This aspect is not collected or easily measured in transport employment data collection.

Some subsectors, such as international road haulage and freight, low-cost airlines and maritime services (such as cruise ships) only offer workers fixed-term contracts, which may involve long periods away from home, which does not fit easily with family life.

To cover the state of play of female employment, country-level data on employment in “transport, stor-

age, and communication” from the International Labor Organization (ILO) is used.⁵² This is complemented with an analysis of legal barriers to women’s employment in the transport sector, and legislation relating to equal pay for equal work. Both these aspects are measured using World Bank data on whether women⁵³ can work in transport in the same way as men, and on whether the law mandates equal remuneration for work of equal value.⁵⁴ Such laws differentiate between men and women in ways that affect women’s opportunities and incentives to work in the transport sector.

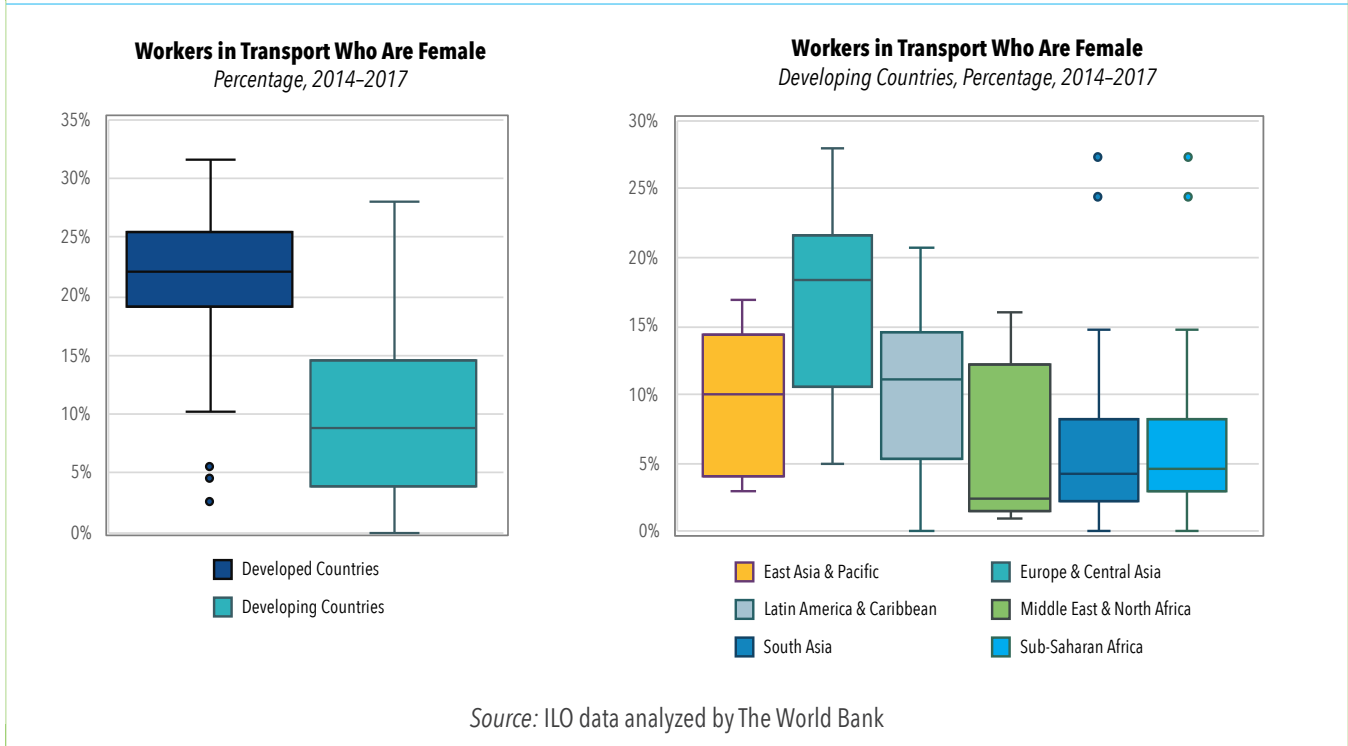
In Figure 2.1, data on workers in transport sector who are female is plotted against GDP per capita and used to compare countries on Gender equality. Group A includes all the countries with performances closest to achieving the goal, while group D includes countries that are far from it. Performance on gender equality is spread along the GDP per capita continuum, showing a considerable amount of countries with relatively lower GDP per capita and a low percentage of female workers in the transport sector.

Figure 2.1: Scatterplot of Workers in Transport Sector who are Female vis-à-vis GDP per capita by Country



Source: ILO raw data and World Bank analysis

Figure 2.2: Women's employment in transport sector by region



Countries' performance can also be compared with their peers within and across the six regions. Figure 2.2 shows the distribution of workers in transport sector who are female in developed and developing countries, and in six regions of the world for developing countries only. The line in the box shows the median of the variable. The width of the box on either side of the median shows the "spread" of one quartile of the observations. The "Whiskers" show where the more spread out observations lie (two quartiles). Individual dots show observations which are outlying extreme values beyond the quartiles. For example, the median for East Asia & Pacific is about 10%. The values within one quartile range from about 4% to 14% (the Box) and the broader values range from about 3% to 17% (the Whiskers).

Developed countries were found to have a higher median percentage of female workers in transport than developing countries. There were also clear differences between regions in the median and in the variability (spread) of the data among countries within a region. Ranked by median, the regions, from lowest to highest, would be: Middle East & North Africa, South Asia,

Sub-Saharan Africa, East Asia & Pacific, Latin America & Caribbean and Europe & Central Asia.

This typology of countries is correlated with a number of key attributes to identify differences in circumstance across the four groups of countries. This assessment can be used to develop targeted actions for each of the four groups of countries (the roadmap of action for gender-inclusive sustainable transport) and tailoring the set of actions to the attributes common to each of the four groups. Typical attributes or aspects considered (which are the same for all SuM4All thematic areas) include trade openness, GDP per capita, government effectiveness, terrain ruggedness, country size (land area), urbanization rate, motorization rate, female education,⁵⁵ and female labor force participation rate.

On average, economies that mandate equal pay tend to have higher levels of female employment in all sectors, including transport, have better governance, are richer, more urban and more motorized. Women's employment in transportation is positively correlated with motorization rates, female education, GDP

per capita, and government effectiveness (0.53, 0.42, 0.38, and 0.45, respectively). This means that higher motorization rates, female education, GDP per capita and government effectiveness levels are associated with a higher share of female employment in the transport sector. (Figure 2.3)

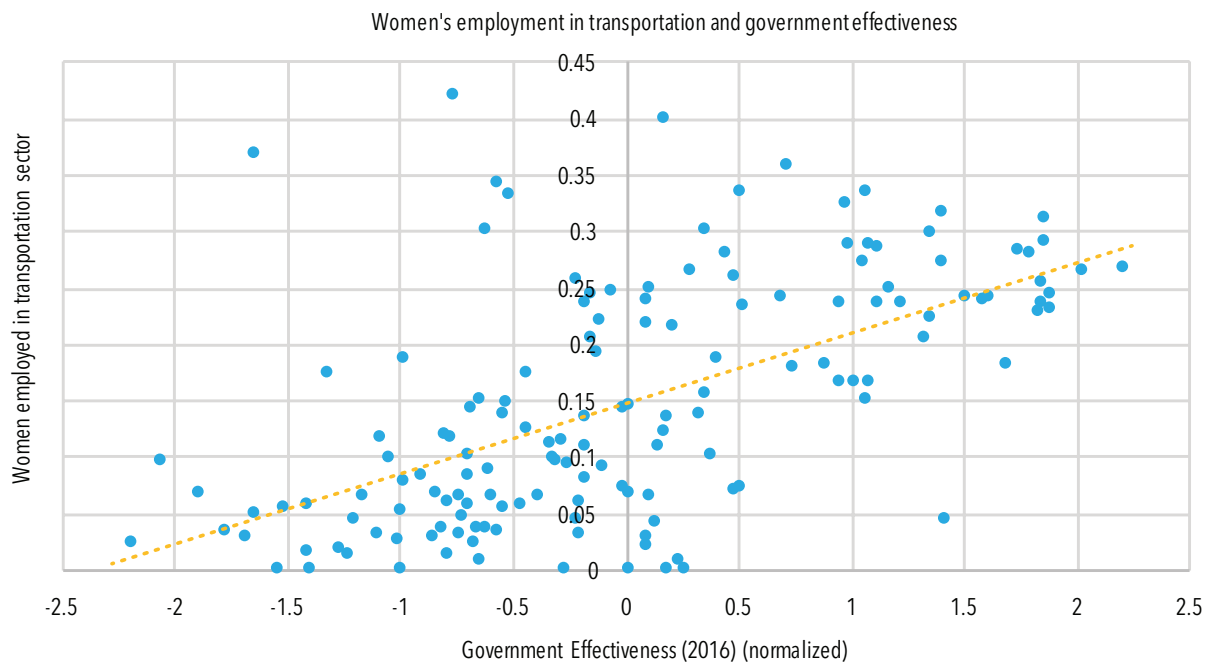
At the same time, this is still much lower for transport than for other sectors (even when income, effective governance, and motorization are high) and female employment in transport clearly lags behind male employment. The following is a regional example: in 27 countries in Europe, the transport workforce is just 22 percent female, despite women accounting for close to half – 46 percent – of all people employed in the overall economy.⁵⁶ Notably the correlation between female employment in the transport sector and overall female labor force participation rates is also low, at 0.23.

104 of the world’s economies have at least one restriction on women’s employment and 19 have specific

restrictions in the transport sector⁵⁷ – such as transporting goods or people at night (figure 2.4) – and globally only 75 economies mandate equal pay for equal work in all sectors. At the same time, only 32 economies have legislation on sexual harassment in public spaces and the majority, but by no means all, of them are high-income. But within this group there tend to be less robust governance structures and lower levels of smartphone penetration.

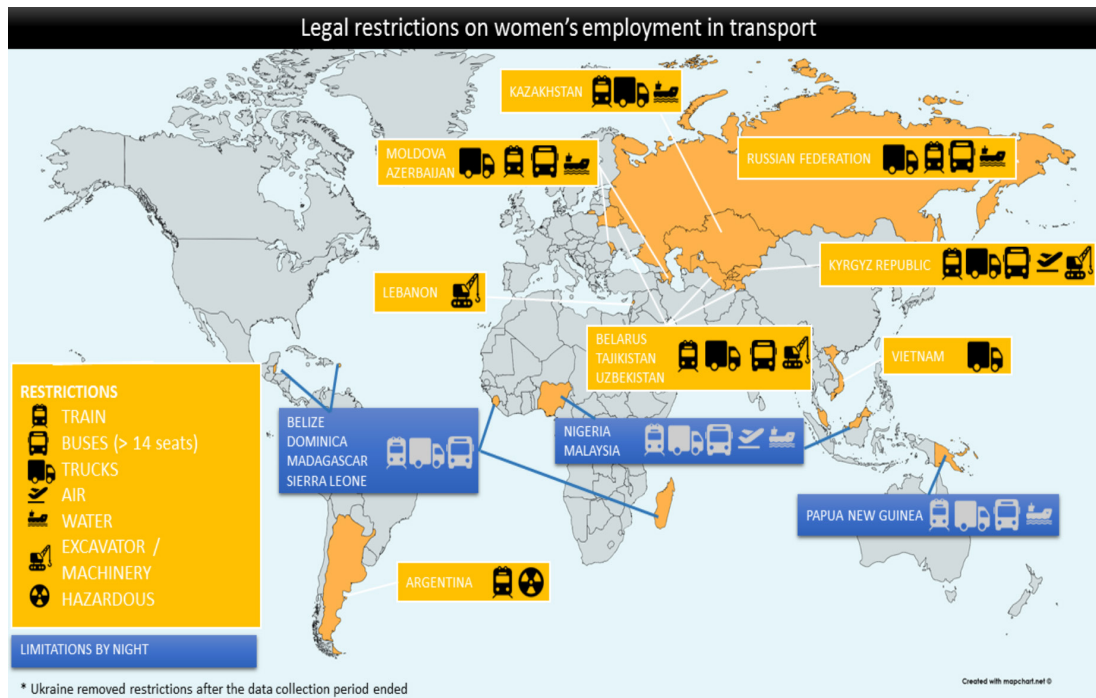
Group D countries have the lowest share of women employed in the transportation sector relative to total employment in the sector.⁵⁸ These countries also have the lowest incomes on average, and the lowest levels of government effectiveness, female education, and urbanization. Group C countries have relatively better performance than Group D but have only made limited progress in addressing gender in the transportation sector. Group B countries are doing better vis-a-vis female employment in the transportation sector, while Group A countries are the best performers. They tend to have the highest government effective-

Figure 2.3: Women’s employment in transportation and government effectiveness



Source: Authors based on ILO and World Bank

Figure 2.4: Legal restrictions on women’s employment in transport



ness, average income levels, and female education. They also have high motorization and urbanization rates. (Table 2.1)

Nonetheless, as mentioned, transport offers many employment opportunities and jobs in both the public and private sectors⁵⁹ with attractive, long-term career

opportunities yet few of these are currently enjoyed by women; and the transport workforce globally remains primarily male. Additionally, women working in transport, at all levels, usually have to adjust to masculine-focused work organizations, infrastructures, workplace cultures, and working conditions.⁶⁰

Table 2.1: Attributes of Four Country Groups by Levels of Female Employment in the Transport Sector

Attribute	Type D: Worst Performing	Type C: Worse Performing	Type B: Better Performing	Type A: Best Performing
Motorization	Low	Moderate	Moderate	High
Government Effectiveness	Low	Moderate	Moderate	High
GDP per capita	Low	Moderate	Moderate	High
Urban Population	Low	Moderate	Moderate	High
Female Education	Low	Moderate	Moderate	High
Terrain Ruggedness	High	Moderate	Moderate	Low
Equal Pay for Equal Work	Low	Moderate	Moderate	High

ENDNOTES

- 37 Country-level data on employment in “transport; storage and communication” from International Labor Organization (ILO) is used. This is complemented with an analysis of legal barriers to women’s employment in the transport sector. This aspect is proxied using World Bank data which tracks whether there are any legal barriers that prevent women from doing the same jobs as men.
- 38 Asian Development Bank Gender Tool kit <https://www.adb.org/sites/default/files/institutional-document/33901/files/gender-tool-kit-transport.pdf>, Making Transport Work for Women and Men World Bank
- 39 Allen, H., Cárdenas, G., Pereyra, L., Sagaris, L. (2018). *Ella se mueve segura (ESMS) - A study on the personal security of women on public transport in three Latin American cities*. CAF and FIA Foundation; CIVITAS 2020 (2014) *Smart choices for cities: gender equality and mobility: Mind the Gap! Policy note*, <http://civitas.eu/content/civitas-policy-note-gender-equality-and-mobility-mind-gap> Accessed April 2018.
- 40 Based on the conclusions of Ng, W and Acker, A. (2018) and others,
- 41 Loukaitou A et al (2009) *How to Ease Women’s Fear of Transportation Environments: Case Studies and Best Practices*, Mineta Transportation Institute MTI Report 09-01
FHWA-CA-MTI-09-2611
Sonal S, Viswanath K, Vyas S, Gadepalli S (2017) *Women and Transport in Indian Cities*, Policy Paper, ITDP and Safetipin, New Delhi
IFSTTAR & WIT (2014) on behalf of the European Commission Directorate for Mobility and Transport (DG MOVE). *Report She Moves: Women’s issues in Transportation*
http://www.itdp.in/wp-content/uploads/2017/12/171215_Women-and-Transport-in-Indian-Cities_Final.pdf
- 42 It is recognized that men also experience fear in public space but this is more often fear from other men
- 43 World Bank (2018), *Women, Business and the Law*
- 44 *Global Employment Trends 2014: Risk of a jobless recovery?* p. 19. Accessed June 2018. Male employment-to-population ratio is 72.2 per cent, while the ratio for females was 47.1 per cent (based on 2013 figure) International Labor Organization (2014) 2015: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_233953.pdf
- 45 World Bank (2018), *Women, Business and the Law*
- 46 This is the case for the ILOSTAT database where data for transport includes storage and communications and information on male and female activity is not available for a number of countries.
- 47 Euros found and EuroStat source.
- 48 Source ATAG.
- 49 *The Review of Maritime Transport*, UNCTAD http://unctad.org/en/PublicationsLibrary/rmt2017_en.pdf
- 50 Turnbull P., (2013), *Promoting the employment of women in transport sector – obstacles and policy options*. International Labor Organization ILO Working Paper 298.
- 51 International Labor Organization (2018), *Women and men in the informal economy: A statistical picture*
- 52 Data on female employment in transport and logistics is also available for European countries only through Eurostat.
- 53 nonpregnant and non-nursing women
- 54 World Bank (2018), *Women, Business and the Law*
- 55 Measured using lower secondary completion rate, total (% of relevant age group)
- 56 European Commission Statistics
<https://www.governmenteuropa.eu/women-in-transport-eu-platform-change/85971/>
- 57 <http://blogs.worldbank.org/jobs/node/1116>.
- 58 And to total women in formal employment.
- 59 *Women in the transport sector ILO Transport Policy Brief 2013*
- 60 European Foundation for the Improvement of Living and Working Conditions (Eurofound), *EU road freight transport sector: Work and employment conditions – Belgian Survey, 2003*.

3. CATALOGUE OF MEASURES

Introducing gender considerations into transport is complex; there are many synergies and trade-offs with political, social, economic, and environmental aspects. Additionally understanding the gendered nature of current transport systems is limited by the lack of transport data sets. The various roles and responsibilities of the public and private sectors and how this may influence gender and transport cannot be fully covered in this paper. For example, employment and sexual harassment in public space laws may not directly be a transport related measure but they have a direct impact on female mobility. Improved universal access should incorporate women’s transport perspectives beyond their needs as a vulnerable group.

The catalogue of measures indicates actions that can be taken by the numerous stakeholders and interested parties but the success of many of them depend on how they are implemented within the sector and how other complementary and synergistic measures both within and outside of transport.

Modal fare integration brings many positive benefits and may not be seen as gender action. Yet transport affordability is very important for women. Integrating fares and allowing interchanges between routes and modes helps women in particular as they make more frequent, shorter length trips while men will also benefit but possibly to a lesser extent.⁶¹ However, for this to happen many institutional barriers need to be overcome, and both the private and public sectors must work in unison.

The following section and subsequent catalogue of measures compile key areas of actions and demonstrate the complexity of transport interventions asso-

ciated with gender. The majority apply to more than one action and cannot be considered in isolation.

3.1. Key areas of measures and action across all modes and subsectors

The large number of interventions and measures that can be taken to improve women’s mobility can be clustered under the following headings:

- Diversity and inclusion.
 - Build the case for positive action to make transport more inclusive.
 - Increase the diversity of those working⁶² in transport to better respond to women’s needs as users.
- Legal and social barriers.
 - Address key legal provisions and social norms that may restrict women’s mobility, such as lax enforcement of equality and equity laws, social protection, and harassment and violence against women in public transport spaces. Collect and circulate information of convictions for sexual harassment on or around transport, to create zero-tolerance of this behaviour. Make provision for gender-sensitive training for security agencies, transport operators, and the creation of gender units to deal with complaints and grievances.
- Policy dialogue, capacity building, and awareness raising.
 - Build capacity and skills on gender and transport at national, regional, local, and community levels. There is currently little capacity especially at local levels even if higher-level decision makers request actions and can provide resources.

- Create integrated policy with complementary sectors, especially focussing on keeping girls in secondary education and taking up technical vocations; and encourage more women to enter STEM careers.
- Conduct campaigns to raise awareness of gender and transport in the public and private sectors and civil society, with a focus on universal access, and a target that women have the same mobility rights as men.
- Use policy dialogue and regional conferences to share learning and experience on gender and transport.
- Data collection.
 - Improve knowledge on user needs with systematic disaggregated⁶³ data collection to build a strong evidence base and better understanding of the significant differences between male and female transport use, mode preferences, and mobility needs, to improve women’s freedom of movement and identify latent demand. This should include differences between passenger and freight movements and urban/rural variances.
 - Improve guidelines on the planning, design, implementation, measurement, monitoring, and evaluation, to better reflect male and female user profiles.

More details are given in the following sections, with measures and actions centred on the identified entry points—decision makers, users, workers, and infrastructure—and structured within the four SuM4All toolboxes. The actions and measures can be tailored to the country typology, development level, and needs.

There are many intersections for measures actions with other thematic areas within the SuM-4All initiative, but two key aspects are seen as being the most vital: data collection and capacity and awareness building.

The cross-cutting nature of gender presents numerous intersections with other sectors, and opportunities for building cross-sectoral alliances that can sub-

stantially support gender mainstreaming. A number of suggestions are put forward for consideration within the other thematic interest areas of the SuM4All work. There is potential for cross-fertilization and promotion of synergies in diverse sectors, including agriculture, urban planning, ICT, energy, trade, and industry. This will enable deeper embeddedness of gender equity across all sectors of the development arena.

For example, access to health centers impacts how babies develop into children and adulthood. If women are not able to access such centers, the negative impacts affect not only them, but also their children’s development, and their future lives. If girls are not able to attend school beyond primary levels, they are also caught in the poverty trap - ultimately impacting global targets for poverty alleviation.

3.2. Including gender in transport politics and policies

Increasing the diversity of the sector includes getting more women into decision-making positions, and a number of actions are needed to help redress the current negative gender balance. There are a number of actions that fit into the regulatory and institutional toolbox of the Catalogue of Measures that help break down barriers and remove discrimination. Leadership from high-level decision makers who place a greater emphasis on gender equality—and on equitable outputs and outcomes of transport projects—is considered to be important, generating political will for change.

Mainstreaming gender into national transport plans, policies, and investments helps to bring gender formally into planning and transport provision and establishes and improves the decision-making process on gender-sensitive transport.

A number of high- and low-income countries have taken this step.⁶⁴ National transport policies may specify that transport service providers and agencies prioritize the needs of pregnant women, children, older persons, and persons with disabilities in their service levels, and provide dedicated seating and set basic levels of access for these groups.

Measures include reviewing legal frameworks and guidance to ensure women are able to enter employment without legal or cultural barriers.

Dedicated gender budget lines for the collection of data and evaluation of transport projects and use can help monitor progress at national and city levels, to build a better understanding of mobility differences, travel needs, and behaviors between men and women, and to increase capacity and knowledge on gendered travel patterns and the impacts and benefits of current systems. The majority of institutions lack the framework and mechanisms that equip them to promote gender equality and mainstreaming in an effective manner, either within transport or with other associated ministries.

Gender should be recognized as a key aspect of transport governance, even in decentralized systems. The private sector has benefitted from several initiatives and quota setting (from within and out of the transport sector). An example includes the EU's Directive on Women on Boards, with the objective of reaching a target of 40 percent women as non-executive directors of publicly listed companies by 2020.

There have been many developments in transport planning over the past twenty years that can be used to make transport more gender sensitive, such as accessibility planning. These need to include more information about the centres of interest for women⁶⁵ and the gender-specific aspects of access to education and health care. Research shows there are major differences in how men and women may interpret accessibility based on transport use and concerns about security, safety, cost, and time. Many of the planning tools currently available for transport do not currently address gender aspects.

Overall, women make more non-motorized (walking) trips, and use public transport more than men.⁶⁶ Additionally, they will take-up cycling if the infrastructure is safe. Investments in these modes therefore will usually benefit women in particular. Targeted programs to help women overcome any fear of cycling and build confidence also show good results, and the number of women who cycle is slowly increasing.⁶⁷ Data from cities in a number of Latin American countries is particularly promising. In Europe the growth of use and

ownership of electric-assisted bikes and pedelecs (low-powered electric bikes) encourages the older generation of cyclists mobile.⁶⁸ Walking and cycling brings health as well as mobility benefits, but safe infrastructure is crucial.

However, there is still a preference to base transport improvements on speed rather than connectivity; the former is usually of greater interest to men, who are usually better resourced financially and have fewer time or socio-cultural constraints on their travel and are more likely to be able to make single-purpose trips. Women are more interested in being able to make a number of smaller trips that connect well in an affordable and safe manner.

Attitudes to two-wheelers are not the same in all regions. In a relatively large number of countries, social and cultural norms can prevent women from learning to drive two-wheelers or pedal bikes. For example, in a number of countries women should not be seen in public with their legs astride,⁶⁹ or touch non-family males. Women are more frequently passengers in these cultures, usually riding 'side saddle' and without helmets (due to habits and a lack of safety knowledge).

The poor data availability, especially on gendered mode use, leaves gaps in terms of understanding growth areas and current regional trends in two- and four-wheeler use. For example, there has been an increase in motorcycle and scooter use in both rural and urban areas, especially in the US⁷⁰ and Asia, but the regional and gender differences are not easy to follow or to link with policy developments. This is likely to be due, at least in part, less to cultural and social barriers that may exclude women from using, owning, or even learning to drive motorbikes, but from low levels of female access to finance combined with other social and cultural restrictions.⁷¹ Policy can help to make positive changes to this.

3.3. Levels of motorization and safety standards by gender

Typical indicators for transport at national levels include levels of motorized transport. It is well documented that men have more access than women to motorized (two, three, and four-wheeler vehicles) and

mechanized (usually bicycles and carts) vehicles, especially in the developing world. Thus, this indicator camouflages a gendered aspect of mobility.

Women face a number of cultural and role-based constraints to vehicle access that are difficult to identify via such indicators. Thus, disaggregated data by gender and mode, with indications of trip purposes, is required to better understand women's mobility.

The significant differences between women's and men's levels of motorization in the developed and developing world may be due, in part, to their lower income levels and to less access to credit, but there is not enough data to validate this. However, globally women are less mobile than men, thus actions to develop female levels of mobility and accessibility *need to retain* their current habits of high levels of walking and public transport use, in order to achieve sustainable mobility.

Furthermore, women should also be able to enjoy the same levels of vehicle protection and safety, whether they are travelling in the vehicle or outside it, yet this is not always the case. National standards for road safety, vehicles standards⁷² and access do not always include gender elements, and there is some evidence that women may risk greater injuries than men because of biological differences being overlooked in vehicle design and protection systems. The introduction of global standards for the use of safety belts and helmets for passengers as well as drivers would help to improve women's safety.

The vehicle designs, technical standards, and specifications of public transport should take gender more into account for women's comfort and safety when travelling. Low floor vehicle access, seating, space for strollers and shopping, the height, number, and location of grab rails and hanging straps all need a gendered approach. The driving compartments of rail and road vehicles need to be as comfortable and safe for men and women alike, if more women are going to take up these roles.

3.4. Urban and rural differences

Urban and rural women have similar travel behaviors. Rural women need to make numerous local trips to fulfil their household duties, such as collecting water

and gathering firewood. Many rural women are also farmers, especially in Africa, working on small holdings.⁷³ Their transport options (from farm gate to market) largely determine their and their family's incomes. Women in these situations transport more tonnes per capita than men,⁷⁴ usually by head loading. The results in a number of associated health issues, especially as women age. Distance and accessibility of hospitals or health centers also affects women more than men, not only for themselves but for children and other family members such as parents who they may be caring for.

With respect to this, some attention has been given to the gendered needs of women⁷⁵ with projects in rural transport access on agricultural produce transport for peri-urban and urban areas, where women are more involved in small-scale entrepreneurial economic marketing of agricultural products, and/or handcrafted goods. In addition, using Intermediate Mechanized Means of Transport (IMMT⁷⁶s) options that include carts (bicycle and animal) can significantly help women's mobility, especially in rural areas where there may not be sealed, all-weather roads.

Urban women, especially low-income women,⁷⁷ also make numerous local short trips, often combining their caring roles with informal or part time work that are easier to fit in with ever-changing family needs and provide flexible working times.⁷⁸ Local shopping is often done on foot, while motorized trips are more often used for work, education, and health visits.

Overall, women tend to use buses more than rail-based modes if they are available. This has been confirmed in a number of studies, most recently from the work done by the International Transport Forum in 10 cities internationally,⁷⁹ where gender was found to be a key determinant for mode choice. There is also evidence that mothers increasingly accompany their children to and from school, especially girls, due to concerns for their safety. This means that the traditional pattern of women travelling most often in off-peak, rather than peak times, is being eroded. A detailed assessment of key gender needs within the transport sector should be developed, with reference to the urban/rural context and variations in women's socioeconomic status in the broad national gender context.

3.5. Freight and women users

As mentioned, many women especially in rural areas are active farmers and local traders (informal or formal) face daily difficulties in transporting their goods (food and non-food) to the point of sale. In an urban context, there are few specially designed options for low volume freight especially in the developing world, and passenger transport is often used by women traders for their freight needs. The cost of transporting urban micro freight in passenger vehicles is frequently a topic of contention between the passenger trader (usually a woman) and the driver (usually a male), with prices varying widely and extortion frequently exercised, significantly impacting the profitability of the exercise.

In terms of freight and logistics services, women mainly require informal, low volume freight which is hardly recorded, while men are more active in high volume freight which is tracked, presently another data gap.

Transport hubs are often the locations of formal and informal markets, with high levels of foot traffic and good selling potential. However, these areas are frequently at risk of being moved or relocated, either as part of urban development or transport infrastructure projects, which in turn can negatively impact women and their families, who rely on these small income-generating activities. Also, problems associated with storing goods conveniently and safely may require women to sleep next to the roadside, or at these market locations until enough goods are sold, causing family and security issues.

3.6. Women users, safety, and security

Safety and security strongly influence the mobility of women and girls. The lack of provision of safe travelling environments is crucial for women, transgender and girls, constraining their access to opportunities, goods, and services. Examples include a lack of safe walking and public spaces, unencumbered footpaths, and safe road and rail crossings.

There are some specific security needs for women that may require special attention such as those associated with women who wear a veil. Examples include

security screenings and searches at major transport hubs, especially airports, ports, and border crossings, and the wearing of safety helmets. Long-distance travel also presents particular challenges related to segregated bathroom facilities, and the provision of private space for women who need to breastfeed while travelling.⁸⁰

While men and women both worry about personal security, especially theft, sexual harassment on (public) transport is a hazard faced principally by women and young girls.

This reality reduces women's and girls' freedom of movement and their ability to participate in school, work, and public life, and limits their overall enjoyment of cultural and recreational opportunities.

The institutional and legal framework on the security of mobility and responses when crime happens vary widely. In many countries, when crime or sexual harassment takes place, there is often a problem of statutory definitions, such as definitions of harassment in public spaces. Laws, regulations, and responsibilities of security agencies can also vary from one jurisdiction to another. For example, transit authorities may have jurisdiction over public motor vehicles, trains, ships, and airplanes, while local police forces have jurisdiction over the streets (public space) stations or terminals (which may be part of a same transit system) or they can be shared competences.

Moreover, there is frequently a lack of clarity of the roles and responsibilities for post incident support of women survivors of violence in public transport, and related services—medical care, safe accommodation, psychological counselling, police protection and/or legal advice—compounded by a lack of coordination among these services. In many countries a lack of attention by the justice systems to sexually motivated crimes that happen to women while travelling can lead to reluctance to report incidents; and research shows that this is largely due to a widespread lack of trust in security agencies, especially in developing regions.⁸¹ Actions in the spheres, clarifying jurisdictional issues and criminalizing harassment in public spaces, can provide women with the legal tools they need to ensure a safe user experience.

Security concerns and the resulting constraints have key intergenerational impacts, between mothers and their children. This affects their own lives and how those of their children develop, their level of empowerment, their financial and societal well-being, but additionally these negative values will be transferred to the next generation.

3.7. Making the transport workplace more attractive to women

To make the transport industry a more attractive workplace for women, and to eliminate the risk of gender inequality at work, attention needs to be devoted to three main areas of action:

- **Legal and fiscal actions**

The main areas for action include removing legal and social barriers and addressing the gender pay gap. Improve working conditions and contractual rights to be more family friendly and overcome perceived and real barriers that make working in transport incompatible with a quality work-life balance for women. This includes part-time work and flexible hours, without the need to be a full-time employee, offering maternal protection, health arrangements, improving options for re-entering the workforce after a career break, and the legal requirement for female-friendly facilities (restrooms, etc.). Other measures that help make transport jobs attractive to women include ensuring that the social conditions and protections (health insurance and pension rights), and contractual rights to paternity and maternity leave include female needs which may include career breaks for family reasons.⁸²

- **Awareness raising and the breaking down of stereotyping**

Promote role models for all jobs that women are able to do, but may be traditionally seen as masculine, including operating heavy machinery, engineering, technical positions, and driving—planes, ships, trains and road-based transport. Women should be able to benefit from equivalent opportunities for training and career development.⁸³ Targeted awareness programs and campaigns to influence decisions made at key life stage points,

such as working with both boys and girls and schools (at all levels) and learning academies, can help to change embedded preferences for male recruitment and fill existing and upcoming skill gaps.

- **Greater attention to health, safety, and violence**

Gendered attention to health and safety in the workplace, especially with respect to violence⁸⁴ against women (cited today as being one of the main constraints to women looking for employment in the sector⁸⁵) needs to be mainstreamed. Legal protection for women in the workplace and in public spaces is a prerequisite for addressing this. Vigilance and enforcement is needed at all levels to ensure a zero level of tolerance.

Protocols and binding clauses in contracts help to address discrimination and male-dominated habitual health and safety practices. Trade unions have a key role to play in this—on the one hand, working with their members and employers to ensure that workers know their rights and that gender sensitive training is available, and on the other to promote women into their ranks⁸⁶ to ensure that there is greater equity and understanding in developing joint protocols and that women's needs are not overlooked in collective bargaining and employment negotiations. The need for capacity building and training to motivate more women to take on positions in trade unions is clear.⁸⁷

Not all transport jobs are attractive to women, nor should they be. Positions requiring long periods of time away from family, or those requiring physical strength, do not suit all women but women themselves should be free to choose if they wish to follow these careers. For example, many infrastructure related, construction, driving and maintenance jobs that were previously not able to be taken up by women can now be more equally shared between men and women. Nonetheless, there are some administrative barriers that hamper women, and especially the LGBT community, when applying for positions. Recruitment procedures should be 'blind' i.e., a resume or job application is presented without name or gender. The way personal details such as sex is requested on documentation may need to be reviewed to ensure

that it does not have a bias for only male and female (excluding those who may consider themselves transgender). This can be troublesome for some transport providers/operators/drivers, in license provisions, but it helps to ensure equality in employment in transport and promotes non-discriminating practices.

Contracting and procurement practices can also be used where appropriate to help achieve quotas of females in the workforce –especially in construction, maintenance, and operations. There are already some examples of preferential contracting rights for female-owned providers which help to stimulate women entrepreneurs especially in engineering and construction.

Filling known gaps in skill sets with more female and non-traditional candidates can increase efficiency within the sector. Positions include engineers, drivers for heavy duty vehicles including buses, road haulage, logistics, off-road activities such as mining, and many areas in the rail sector. According to India’s National Skill Development Organization, the transportation and logistics sector employed around 7.3 million people in 2011. But the number is expected to increase to about 25 million by 2022 meaning that transportation and logistics companies will need to find more than 17 million more workers over the next 10 years. New skills may be required, but gaps in the market are also created by ageing within the sector; this can be eased with the injection of suitable female and male candidates. A example from the mining industry, shows that women are now the preferred drivers of large heavy-duty construction vehicles as they tend to be more careful and follow operating directives more carefully, resulting in lower operational costs.

Other sectors (and some lighthouse projects within the sector), have found that overall productivity can be boosted with a more diverse workforce.⁸⁸ Additionally, including more women as equals in the workplace can help reduce corruption (see country examples section), as has been also demonstrated in police forces in countries⁸⁹ such as Brazil, Ecuador, Peru, Mexico, and Nicaragua, (UN Women, 2011). Regardless of whether or not some women may be just as likely as men to engage in corruption, the fact remains that women are viewed differently than the men who

have traditionally occupied public service institutions like police departments.

Setting targets and recognition programs have already helped in occupations such as train, tram and bus driving where there are already a growing number of women workers.⁹⁰

Undoubtedly, technology will impact all sectors and jobs. But this will not be one-dimensional and simply replace existing jobs and where it can replace staff (often the most expensive cost of transport operations), new technologies will de-skill working processes and drive wages down. This is likely to affect women more and may reinforce existing structures and practices. In other words, women are far more likely to be in the positions that will be de-skilled or replaced by new technologies, and less likely to be in jobs that will benefit from the introduction of technologies.⁹¹

Programs to upskill women are vital to increase the participation of women above low-skilled positions, and to overcome embedded social attitudes that are currently unwelcoming and hostile to them joining male-dominated working areas.

On the other hand, technology may actually increase employment opportunities by creating new sectors, or make labor more efficient and increase demand. As women are currently underrepresented in all technology sectors, and as transport is becoming increasingly technically sophisticated with traditional and disruptive technologies, women still need to be encouraged to join transport, especially as technology developers and entrepreneurs. Investments in overcoming bias in education training, and changes in recruitment processes to attract more females to the sector, can go some way to improving this.

Nonetheless, as transport moves away from its pure function of taking people and goods from A to B and shifts to mobility as a service (MaaS), there will be an increasing number of job opportunities for women, that will use their well-defined social skills, as well as their technical skills. The role and potential of women as consumers has not escaped new transport technology start-ups, as demonstrated with technology platforms such as for ‘ride-hail services’⁹²—where women are not only working as drivers but are also increasingly using such services as passengers. Additionally,

there are a growing number of regular taxi services being operated by women for women.

This does not mean that women do not currently work in transport—but much of it is either unrecognized or it is in the informal sector. Although, in some countries, women are not allowed to work in some areas of transport—such as driving for a living in the MENA region—or are banned from driving or riding some vehicles, such as motorcycles or bicycles.⁹³

3.8. The gendered impact of infrastructure

Under the SuM4All definitions, access should be viewed through the lens of access to opportunities and be mode and income neutral. As transport infrastructure physically changes landscapes and alters access between and within communities, there is a critical link between land-use planning, urban development, and transport infrastructure. There are numerous examples where the planning and design of transport infrastructure has overlooked gender impacts, leading to unequal gains and losses.

According to UNHABITAT,⁹⁴ dam and transport infrastructure has displaced the greatest number of families compared with all infrastructure projects, with an obvious impact on mothers.

Mega transport projects, such as construction in port locations (a new quay, a breakwater, or extensive dredging) may have significant impacts on women's livelihoods that are not directly transport related. For instance, construction may limit women's trading on the quayside, or affects fishing grounds on which they depend. Depleted stocks will impact not only the fishermen, who are usually male, but also the women who are commonly involved in a range of income-generating activities around the processing and selling of fish.

Large transport projects can sever existing communities, creating new barriers to access that affect women and children more than men. Resettlement may result in preferred markets, jobs, or employment opportunities, children's schools or sports facilities may now be less accessible, exacerbating female time-poverty. For example, access now may entail a longer walk or a climb up or down stairs via a passenger overhead

bridge—daunting prospects to a time-poor, low-income woman travelling with shopping and young children.

Thus, there is an impact due to the project itself, but also those due to the design and implementation of the project. Women should be able to access the employment opportunities equally during the construction period as well as benefit from the final results.

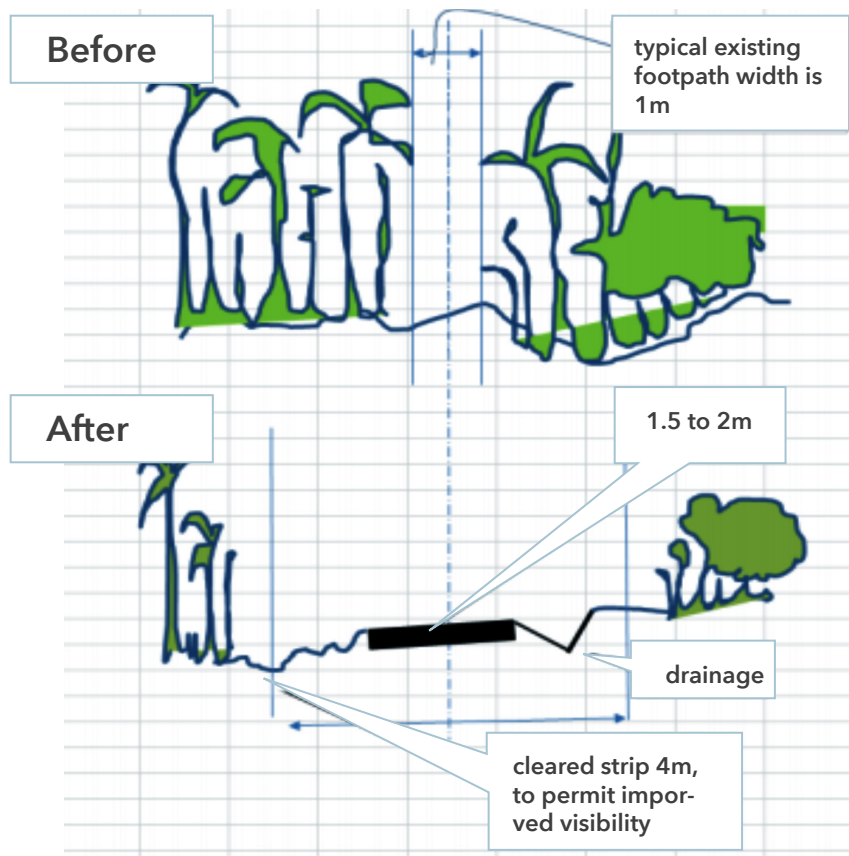
In addition, the way infrastructure is designed can incorporate more gender sensitive aspects. As the predominant modes of travel for women, especially in the developing world are the 'slow' modes (women walk more than men) and frequently they travel accompanied by young children or older adults. Therefore, the design of transport infrastructure needs to be adapted to this (width of sidewalks, lighting, rest areas etc.). When compared to investments in the infrastructure of 'fast' modes, pedestrians have seen the least investments over the past twenty years. A rebalancing of investment direction would increase equity and benefit women, children, and the elderly in particular, especially in urban areas.

Women must have a strong voice in the planning and project development phases in order to avoid unforeseen negative gendered impacts.

Infrastructure design can be developed to be more gender sensitive 'inter alia' in terms of:

- Road safety (refuge islands, expanded and dropped curbs, safe crossing provisions).
- Access paths.
- Barrier-free crossings and vehicle boarding / ramps and step/ curb heights.
- Lighting and sight lines.
- Allocated and sometimes segregated, public spaces (such as for bathroom and rest facilities).
- Handrails (heights) and doorways (turnstiles and widths appropriate for passage with strollers and shopping)
- Wayfinding and information signage and symbols.
- Fare structures and integrated ticketing as well as the payment of fares by cash or card.

Figure 3.1: Gender guidelines on low-volume rural access



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3.8.1. Impacts of improved connectivity on women

On the one hand, transport infrastructure and better all-weather access bring tangible benefits especially to women and girls in places where there are no or few roads. The distance to health services and availability of emergency transport, particularly affect women. Failures can be reflected in maternal mortality rates, especially obstetric fistula⁹⁵ and reduced uptake of pre- and post-natal care, as well as other, health services. Therefore, women and girls benefit specifically from increased connectivity to access to health services. Similarly, better access to education can also increase the numbers of girls staying on at school.

Although connectivity is a recognized benefit of improved transport infrastructure, care should be taken to ensure that the benefits are evenly distributed between communities and genders. For example, high

speed, express intercity roads can bring unforeseen negative consequences that affect rural women’s incomes as they previously may have sold their produce on the roadside (rarely a male occupation), resulting in the decline or death of small local markets.⁹⁶

Low-volume roads and all-weather paths often bring higher benefits to rural women than high-volume roads, and these aspects need to be integrated into improvements, especially in rural and peri-urban areas. (Figure 3.1)

3.8.2. Unintended safety and security consequences of transport projects on women and girls

The development and operations of large transport infrastructure projects can alter the economic and social fabric of the communities surrounding these in-

vestments in a way that creates negative consequences for women and girls. Such transport projects often bring men, attracted by the work, into a community, and this presents negative behaviors that degrade the role of women and put girls⁹⁷ in particular at risk from sexual harassment and human trafficking.

Key strategic transport routes are now recognized as pathways for sexually transmitted disease (STD) transmission and the expansion of sex work on such routes increases exposure of both the workers and clients, with impacts on (usually female) caregivers.

In some instances, transport projects will also increase the risk of, or compound risk factors that contribute to Gender Based Violence (GBV). It is therefore critical to take preventative and mitigation measures. Below are some actions that can be taken in this regard:

- **Assessing risk:** A GBV risk assessment should be performed before starting infrastructure development. This assessment should be used to determine where risks may be particularly high and identify actors in the local community who can be engaged to minimize and mitigate such risks, such as women's groups, and groups that advocate for women, children, and adolescent rights.
- **Training Workers:** Construction companies and contractors hired for the construction of the project should be required to institute sexual harassment policies and workers' codes of conduct, with specific prohibitions against GBV (including prohibition of sexual activities with underage partners). Continuous training for workers on codes of conduct should be conducted throughout the lifecycle of the project, in order to ensure that all workers are aware of the risks of such behaviour.
- **Engage the local community throughout the lifecycle of the project:** To effectively handle such risks, it is important to build a strong and dynamic partnership with local community actors. Such community actors can also be used to create awareness about GBV risks, as well as information about preventative actions and response and support mechanisms.
- **Response mechanisms:** Response mechanisms in case of a GBV incident caused by the project

should be developed, on the side of the perpetrator(s) and the victim(s). These should not only include the security agencies, but also victim support can successfully be implemented by local independent organizations (often NGOs) with relevant experience and structures. The focus of the responses should be support to the victim, corrective action against the perpetrator, and a re-evaluation of the contractor's policies, worker training, and response mechanisms (if needed). Development agencies and funders should be informed about incidents and the responses and actions taken.

3.9. Women working in infrastructure construction

Labor-intensive practices in transport infrastructure create numerous opportunities for jobs for both men and women during construction, maintenance, and operations. This is of particular importance in low-income areas and development projects often use labor-intensive practices for construction to provide local employment. Gender balance is usually achieved by applying a male/female quota system for the workforce, but this frequently results in women only being represented in low-paid, unskilled positions such as rock crushing and mixing cement, and are consequently they are excluded from decision making positions.

Clear protocols with the private sector and construction companies that include incentives for rewarding high performers and mechanisms for penalizing non-compliance, are likely to offer the most effective routes to improvement. Increasing the number of possible earning opportunities for women, as part of large, nationally supported development projects can also help increase equality and incomes.

Encouraging more women to participate in direct jobs that are available is one aspect, but they can also benefit from a multitude of indirect jobs—such as providing catering to the construction crews. However, these opportunities are currently not included or recognized in the majority of tenders, while the gender balance of the construction crews are. In addition, women are less willing to work if standards of hygiene

and well-being are low (as they frequently are on construction sites). Women for biological reasons may need to use bathroom facilities more frequently than men and changing rooms need to be robustly segre-

gated, to avoid harassment. Thus, those women that currently work in construction crews may not be there by choice but by the necessity to earn money.

ENDNOTES

- 61 Such as one longer trip in km compared to a number of shorter trips taken on different modes within the same time frame
- 62 Including decision makers and planners
- 63 The collection of transport data based only on sex may not give enough information to properly plan transport that responds to male and female needs and mode, trip purpose, age, frequency and distance are all considered to be important aspects to include in surveys
- 64 See next section
- 65 not only for jobs in the CBD district where men rather than women may work (formal versus informal employment profiling).
- 66 <http://documents.worldbank.org/curated/en/220381468278678436/Making-transport-work-for-women-and-men-challenges-and-opportunities-in-the-Middle-East-and-North-Africa-MENA-region-lessons-from-case-studies>, She Moves European Commission <http://civitas.eu/content/she-moves>
- 67 This has been especially seen in Latin American countries.
- 68 According to recent research in the Netherlands the deaths of men over 65 using electric bikes on Dutch roads have caused the number of cycling fatalities in the country to surpass the people killed in cars. Official figures from the Netherlands' central bureau of statistics show a near doubling of deaths on electric bikes in the last 12 months, three-quarters of which involved men of 65 years or over. While fatalities for women have decreased.
- 69 Women riding bicycles is a topic of heated discussion in both Sunni and Shia Islam. Concerns centering around modesty (not revealing the body) and mobility (social control) and it is banned in some Islamic countries.
- 70 <http://www.thedrive.com/motorcycles/25290/nearly-twice-as-many-women-are-riding-motorcycles-compared-to-a-decade-ago>
- 71 Such as a loan needs to be co-signed by a women's husband but not always the other way around
- 72 The example of 30 years of vehicle crash testing using a male form dummy resulted in more women being killed or being susceptible to serious injury more than men in equivalent crashes is one such example. (source being verified)
- 73 Women make up almost half of the agricultural labor force in developing countries World Bank 2018 <http://www.worldbank.org/en/news/feature/2018/03/06/breaking-the-grass-ceiling-empowering-women-farmers>
- 74 Source ReCAP
- 75 See ReCAP e. <http://www.research4cap.org/Library/Tanzarn-ReCAPTP-2017-GenderMainstreamingCluster-IRIM2017-171122.pdf> and World Bank
- 76 This includes carts and tricycles (mechanised rather than motorized).
- 77 Women represent more of the urban poor.
- 78 WIEG – Women in Informal Employment Globalizing and Organizing briefing paper stating that the informal economy provides a source of earning for the majority of households in developing countries but is also prevalent in many OECD countries. www.WIEGO.org
- 79 In both the developed and the developing world. Ng W Ascher A ITF Discussion Paper 2018
- 80 Sjoberg (2015).
- 81 Allen, H., Cárdenas, G., Pereyra, L., Sagaris, L. (2018). *Ella se mueve segura (ESMS) – Un estudio sobre la seguridad personal de las mujeres y el transporte público en tres ciudades de América Latina*. Caracas: CAF and FIA Foundation.
- 82 Although maternity leave is important to women, paternity leave has wider implications as this can help families to share more of the caring roles that otherwise may fall to women.
- 83 'Sticky floor' effects means that women are overlooked for promotion (horizontal segregation and discrimination) and 'glass ceiling' means that they are not able to break into senior 'C' suite decision making positions (vertical segregations and discrimination).

- 84 <https://2018.itf-oecd.org/sites/2016.internationaltransportforum.org/files/women-transport-safety-security-alma-world-bank.pdf>
- 85 ILO and others
- 86 Where they are largely unrepresented - International Transport Federation (ITF.org) and International Labour Organization (2014). Global Employment Trends 2014: Risk of a jobless recovery? p. 45. http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_233953.pdf
- 87 The ITF has a programme to help build a pipeline of high potential female trade union leaders.
- 88 Transportation and Logistics 2030 - Winning the talent race. <https://www.pwc.com/gx/en/transportation-logistics/pdf/pwc-tl-2030-volume-5.pdf>
- 89 Barnes T Beulieu E Saxton G 2016 Restoring trust in the police: Why female officers reduce suspicions of corruption <https://onlinelibrary.wiley.com/doi/pdf/10.1111/gove.12281>
- 90 EU WISE project, TUMI funded Ghana program <https://www.scania.com/group/en/scania-empowers-women-to-move-the-city-of-accra/>
- 91 This is based on the gender pay and skills gap previously mentioned
- 92 Such as UBER, GRAB, CAREME or LYFT. World Bank report 'Driving towards Equality' https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/drivingtowardequality
- 93 In some cultures, this may be connected to avoiding physical contact with a non-family male person, (by having to hold on to the driver, sitting too close or because they must not spread their legs in public required to sit astride a motorcycle.
- 94 Development-induced displacement and resettlement: theoretical frameworks and current challenges. Terminski B., & India Migration Report 2017 Urban Development Smart cities and Displacement. <https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/8833/Bogumil%20Terminski,%20development-Induced%20Displacement%20and%20Resettlement.%20Theoretical%20frameworks%20and%20current%20challenges.pdf> <https://www.taylorfrancis.com/books/e/9781351188746/chapters/10.4324%2F9781351188753-6>
- 95 Complications from obstructed child birth labor
- 96 As occurred in 1980s/90s northern Nigeria. Source DFID.
- 97 Other groups, such as transgender and young boys can also be affected.

4. INTERSECTIONS WITH OTHER SUM4ALL THEMES

Transport is an eco-system, a complex mix of regulation, infrastructure, technologies, market forces, and business models, knowledge, and data, public and private players, user practices, and cultural values,⁹⁸ relying on numerous interdependencies and interconnections. No one transport system is the same as another—as no one person is the same as another. With this in mind, there are a number of areas where gender intersects with the other thematic focus areas within SuM4All that are important to highlight.

4.1. Safety

Safety are extremely important to women and can be considered a key determinate of how women make their mobility decisions. It is especially important to look at road safety through a gender lens. Technical specifications should incorporate gender aspects—including crash testing of vehicles to include impact effects on passengers that might be female and children, and the mandatory wearing of crash helmets and seat belts for passengers.

In all countries, poor people are more likely to be pedestrians; and women are more likely to be both pedestrians and passengers in all motorized modes (buses, trucks and motorcycles especially in urban areas. Poorer population groups bear a disproportionate burden of avoidable morbidity and mortality from road traffic accidents, and developing countries show the highest rates of injuries and fatalities. Statistics show that men are more frequently the ones injured or killed as drivers while women are most at risk as passengers and they are more frequently involved in accidents as pedestrians. Similarly, children and adolescents are at risk, especially on their way to and from school.⁹⁹ Even in rich countries, children (girls and boys) from poor socioeconomic classes suffer more injuries and deaths from road crashes than their counterparts from high income groups.

Increased speed usually translates into an increase in road casualties and deaths, so speed limits also play an important role.

Women, in particular, if not implicated directly in traffic accidents experience a disproportionate portion of the loss of welfare, or ill health personally and they also experience high levels of emotional distress associated with unsafe travelling environments. But they also bear the burden of care for other family members affected. In low-income countries this is especially hard, as the woman may now also have to be able to generate the family income if a husband or father has been injured or killed, while remaining the primary care giver. Additionally, the extra costs of medical care and mobility aids such as crutches or wheel chairs, add to any financial stress. If children are involved in accidents, it is likely that mothers, in their caring duties, will need to look after them but also it is likely that they will restrict the mobility independence of their children, as a result of this experience. This translates into restricting them from attending school if the routes are unsafe, and this usually affects girls more than boys.

Moreover, the current way that statistics are collected overlooks a number of gender aspects. By distinguishing between men and women involved in accidents, and the injuries and persons affected, more information on gender inequalities can be identified. Police reports seldom include information on passengers, who may not be physically injured, although they were involved. As these are more likely to be women, it means that the any emotional stress or physical disability that may occur at a later date is also overlooked.

In many urban and rural areas, the simple act of walking along or crossing a road can be life threatening. In rural areas especially, women are frequently walking (on the road as there are no sidewalks) with head-load-

ed goods and are unable to move out of the way of traffic quickly or easily. There is also a need for basic road knowledge to be shared with low-income women, especially in rural areas, as they may not be fully aware of how best to negotiate new road or rail infrastructures that may sever them from their habitual routes to markets or schools.

On a more positive note, there is also a high potential for women to act as ‘agents of change’ and to increase the awareness of safe transport behaviors. Women are usually more supportive of speed restrictions in urban and peri-urban areas, such as 30 kph home zones and speed bumps near schools. Low-cost investments in educating women on road safety can also help educate their children. This is a high-potential, low-cost investment area that could be developed more.

4.2. Efficiency

Many aspects of the current transport system can be considered to be inefficient. There are some aspects of particular importance to women in terms of international trade and major strategic transport routes.

Firstly, the enforcement of controls at border crossing between some countries should be reinforced, to avoid the possibility of human trafficking. This is still a reality, and it is usually women, girls and young boys who are most at risk. Proper procedures and checks will help to reduce the numbers of people that are currently trafficked from and through countries. Inefficient border crossings result in many truck and freight drivers experiencing long delays. This creates an environment where the sex trade can burgeon, putting local women at risk (see previous section).

Secondly, as indicated in the section on infrastructure, large transport projects often bring men attracted by the work into a community, and this can result in negative behaviors that degrade the role of women and put girls in particular at risk from sexual harassment and coercion.

4.3. Green

The gender aspects of future low-carbon mobility and environmental protection reveal significant areas of concern but also potential for change. Transport related per-capita CO₂ and energy use is higher

for men than women, due to their higher, motorized transport use and longer distances travelled. For example, a study of four European countries, men consumed between 70-80 percent more energy for transport than women (Germany and Norway). This rose to 100 percent more in Sweden, and 350 percent more in Greece.¹⁰⁰ Globally, especially in the developing world, women currently have sustainable mobility habits, with high levels of public transport use and walking, but this may well change as women become more economically empowered.

Indications of this are already apparent, and the numbers of female drivers in developed countries getting their drivers’ licenses are overtaking new male drivers.¹⁰¹ Initial insights also show the widespread and swift adoption by women, as both passengers and drivers, of TNC or ride-hail services such as UBER. Other research¹⁰² shows that with the widespread use of mobile phones, low-income women are also increasingly able to organize themselves into small groups to use taxis and other services (rather than public transport) and are willing to pay a little more for the convenience and safety of door-to-door transport. This is seen as an expression of their frustrations with public transport and if public transport players do not increase attention to women’s needs, there is a risk of a silent exodus by many female users. This may also be difficult to trace, as the data on travel habits is not sex disaggregated, leaving many questions unanswered as to who has left the system and why, until it is too late to do much about it.

The number of care-based trips made by women may be increased because of system inefficiencies (of both the transport system and other socioeconomic systems such as health care).¹⁰³ Applying a gender lens to low and least-cost investments to improve the accessibility of centers of interest to women, as well as the efficiency of interchanges, may lead to reducing the numbers of motorized trips that need to be made.

The poorest population groups can become even further marginalized and impoverished from the associated higher levels of traffic-related air pollution, which may serve to further dislocate them from accessing economic or social activities.¹⁰⁴

Women walk more than men and are therefore more exposed to all types of airborne pollution, and this in

turn also affects the development of any unborn children that they are carrying. As they are usually primary care givers, they will also be responsible for others who may be affected by the air pollution –especially children and the elderly.

Thus women may also bear the brunt of the negative environmental externalities of current transport systems, especially traffic-related air pollution and noise and are affected both directly and indirectly. by this, especially in urban areas.

Efforts to encourage more women to cycle have been positive in some countries. Santiago, Chile, has seen a doubling of the use of bikes by women with proactive programs. However, national and local programs usually need to be supplemented by safe cycle paths and routes.

On a positive note, women are more interested in making decisions for environmental or ecological reasons. This can be seen by their choice of private vehicles.¹⁰⁵ They tend to choose fuel- efficient smaller cars, with safety aspects being crucial, but are less interested with the status the vehicle may bring. That said, women often play an important role in the purchase of the main family vehicle, and may be influenced to buy heavier cars, as they are promoted as being safer. From their perspective, fuel economy may appear to be less important than safety.

There are a number of avenues that can be expanded to build on the concept of greening transport that can include women as agents of change are they are inherently interested in the environment and may be more willing to shift behaviors and habits towards more ecological and green transport.

4.4. Urban

As the world becomes more urbanized, the links between gender and urban transport become increasingly important. A better understanding of the gender needs and benefits of large urban transport projects, especially in terms of connectivity and accessibility, modal integration, safety, security and barrier-free access, would bring a number of gender and other benefits. Also, to increase gender balance, the modes that

are used by women, such as bus systems and walking, should have similar or equivalent investments to high speed, high volume systems. Safety and security audits are key aspects of inclusive urban transport, as all vulnerable people, and particularly women, fear dimly-lit roads, dark, empty bus and train stations, and deserted parking lots.

Integrating gender needs based on evidence and data into major transport projects, in a more dedicated fashion than is current practice, would build in more benefits for women. Infrastructure should be designed with procurement specifications that redefine the ‘least cost alternative’ to bring tangible benefits to women (see section on infrastructure and vehicles). Examples include lifts and/or escalators instead of only stairs for overpasses and underpasses, step-free access to metros and subways and bus services and using universal design principles so that there are clear sight lines, adequate lighting, and wayfinding.

There is also a high potential for combining new approaches to the low-volume gender needs of freight transport in urban areas. Intermediate means of transport can be used to expand this market for the benefit of many women entrepreneurs. Increasing the numbers of women working in the sector and reducing discrimination would bring numerous benefits, not only to users but also to the productivity of the system.

There are many opportunities to address women’s mobility in urban areas and overcome the issues above. Building capacity with local communities and women’s groups can also result in net positive gains to urban transport systems, a shift of perspective that women are a vulnerable group ‘to be protected’ to one ‘of a valued partner for positive action’ could be the most cost-effective intervention at the local level.

4.5. Rural

The economic and social benefits of rural road infrastructure investments should be equally reaped by women and men. Development of a rural road network is a necessary condition for rural transport services to expand, and care needs to be taken to include gender perspectives. The first and last mile distance—from farm or village to main transport links—is of particular importance to women. Basic maintenance of

footpaths can increase their security (See previous section Figure 3.1), and their mobility. This can have many positive impacts, as women are able to access more services, and girls can continue to attend school, as they are not frightened of being attacked on the way to and from it. This may also help women farmers take their produce from farm gate to market with less waste or loss; and better connectivity may reduce the prices of incoming goods that women may need to purchase at existing markets near their village

Many rural roads are constructed using labor intensive construction practices – and while women may benefit from employment, they are often only offered lower-paid, unskilled jobs. Training and skills-development initiatives can open up a number of higher-paying jobs to women, giving them higher returns

on their time. These opportunities should equally be offered to them and available at times when women can take part.

4.6. Tradeoffs and synergies

Gender is a cross cutting issue and including gender in transport is complex as there are many interactions between actions and policies. The list of measures listed below are indications of actions that, when combined, will lead to greater gender equality, equity, and sustainable mobility. These can be clustered under four main SuM4All headings (toolboxes) with the following being highlighted across all modes: review existing transport policy to ensure that gender aspects are included equal beneficiaries.

Toolbox/ subject	Action	Synergies or Trade-Offs with Other Goals				
		Safety	Efficiency	Urban	Rural	Green
Policy-maker and lawyer toolbox						
Transport Policy	Review existing transport policy to ensure that gender aspects are included as equal beneficiaries.	◆	◆	◆	◆	◆
	Include targets for equitable access to transport services and jobs that are attractive to women. These can be based on the SuM4All goals outlined.		◆	◆	◆	
	Review national frameworks for security and safety in public spaces used to access transport, and protection from harassment when travelling. Ensure that there is adequate and clear legal protection for women (including defining harassment).			◆	◆	
	Ensure enforcement of legal protection and non-discrimination of women (in domestic and workplace situations) and the removal of barriers to employment in transport.		◆	◆	◆	◆
	Set and/or improve standards on license requirements for drivers of taxis, buses, etc. to exclude those that have a history or criminal record of violence against women (and LGBT communities).	◆	◆	◆	◆	
Institutional and governance	Establish guidelines for the collection of gender-disaggregated data on transport to include sex, trip purpose and mode.	◆	◆	◆	◆	◆

Toolbox/ subject	Action	Synergies or Trade-Offs with Other Goals				
		Safety	Efficiency	Urban	Rural	Green
Institutional and governance	Review baseline of female decision makers in transport, set targets for eventually reaching gender parity, and promote suitable candidates to positions of power. Intermediate SuM4All targets are 30% by 2030 and 50% by 2050.	◆	◆	◆	◆	◆
	Establish joint programs with other ministries and institutions responsible for gender, to include transport in their work and introduce supportive programs such as traineeships and mentoring programs to build capacity and pipelines.			◆	◆	
Capacity building	Provide capacity building programs to assist stakeholders to include gender in transport.	◆	◆	◆	◆	◆
	Provide funds for including gender for major and regional projects at national levels and also more rigorously evaluate the gendered impacts of transport projects.		◆	◆	◆	
	Improve the evidence base for investing in gender in transport, especially data collection at national and local levels.		◆	◆	◆	◆
	Encourage more women to enter STEM education areas to increase talent pools.		◆	◆	◆	◆
Economist toolbox						
Incentives and fiscal arrangements	Ensure that women and men enjoy equivalent rights for pay, social protection, and pensions.		◆	◆	◆	
	Provide (financial) incentives for women and men to better share family care roles and duties with paternity and maternity provisions.		◆	◆	◆	◆
	Create incentives for training more women in the skills needed in transport to help fill capacity (such as Heavy Duty Vehicle – HDV drivers)		◆	◆	◆	
	Create funds for training security and transport stakeholders in gendered aspects of transport and responses.	◆		◆	◆	
	Review tax laws on second-income earners to make it more attractive for married women to work in formal jobs.		◆	◆	◆	
Operational aspects	Assess the affordability of transport from a gendered aspect, and explore possibilities for integrated ticketing and fare solutions that allow trip-chaining without extra costs		◆	◆		
	Allow operational procedures for bus and rail services such as ‘in-between bus stopping’ ¹²⁶ for women and women’s safe carriages on rail services at night.			◆	◆	
	Encourage public service providers and private operators to include women in recruitment (for example via gender-neutral job profiling and gender blind candidate selection processes)		◆	◆	◆	

Toolbox/ subject	Action	Synergies or Trade-Offs with Other Goals				
		Safety	Efficiency	Urban	Rural	Green
Allocation of funds	Invest equally in transport modes that benefit women most, such as buses and walking.			◆	◆	
	Build capacity and tools on accessibility planning that include gender impacts (e.g including centers of interest for women, access to domestic jobs, markets etc.)			◆	◆	
Engineering toolbox						
Technical standards	Ensure that there are no gaps in road-safety standards (such as in mandatory use of helmets and safety belts for passengers, usually women)	◆		◆	◆	
	Review engineering standards for roads to ensure that gender sensitive aspects are included (dropped curbs, size of refuge islands at crossings, timing of traffic signals, etc.). Ensure that walkability and step free access is included in projects wherever possible.	◆		◆	◆	
	Ensure specifications for public transport (vehicles and infrastructure -stops, stations and interchanges)			◆	◆	
	Conduct participatory safety and security audits of public transport and related public space.	◆	◆	◆	◆	◆
Procurement processes	Proactively promote contracting to female owned/managed companies for procurement.			◆	◆	
	Encourage the hiring of women especially in engineering and construction, (not only for road crews but also for management positions). Successful bidders should be able to demonstrate their gender-sensitive recruitment processes and gender action plan for the project. Ensure upskilling of women is included.		◆	◆	◆	◆
	Integrate gender in bidding documents for standard public procurement and in Public-Private Partnerships for infrastructure projects. Request bidders to set gender-specific targets for women's employment (in contractors' workforces) and reward entrepreneurship (quotas for contracts to be awarded to women-owned and managed businesses and in the supply chain of subprojects). Request bidders to develop and commit to an agreed Code of Conduct that should be applied to their employees and subcontractors to ensure compliance with the environmental, social, gender-based violence, and health and safety requirements.			◆	◆	

Toolbox/ subject	Action	Synergies or Trade-Offs with Other Goals				
		Safety	Efficiency	Urban	Rural	Green
Include gender aspects in design in projects (services and logistics)	Include gender specifically in project design and planning and use participatory planning methods to help communities propose interventions that include the views /voices of local women.	◆	◆	◆	◆	◆
	Ensure that women and their centers of interest are not marginalized in resettlement due to transport projects.	◆	◆	◆	◆	
	Ensure that there are separated facilities for both passengers and workers (bathroom, rest areas etc.) for comfort and to prevent harassment.			◆	◆	
	Ensure that walkability based on Universal Design principles and step-free access is included in projects wherever possible.	◆	◆	◆	◆	◆
	Set standards for signposting and wayfinding that include gender and universal access aspects.			◆	◆	
Project implementation	When qualified firms are recruited to perform tasks (for example, feasibility reports and engineering designs, supervision), they should be able to demonstrate their gender expertise.			◆	◆	
Impact and evaluation	Establish a pool of independent experts for gender assurance.			◆	◆	
Maintenance	Consider how women can be involved in maintenance, especially of rural roads and proactively include them in maintenance training and programs.				◆	
	Systematic use of safety audits help to ensure that infrastructure remains usable for women.			◆	◆	
Feeder access	Better evaluate and accommodate how the first- and last mile access to major transport services include gender needs (rural and urban).			◆	◆	
Marketers toolbox						
Consultation and evidence base	Continuous consultation to ensure that that voices of women are upheld pre- and post- project. Public consultations, especially those involving infrastructure projects, must allow women to 'meaningfully' participate and physically attend consultations. Careful management of the stakeholder engagement should take into account how best to ensure that women are able to properly engage and be heard in the process.			◆	◆	
	Create programs in partnership with civil society to work with the public and private sector to ensure that gender issues are addressed.			◆	◆	

Toolbox/ subject	Action	Synergies or Trade-Offs with Other Goals				
		Safety	Efficiency	Urban	Rural	Green
Consultation and evidence base	Share knowledge, successes and failures with others (at national, regional, and local levels) to help build a better evidence base.	◆	◆	◆	◆	◆
Public awareness campaigns	Public awareness campaigns need to be specifically targeted to proactively attract women into the sector. Promoting that they can succeed (and sometimes excel) at traditional male jobs such as driving; and that there are economic, environmental, and social benefits of including them in the work force. Also include campaigns to ensure protection from violence and harassment.	◆	◆	◆	◆	◆
	Create programs to promote role models, mentoring, and networks.	◆	◆	◆	◆	◆

ENDNOTES

- 98 Geels 2012; Schwanen 2015
- 99 FIA Foundation Child Safety work <https://www.fiafoundation.org/connect/publications/ten-strategies-for-keeping-children-safe-on-the-road>
- 100 Comparing energy use by gender, age and income in four European countries. 2009. <https://www.compromisorse.com/upload/noticias/001/1560/foir2800.pdf>
- 101 UK's RAC Foundation report showed between 1995 and 2010 women drivers with full licences are increasing in number (+23%), and at a faster rate than men (+9%). <https://www.rac.co.uk/drive/news/motoring-news/more-women-take-to-britains-roads/>
- 102 "Allen, H., Cárdenas, G., Pereyra, L., Sagaris, L. (2018). Ella se mueve segura (ESMS) - A study on the personal security of women on public transport in three Latin American cities. CAF and FIA Foundation. " Retrieved from <http://scioteca.caf.com/handle/123456789/1405>
- 103 Transport systems often focus on a spoke and hub approach with the focal point being the CBD, as a major centre of employment, however women tend to make more trips across and within districts, but due to the nature of connection they are obliged to travel via the CBD, making the trip longer and more time consuming.
- 104 Transport poverty and its adverse social consequences Starkey and Hine, 2014.
- 105 In developed countries, women influence heavily the final decision of purchase of a family vehicle

5. THE GLOBAL ROADMAP OF ACTION

Sustainable mobility is an important enabler for economies to prosper and be socially inclusive. Making transport more responsive to the needs of women requires developing a structured approach to better understand their needs, identifying the most effective and cost-effective instruments to address those needs, better analyzing the benefits of projects, and establishing a robust, equitable policy framework. It also requires that women’s voices—and those of similar groups, such as transgender persons—are also represented at each step of the cycle of planning, design and implementation. There are numerous roles for women to participate at all levels; but this requires leadership and commitment by governments and institutions, the private sector, NGOs, and Civil Society.

Men’s cooperation is seen as essential for stimulating and grounding the change in the transport sector. Male domination is widespread within the sector, especially in decision making and employment, but there are many opportunities where women can add value to the sector. Working with men to ensure that the arguments for change are both logical and compelling will determine the level of success.

There is also a positive feedback loop for bringing more women into transport work. When women are able to access more opportunities, they in turn have more choices, and transport becomes a less masculine-dominated space, making transport more attractive to them. However, care is required to show that women are not trying to take jobs currently being held by men, but rather to bring diversity into the sector for the benefit of everyone.

The global roadmap of actions sets out a number of priority measures to be taken by the four defined groups of countries, to achieve affordable and equitable access for all. Most of the catalogue of measures are relevant for all country groups, but the global

roadmap of actions highlights those that are considered to form the fundamental building blocks without which progress will be difficult. This starts with the areas without which it is not possible to make progress.

Incorporating gender into sustainable transport and access for all is multidimensional; and there are many intersections with the proposals of other working groups. In this respect we put forward suggestions for each thematic area on the key aspects that influence the universal nature, and therefore gender, of access.

An overview of the global roadmap is presented below, framed around the need to include gendered aspects of transport in:

- Legal and normative frameworks to ensure that women are able to enjoy freedom of movement and are protected from violence and harassment.
- Institutional architecture to help cross ministry support of gender and transport (e.g. joint initiatives between the Women’s and Transport Ministries).
- Funding and financing for including gender and promoting gender budgeting.
- Capacity building and strengthening at national and local levels to reinforce gender knowledge and capacity to implement measures and programmes.
- Data collection and technical aspects (see text on desegregated data collection and suggestions for gender sensitive technical standards).
- Monitoring and evaluation especially large infrastructure projects to evaluate the gender benefits or disbenefits more systematically than presently.
- Participation to ensure that women with differing social economic groups, ages, occupations

and cultures are including in a meaningful way in stakeholder discussions and engagement

- Communication and knowledge transfer to ensure that there is increased awareness of the need and benefits of taking action to promote more gender sensitive transport decision making, planning, operations and management.

The following section indicates the crucial areas, without which it will be difficult to achieve mobility inclusiveness and universal accessibility, while the catalogue of measures provides further details of the numerous types of measures that can be taken. Many areas of policy impacts rely on the combination of actions taken. In this roadmap, it is assumed that all the measures of building block one would be in place, further resourced and refined as countries move towards achieving building block three, following their own chosen pathways to achieving the SuM4All goals.

1. Building block level one

Applicable to all countries (Groups A - D)¹⁰⁶

- Ensure that access to the transport is unrestricted, and social norms that may currently discriminate against women are addressed. This specifically includes equal pay, social rights, and the reduction of violence and sexual harassment.
- Start engagement and participatory processes.
- Make explicit references to gender in transport policy.
- Allocate funds to capacity building and training programs.
- Initiate data collection programs.

2. Building block level two

Applicable to countries that have already set basic policy and processes in place (country groups C, D, and in some cases B)

- Address key transport and gender data gaps and build evidence and context on gender at national, regional, and local levels.

- Identify key projects with high possible gender impacts and systematically and rigorously address gendered needs especially in mass transport projects.
- Design and implement public awareness campaigns to underpin equity and inclusiveness, aiming for zero tolerance of discrimination and violence against women, transgender, disabled, and vulnerable groups.

3. Building block level three

- In particular countries (Groups A, B, and in some cases C)
- Funding proactive employment programs by subsector that may address specific aspects within the sector that currently prevent it from attracting and retaining women. This includes the collection of baseline data, investing in preparing a pipeline of high-potential, diverse candidates that will rebalance the sector's perspective and decision-making processes; and the promotion of jobs and other gendered economic opportunities to achieve greater diversity within workforces.
- Build on baseline data collection and analysis with user data that includes trip type, mode choice, and time of day.
- Ensure procurement and contracting processes that proactively promote gender balance and encourage women's involvement.
- Include gendered aspects in monitoring and evaluation in scalable and systematic ways.

Noting that women are often unable to have the same levels of access to motorized transport as men, all levels of countries (from A to D) should work on policies and measures that ensure women are able to access transport that respond to their mobility needs. The collection of disaggregated data on mobility behaviors at metropolitan, regional, and provincial levels, and working with women's groups to build capacity on how to participate in transport decision making are seen as key entry points, especially for country groups B and C.

6. CONCLUSIONS

The numerous examples listed in the Catalogue of Measures show that there are many interventions and policy measures that, when combined, will move the sector in the direction of greater inclusiveness and sustainability. However, progress will remain slow without a strong commitment to gender mainstreaming, combined with institutional strengthening and gender budgeting. Positive impacts will be limited unless efforts both within and from outside the sector are clearly linked to transport policy, institutions, and resources allocated.

Therefore, if we are to accelerate progress on equitable transport and achieve the multiple benefits that have been set out, as well as the Agenda 2030 framework, we need to change the current transport paradigm. Transport has a major role to play in the 2030 agenda, and in how countries show their progress on the SDG goals and targets. In the future gender should feature as an integral aspect of transport policy and planning, and transport also has to emerge in gender mainstreaming policy and actions.

It is currently still too easy to overlook gender in transport, and there are still a number of misconceptions that are held by transport professionals who continue to defend that it is not really a transport issue. Their remains an embedded bias that this is a social or cultural issue, not a transport issue. Technically addressing gender within projects is often cited by project developers or assessors as being cumbersome –but it should not be any more difficult than other aspect of the project. What is lacking is the experience and knowledge (especially data) on how to do this, as well as protocols, strong guidance, resourcing, and the enforcement of gender action plans.

In conclusion, there is much that can be done, but there are two areas of resource investment that are essential to consider in order to better address the gender-specific needs of transport, and they are interdependent. One is data collection and the other is capacity building. Simply put, unless there is investment in increasing knowledge and capacity at national and local levels, the potential benefits of including women in transport will be patchy and missed by many of the developing economies who have the opportunity to shift onto a sustainable transport development path.

ANNEX I




A1.1 Linking the four entry points with country profiles














In addition to the Catalogue of Measures, the following table provides suggestions for areas of action that can be taken by countries following the four entry points (women as users, women working in transport, decision makers and gender aspects of infrastructure)

and clustered into the different SuM4All tool boxes—legal, engineering, economic, and marketing. Many of these actions are continuous in nature, and as the measures and actions will be adapted to local conditions and resources, it is expected that efforts will be scaled up and continued, as countries make progress and move from a Group A profile to a Group D profile.

Thematic area	Type A	Type B	Type C	Type D
Users				
Legal	<ul style="list-style-type: none"> - Map gaps in legal framework that may restrict women's access to transport. 	<ul style="list-style-type: none"> - Ensure (with new legislation if needed) that there are no legal barriers to women - Start to collect data and monitor how women use all transport modes - Ensure knowledge is shared between ministries, government departments, and agencies, as well as private sector. 	<ul style="list-style-type: none"> - Refine and continue data collection - Formally integrate evidence bases into policy change, transport organization, design, and operations at the national and local levels 	<ul style="list-style-type: none"> - Use the data sets; refine and continue data collection - Monitor evaluation and measures
	<ul style="list-style-type: none"> - Ensure that harassment in public places is recognized as a crime in the legal system. - Ensure physical presence of relevant authorities in transportation networks to deter harassment. 	<ul style="list-style-type: none"> - Establish legal protection of women in public spaces and on transport and define harassment legally, and increase the options for sentencing. - Ensure harmonization in jurisdiction between various agencies (for example, transit authorities and local police) and develop a joint legal recourse mechanism 	<ul style="list-style-type: none"> - Develop robust response mechanisms for women survivors of violence in public transport and related services (medical care, safe accommodation, counselling, police protection, and legal advice). 	<ul style="list-style-type: none"> - Develop harmonization among the various services offered to survivors of violence - Provide communication technologies that can both help in monitoring and summon for help if a crime occurs.

Thematic area	Type A	Type B	Type C	Type D
Legal		<ul style="list-style-type: none"> – Ensure gender is included in standards for vehicle type, approval, testing, and specifications, such as safe and comfortable boarding heights for vehicles, stepfree access, etc. 		
Engineering	<ul style="list-style-type: none"> – Map areas that can be best adapted to give equal access for women in urban and rural areas to motorized transport and safe NMT infrastructure. – Ensure that all public transport areas have proper lighting in the evening and night time. – Install surveillance cameras on transit stations. 	<ul style="list-style-type: none"> – Design and implement projects to ensure that there is equal access for women in urban and rural areas to motorized transport and safe NMT infrastructure. – Ensure design standards are gender inclusive (for example, open transit areas and platform layouts). – Wellmaintained facilities such as bathrooms for women to use. 		
Economic	<ul style="list-style-type: none"> – Implement targeted subsidies for the poor. 	<ul style="list-style-type: none"> – Design and implement projects to ensure that transport is affordable, especially for women, such as integrated ticketing. – Commence disaggregated accessibility mapping 	<ul style="list-style-type: none"> – Offer discounted fares for multideestination trips. – Setup integrated fare systems. 	
Marketing	<ul style="list-style-type: none"> – Implement marketing, public awareness campaigns, and gender training to ensure safe and secure transport – Build capacity in managing, operating, and planning transport. Develop public awareness about the different mobility needs of women and regarding the importance of safety and security of mobility. 	<ul style="list-style-type: none"> – Provide training to transport operators and transport users (who may witness harassment or violence) on how to respond. 	<ul style="list-style-type: none"> – Develop from within civil society both male and female champions for mobility of women. 	

Thematic area	Type A	Type B	Type C	Type D
Workers				
Legal	<ul style="list-style-type: none"> – Ensure that women face no legal barriers in working in transport-related jobs. 	<ul style="list-style-type: none"> – Ensure that legally both men and women are entitled to equal pay for equal work. – Make gender discrimination in recruitment illegal. – Ensure that women are offered legal protections against sexual harassment at work. 	<ul style="list-style-type: none"> – Develop protocols for legal recourse to protect female workers (equal pay, employment discrimination, and sexual harassment in the workplace). – Set minimum employment quotas for women. – Mandate binding maternity and paternity leave policies. 	<ul style="list-style-type: none"> – Develop streamlined and fast legal recourse options for worker protections offered by law (equal pay, employment, discrimination, and sexual harassment in the workplace)
Engineering	<ul style="list-style-type: none"> – Include women in transport infrastructure development and maintenance, in low-skilled jobs. 	<ul style="list-style-type: none"> – Include women in trade union positions – Establish technical training cells within government agencies to give women hands-on technical experience. 	<ul style="list-style-type: none"> – Ensure that technical streams within agencies develop a career path with women's needs in mind. – Develop mentorship programs for female employees. 	<ul style="list-style-type: none"> – Develop internship programs for youth at government agencies and ensure that interns also gain experience with technical skills.
Economic	<ul style="list-style-type: none"> – Monitor pay by gender at all levels within the transport hierarchies, to identify and rectify possible gender gaps in pay. – Invest in women to upskill them so they are able to benefit from higher paid positions & have the opportunity to make transport a career 	<ul style="list-style-type: none"> – Impart soft skills training for women to impart soft skills – Develop economic incentives for women to continue work after children (for example, daycare allowance). 	<ul style="list-style-type: none"> – Offer daycare services at work. – Organize study tours and foreign training opportunities for women. 	
Marketing	<ul style="list-style-type: none"> – Launch awareness campaigns promoting female employment in the transport sector. – Help develop careers for a select few women to develop them as role models. 	<ul style="list-style-type: none"> – Establish women's professional network in the transport sector. – Launch focused marketing campaigns at school and college campuses. 	<ul style="list-style-type: none"> – Develop a young leader in transport group for women. 	

Thematic area	Type A	Type B	Type C	Type D
Decisionmakers				
Legal	<ul style="list-style-type: none"> Ensure equal numbers of girls and boys continue through secondary education 	<ul style="list-style-type: none"> Set baseline for female decision makers with quotas if necessary Integrate gender into policy (national, regional, and local levels) 		
Engineering		<ul style="list-style-type: none"> Promote and encourage women & girls to take up transport jobs Encourage education of girls in STEM subjects 		
Economic	<ul style="list-style-type: none"> Allocate funding to support action on Gender and Transport 			
Marketing		<ul style="list-style-type: none"> Support networks to build a pipeline of highpotential future decision makers 		
Infrastructure				
Legal	<ul style="list-style-type: none"> Ensure legal framework protects women (discrimination in work/ public places; equality, freedom of movement, displacement due to transport projects, etc.) 			
Engineering	<ul style="list-style-type: none"> Design and construct equally in NMT infrastructure (and low volume) and high speed, high volume 	<ul style="list-style-type: none"> Enforce protocols that protect women 		
Economic	<ul style="list-style-type: none"> Ensure procurement & construction practices are gender friendly 			
Marketing	<ul style="list-style-type: none"> Work with local communities to start dialogues and participation of women in transport decision making 	<ul style="list-style-type: none"> Communicate and increase public awareness of gender actions and zero tolerance of harassment 		

ANNEX II

A2.1 International conventions of importance for women¹⁰⁷

There are a large number of international policy conventions and frameworks that pertain to the societal needs of women. A growing number promote equity through women's empowerment to achieve long-term gender equality goals. The most well-known, which sets the global standard, is the Universal Declaration of Human Rights.¹⁰⁸ Mobility rights, or the right to travel are considered to be an essential element of basic human rights (Art 13.1). This applies to everyone irrespective of color, creed, or social status, and the majority of countries adhere to it; however, women suffer more mobility restrictions than men globally.

Over the past 20 years there have been a number of milestone acts to end discrimination against women which may not be directly related to transport, but are connected to women's freedom of movement, and are therefore of importance when considering their mobility. The Convention on the Elimination of all forms of Discrimination against Women, 2008 (CEDAW) is ratified by all countries, except six UN member states,¹⁰⁹ and 189 countries have signed on to The Beijing Platform of Actions (1995). In 2013, the United Nations Commission for the Status of Women (CSW57) identified various forms of sexual violence against women and girls (SVAWG) in public spaces as a distinct area of concern and called on governments to prevent it. This is furthered by work done by UN Women, which coordinates and promotes the UN system's work in advancing gender equality and progress to the 2030 Agenda. More than thirty cities are part of its Global Flagship Program on Safe Cities and Safe Public Spaces to develop, implement, and evaluate comprehensive approaches to prevent and respond to sexual harassment and other forms of violence against women and girls in public areas, including public transport.

The New Urban Agenda, agreed in October 2016, sets a non-binding framework for urban development. It guarantees an "inclusive and secure environment in urban life for all people to work and live without fear of violence and intimidation, recognizing that women and girls are disproportionately affected, and including equitable and affordable access to sustainable basic physical and social infrastructure for all, without discrimination, including sustainable mobility (paragraph 34, NUA)."

Other commitments to sustainable transport include addressing the needs of women as members of vulnerable groups. The Ashgabat Statement of 2016 emphasizes that public transport services and infrastructure are critical to enable the mobility of people and goods, in particular 'taking into account needs of vulnerable groups (women, children, youth, persons with disabilities, people living with HIV/AIDS, older persons, indigenous peoples, refugees and internally displaced persons and migrants)'.

The United Nations Economic Commission for Europe (UNECE) Economic and Social Council Inland Transport Committee also makes specific reference to women and gender in their recommendations on transport and gender to the Earth Summit Preparatory Conference (2002), stating "that gender perspectives need to be fully integrated into all transport-related policymaking in all departments at all levels on a regular and proactive basis."¹¹⁰

The International Labor Organization (ILO) is working on a convention on violence and harassment in the world of work, scheduled to be concluded in 2019, and one of the ILO's centenary initiatives is 'Women at work'. The International Transport Federation (ITF) of trade unions is also working to increase the sector's attractiveness to women, as transport is a sector cited by their members as being particularly male-dominated, and where sexual harassment and violence is widespread.

A1.1. Sustainable Development Goals and gender

Women’s economic empowerment is at the heart of the 2030 Agenda, recognizing that many of the Sustainable Development Goals (SDG)¹¹¹ may be difficult to achieve without accelerated action to empower women economically. A number of the SDG targets establish women’s equality and empowerment as both an objective and as an integral part of multiple solutions.

The first UN High Level Panel on Women’s Empowerment delivered a report in March 2017, entitled “Leave No One Behind: Taking Action for Transformational Change on Women’s Economic Empowerment”¹¹² (Figure A1) that identifies the key action areas. However, as of yet there is no internationally agreed target for capturing the ambition for change.

A2.2. Regional Conventions

There are a number of regional conventions relevant to the topic of gender and transport; however, few either include women as a group or are designed to address the needs of women and transport specifically. Nonetheless, a number are important, as they provide

the enabling framework for overcoming some of the major barriers that currently constrict women’s mobility and affect their well-being. In this context, those that are designed to reduce violence against women are seen as critical to ensuring freedom of movement, which in turn helps to increase universal access to opportunities and services.

One example is the Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women. Regional and national conventions including the empowerment of women economically, politically, and socially are now widely recognized by the majority of governments in the region. Making transport and cities safer for women and girls and ensuring that women can travel freely and safely is seen as part of efforts to make cities more inclusive and equitable.

Progress has been made in a number of areas, such as maternal health, equal employment rights, and equal pay for equal work, safety and security (including ending violence in public space and workplaces) but one can nonetheless observe that progress has been slow and there are many gaps still to be filled. Enforcement is frequently lax, and discrimination against women, the LGBT community, and other groups remains widespread especially in many transport subsectors.

Box A1. Sustainable Development Goals with a specific mention of women

Goal 5 refers to women’s empowerment, establishing the objective of eliminating discrimination and violence against women and girls, in public and private spheres, including trafficking, sexual, and other types of exploitation.

Goal 9 states that building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation is required, with a focus on affordable and equitable access for all.

Goal 11 aims to make human settlements of all sizes inclusive, safe, resilient, and sustainable. Urban transportation is considered a key component of inclusive cities. SDG 11.2 requires, by 2030, “the provision of access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities, and older persons.”

Goal 12 aims to ensure sustainable consumption and production patterns and extend understanding of household consumer expenditures beyond disaggregation by purpose (energy, transport, housing, food) to understand consumption by individual household members to specific purposes, such as caregiving work, commuting, and personal consumption.

Figure A1: Seven drivers of women's economic empowerment as identified by the High-Level Panel, and the relevance to transport. Source: Transport, a Game-Changer for Women's Empowerment: International Convention on Engineering Design (ICED) 2017



Source: Leave no one behind: A call to action for gender equality and women's economic empowerment. (2016) Report of the UN Secretary-General's High Level Panel on Women's Economic Empowerment

ENDNOTES

106 See previous section on countries categories

107 A full list of legal binding and non-binding conventions can be found in the Annexes.

108 <http://www.un.org/en/universal-declaration-human-rights/index.html>

109 Iran, Palau, Somalia, Sudan, Tonga, and the United States.

110 UNECE ECE/TRANS/2009/8 17 December 2008

111 The SDGs are included in the GMR but not the gender aspects.

112 UN WEE (accessed April 2018) <https://www.unscn.org/uploads/web/news/UNSG-HLP-WEE-2nd-Report-.pdf>

ANNEX III

A3.1 Snapshots of international good practice

Addressing gender across all transport sectors requires complementary actions by a number of different players, that when combined, will help increase the involvement of females in decision making, employment, achieve more gender-sensitive infrastructure (planned and built) and increase, or at least maintain, the current sustainable profile of women’s mobility behaviors.¹¹³ This requires combinations of legal frameworks that provide more security and protection to women entering the transport market and the female users (in line with the needs of many vulnerable

groups such as the elderly, children, and the disabled) and on- the- ground action. Also, as women are often the poorer members of society (even within already poor societies), improving sustainable and affordable transport services will help uplift them from poverty by increasing their opportunities for accessing services and goods, and will also provide economic opportunities within the sector that they currently are not able to profit from.

A number of countries have implemented actions; many can be replicated and the following examples that can be scaled up are grouped according to the cluster of action.

Table A3.1: Women as decision makers (Governance)

Measure:		Toolbox area			Country types		
Inclusion of gender needs in transport policy and projects.		Legal / Engineering Marketing/ Infrastructure/ All			All HIC, LIC, EIM		
Description of measure: Including gender specifically into transport policies.		Action area: Policy			Local /National /Region/ All		
		Complementary Action Area					
		Road Safety	Green	Efficiency	Urban	Rural	All x
Countries	Sweden, Ghana, Mexico	Scalability			Synergy /Trade off		
		Easy	Mid	Selective			
Instrument	Policy, national government, and private sector lead actions						
Typical actions:							
1. Setting a baseline of female decision makers in transport							
Example: International Transport Forum, ITF (OECD)							

It is not easy to find comparable data to indicate the percentages of females in senior positions in the public and private domains. Globally, ministers of transport are predominantly men as are the majority of senior decision makers in transport. A review of the 59 country members of the OECD International Transport Forum (ITF) revealed that only 9 were female (July 2018), 15 percent of the total with only one from the Global South¹¹⁴. A number have been in place for several years, while Chile only recently appointed its first female transport minister. Countries with female ministers of transport include: Chile, Estonia, Finland, France, Korea, Netherlands, Serbia, Switzerland, and USA. As ITF country members tend to come from highincome countries where women are more empowered, it is likely that the situation is worse in lowincome countries. Although desirable, it is not a prerequisite for gendersensitive transport policies, as currently the Swedish position is held by a man who fully supports gender equality.

Key challenges:

- There is still a negative bias toward appointing men to highlevel positions at national levels, and the pipeline of highpotential women interested in this area is weak.

2. Include gender specifically in national transport plans and policies, and build understanding of gender differences by mode and locality

Examples: Sweden, Uganda, Mexico

1. Sweden has been working on gender equality for the past 30 years. Swedish National Transport Policy states, “the transport system shall be designed so that it meets both men’s and women’s transport requirements. Women and men shall have the same opportunities to influence the construction, design, and management of the transport system” and has been incorporating gender into its planning since the early 2000’s. It requires agencies to bear in mind that equality in the transport system does not mean that men’s and women’s transport requirements should be met at any price, but rather that their respective needs are to be met equally, and both women and men should have the same levels of influence in the design of the transport system. All transport agencies include reports on travel surveys for women and travel patterns in their respective sector reports. Even within highincome northern European countries, Sweden has demonstrated a lot of effort and is the only EU country with gender balance in the Transport Committee. However, few resources are allocated to work on equality objectives by the transport agencies, so progress to achieve equality in the transport system is still slow.¹¹⁵ Knowledge and analyses on the main difference in women’s and men’s particular travel patterns by mode is still patchy, and not always integrated into policy.
2. Uganda’s Policy for Developing and Strengthening the National Construction Industry (2010) commits the transport sector to:
 - Generate gender disaggregated transport data to inform policy and planning;
 - Incorporate gender in specifications, standards, manuals, tender documents, and guidelines for physical infrastructure works;
 - Increase gender awareness and capacity building with major actors in the construction industry;
 - Allocate resources in a manner that responds to women’s distinct needs.
 - Positive discrimination for gendersensitive contractors and consultants in the procurement of public works and services.
 - Provide an enabling environment for equitable participation in, and benefit from, developments in the construction industry by women and men.

Uganda can also boast that half of the top management of the Uganda National Roads Authority, including the executive director, are female. Additionally, it has an antigay act, to help address sexual discrimination.

Key challenges:

- Political will and understanding of differentiated implications of transport policy on women and men, especially in mid and lowincome countries, is lacking.
- Allocation of resources to further gender equity and equality within transport ministries (this issue can be made to be a donordriven requirement) and policy development is low.
- Despite supportive constitutional and legal frameworks in place for gender mainstreaming into all levels of decisionmaking including transport, enforcement and compliance are weak in most countries.
- A lack of followthrough and inclusion of gender in transport policy (beyond inclusion of it as a vulnerable group).

3. Encourage ministries to aim for gender equality in transport programs and projects
<p>Example: Mexico</p> <p>Recently, Mexico has enacted important policies aimed at empowering women. Advanced laws and gender mainstreaming at the national level has helped to put it in the forefront of the proportion of female parliamentary representatives. In 2007, 23.2 percent of parliamentarians were female, helping to progress representation of women’s interests in legislative processes. Despite women’s educational attainment now matching men’s,¹¹⁶ they still face significant discrimination and lack of access to decent employment. Sixty percent of working women have low paid, informal jobs (with little or no social protection), and the share of unemployed young women is four times higher than male equivalents. Mothers in Mexico are also less likely to be employed than mothers in most other OECD countries.</p> <p>Many of these disadvantages can be traced to unequal access to safe transport, and women face high levels of violence in public spaces and on public transport,¹¹⁷ especially in cities. In 2014 Mexico City passed a new law aimed at improving quality of life and expanding urban mobility with sustainable transport for all, by explicitly guaranteeing that “mobility is the right of each individual and of the society to move freely and access goods through the different modes recognized in this law.” The law also created a new mobility hierarchy, putting pedestrians and cyclists above motorists, and prioritizing active transport. Working with InMujeres, National Women’s Institute of Mexico (Instituto Nacional de las Mujeres), on transport actions has helped to coordinate gender work across ministries and policy fields. This has also been supported by the UN Women Safe Cities program and the World Bank. Also, there has been consolidation of multiple transport operators within the city, and operators of different modes such as bus, metro, or the BRT system now communicate with one another, allowing more efficient transfers from one system to another, helping women to tripchain.</p>
<p>Key Challenges:</p> <ul style="list-style-type: none"> - Political differences between capital cities and federal governments can create gaps and inconsistencies - Capacity is low, and gender experts with transport knowledge and/or transport experts with gender knowledge are lacking - Funding issues - Data collection to build evidence is needed - The Latin American culture of violence and machoism impacts women’s empowerment - A lack of enforcement of legal rights reducing trust and effectiveness
<p>Expected impact and success</p> <p>Indicators:</p> <ul style="list-style-type: none"> - Increase of female decision makers - Increased number of women in paid employment - Increased access to health and education - Safer transport

A3.2. Women as users

Transport and mobility options play a significant role in ameliorating or exacerbating women’s welfare, particularly for those who are poor. The different travel and transport needs between men and women because of their different social and economic roles and activities, combined with the numerous barriers women face in accessing, using, and paying for transport services present many challenges.

Currently, safety and security are key areas that significantly constrain women’s mobility, irrespective of social economic differences, and have an intergenerational impact that can lead to compromising the current sustainable mobility habits of many females compared to men (from low motorization levels and high public transport use and walking). There are several interventions that increase female users’ mobility, and a small selection is suggested here:

Measure:		Toolbox area			Country types		
Increasing personal security for women (decreasing violence and harassment)		Legal / Engineering Marketing/ Infrastructure/ All			All HIC LIC EIM		
Description of measure: Using technology to improve safety and security		Action area:			Local /National /Region		
		Complementary Action Area					
		Road Safety	Green	Efficiency	Urban	Rural	All x
Countries	India, Ecuador, Indonesia, South Africa, UK, Egypt, Mexico	Scalability			Synergy /Trade off		
		Easy	Mid	Selective			
Instrument	Technology lead actions						
Typical actions:							
1. Using technology to help increase safety and security with security audits and mobile phone technologies							
Examples: Saftipin (India), Bájale al Acoso (Ecuador)							
<p>1. Saftipin is a mobile-phone-based application that allows users to collect safety and security related information according to nine parameters. This information is assessed, and maps are created that show the safest routes to reach specific locations within a city. For example, it has been used in Delhi, India’s capital city, to collect 7000 data points, and helped the city to prioritize maintenance such as repairing street lighting and broken pavements, and it now has an option for collecting data at night. The app has also been used in Mexico City, Bogota, and Manila.</p> <p>2. Bájale al Acoso is a program recently introduced in Quito, Ecuador. The campaign includes two main action areas: first, to address sexual harassment on public transport, and second, working with the Metropolitan Police to assist victims of sexual violence in public spaces. Local protocols have been put in place that help define what is understood as violence (physical, psychological, sexual, financial, and street harassment) based on human rights, gender, intergenerational and intercultural approaches and the international, national, and local regulations. One-hundred percent of the Bus Rapid Transit (BRT) and 85 percent of local city buses are now equipped with the system, and if an incident occurs and a passenger is harassed while on the bus, they can send a message by SMS to a central control centre. A chain of reactions are set in motion, including: an audio public announcement made in the bus when an SMS is received that there is an incident occurring in that bus and all passengers should be wary; station staff and/or police will meet the bus at the next stop and the victim may make a formal complaint. Other municipal actions include a public awareness campaign at bus stops/stations, the rehabilitation of a number of stops according to international guidelines, and the promotion of social media. The program has been put in place by the municipality, an NGO, and the bus company. Since May 2014, a total of 5,231 municipal officials from the Metropolitan Public Transport Company of Passengers Transport (EPMTPQ), the Metropolitan Transit Agency (AMT), the Metropolitan Police, and the Metropolitan Public Enterprise of</p>							

Mobility and Public Works (EPMMOP) have been trained in the protocols. As of June 2018, the city had received more than 1,900 reports, a significant increase on previous years. Fifty-three cases are under prosecution, and there have been 11 convictions (including one for underage molestation) with sentences of between 11 and 38 months.

Key Challenges:

- Coordination among the different players
- Building trust with the general public
- Ensuring that action is taken after reporting
- Funding

Example : Legalizing TNC and ride hail services as part of the mobility offer

A recent report on women's use of ride hailing services (TNC) in 6¹¹⁸ countries (high, middle, and low income) indicate that such services help to increase women's mobility and access. They are able to benefit from door-to-door transport services, as well as driving for a living (while choosing their hours to suit their availability). These services can be of particular interest in countries where public transport services may be unreliable and/or only operate in limited time slots, especially for middle income and professional persons, who may need to be more mobile at different times of the day. The report also indicated that more females would use the services if they were able to choose a female driver. Women drivers find that working as a ride-hail driver helps to meet their basic needs and over 70 percent of those in six countries.

Key Challenges:

- There are fewer female drivers while passenger surveys indicate that females would prefer a female driver when travelling alone or at night.
- Security is a concern for women drivers as for passengers.
- As women are often in the poorer quintiles of the population, they are less likely to have a bank account¹¹⁹ and have less access to capital so are less likely to own a car; major barriers to sign up as a passenger or as a driver.
- Lack of women entrepreneurs in technology

Expected impact and success

Indicators:

- Increase in personal security and mobility
- Increased confidence allows women to travel further, accessing a greater number of opportunities
- Increased access to health and education
- Poverty uplift

A3.3 Women working in transport

Transport provides many opportunities for jobs (formal and informal), yet women are currently excluded from many of them. Women would benefit from being able to access more economic opportunities, and there is evidence that when they are able to contribute financially to the household they gain higher respect from male partners, diminishing social tensions and domestic violence. When they are able to enter

suitable positions, they often perform as well or even outperform their male counterparts and in addition, a diverse workforce brings many non-transport related benefits, and helps provide inclusiveness. Workplace discrimination¹²⁰ and harassment are also quoted as being major barriers to recruiting, maintaining, and promoting women within the sector. There are many positions suitable for women, and the following indicates a few of them.

Measure:		Toolbox area			Country types		
Increasing the participation of women working in paid employment in transport		Legal / Engineering Marketing/ Infrastructure/			All HIC LIC EIM		
Description of measure: Promotion of non-traditional roles for women		Action area:			Local /National /Region		
		Complementary Action Area					
		Road Safety	Green	Efficiency	Urban	Rural	All
Countries	Chile, Argentina, Australia, UK, France, Peru, Pakistan, Dubai	Scalability			Synergy /Trade off		
		Easy	Mid	Selective			
Instrument	National and city government, and private-sector-led actions						
Typical actions:							
1. Women as drivers							
Example: Drivers for urban transport (Chile and Kazakhstan)							
<p>There are many examples of women becoming public transport drivers. In a number of cities in Europe there are good numbers of women tram and train drivers¹²¹, but this is not yet in all countries. In some they still face significant resistance from other drivers and even driver unions. However, in Transantiago, Chile, the city, when faced with prejudice against women drivers and the fact that several private operators refused to hire women bus drivers, Transantiago public transport agency developed an awards program. The public are able to vote for the Best Male and Best Female Bus Drivers. This award was designed to recognize women bus drivers, and to complement the award already given to men. Within a year, all bus companies had a small, but growing contingent of women bus drivers, so that they could compete for the award, helping build a positive public image. This also became an opportunity to highlight women's role and contributions to the quality of public transport with the general public. This award also provides an opportunity for the public to see that women may also apply, and succeed, to become bus drivers as well as recognizing those that are working in the system. The winner often visits local schools and educational establishments, to help break down barriers about the sorts of jobs that women are able to do.</p> <p>As there is currently a shortage of qualified drivers in Santiago, public transport operators must compete to get drivers, and more women stepping up for training can help fill gaps.</p>							
Kazakhstan: Equal opportunities in Almaty Transport Company							
<p>Working in Kazakhstan with Almaty Transport Company (AET), data showed that women were 60 percent of passengers, but comprised only 19 percent of AETs workforce. Of the 8 percent women drivers at AET, 67 percent drove trams, 28 percent trolleybuses, but there were no women bus drivers. The EBRD¹²² supported the company to strengthen HR policies and procedures, and create a model of good practice on women's employment in the urban transport sector to be shared with other operators in Central Asia and beyond. EBRD policy dialogue supported</p>							

an amendment to legislation regarding licencing. This allowed for recruitment of the first women bus drivers in Almaty. This also led to an increase at AET of women in management from 19 percent to 28 percent; women driver supervisors from 7 percent to 13 percent; and the appointment of the first women technical maintenance and road safety engineers.

Example: Women only taxi /rickshaw services (India, Pakistan, Dubai, UK and France)

National and local decision makers can set and/or improve standards with respect to licence provision, especially for taxis, to exclude those that have a history and/or criminal record of violence against women (and LGBT communities) and reduce women's fear of harassment and violence. But violence from passengers is also a common experience for taxi drivers, although most incidents are verbal. Taxi drivers can be targeted because they work alone, are unprotected, accept passengers whose attitudes to violence are unknown – and they often carry cash. Despite this, there are a growing number of female taxi drivers providing women-only services. 'ForShe' Taxis and Sakha cabs run in India, where low- income women are able to learn to drive. Sakha works in partnership with the not- for- profit Azad Foundation, for livelihoods with dignity in professional driving to resource-poor women in India, as part of "Women on Wheels (WOW)" initiative. The women are mobilized from the poor and marginalized sections of society, and their entire training and development is undertaken by Azad Foundation. In addition

to driving, these women are taught self defense by the Delhi Police's Crime against Women Cell to equip them with the means to deal with any untoward incident they may face on the roads. 'Pink' rickshaws also enjoy some success, as they provide affordable local transport, especially filling the first and last mile needs of women. In countries such as Dubai, there is a cultural need for female-only services, which allow women to travel without male chaperones. High-income countries such as the UK and France also have several examples of female-only services started by private entrepreneurs.

Example: Recruiting more female drivers for heavy duty off-road vehicles (mining)

Several mining companies now proactively recruit women to drive their most expensive heavy vehicles (in Peru, Argentina, and Australia). Facing a severe shortage of capable workers and production cost increases, mining companies are turning to women drivers as they take more care of the large and expensive vehicles. Benefits include more careful driving (fewer accidents), rigorously observing protocols (e.g. speeds, maintenance checks) and precision when driving large loads. They have been particularly successful as dump truck drivers. Many mining companies are addressing the issue of inflexible hours, which turned women off mining posts in the past; have instituted parent-friendly work rosters; are addressing gender pay gaps; and the conditions are now much more attractive. Also, this opportunity can benefit indigenous women (as in the Australian Queensland case). A survey, completed by the Office of Women Queensland, the Australasian Institute of Mining and Metallurgy, and the Women in Mining Network,¹²³ said women were an untapped resource and offered a solution to the growing skills shortage.

2. Rebalancing gender in traffic police units

Example: Women as city traffic agents (Argentina, Peru)

In Buenos Aires, women have been successfully recruited as traffic agents, subway drivers (20 percent) and there is one bus line that has only women bus drivers. By taking a pro-active approach and dedicated recruitment criteria, the City of Buenos Aires has increased the gender balance in the numbers of city traffic agents to an equal representation of women and men. Currently, of the 2,750 agents, 54 percent (1,485 agents) are women. During the month of July 2017, from a total of 303 new agents recruited, 66 percent were women. Benefits include strict adherence to the rules, less corruption (expected result) and a positive image for the city.

This is similar to the feminization of Peruvian traffic police in the last 1990s, when the all-male traffic police officers on the streets of Lima were replaced with women as a solution to rampant, omnipresent corruption within the force at the entire national level, (research shows that women are less susceptible to bribes and corruption). By 2000, 1500 sub-official females had entered service to control traffic in the streets. Accompanying internal changes within the department were both physical arrangements, such as adding additional bathrooms for women in station houses, and other measures such as organizing childcare within the institution, allowing nursing mothers to arrive an hour later for their shift, and even extending family planning and counselling services. Violence is nonetheless a key challenge and 'road rage reactions' still occurring. Mexico tried a similar program in the 1990s and reportedly gave it up because of similar instances of violence against the female officers.¹²⁴

Key challenges:

- Violence and harassment against women
- Entrenched bias that women cannot tell men what to do (traffic police)
- Stereotyping and macho male behaviors
- Access to capital for training and buying of taxis (if needed)
- Including gender sensitive recruitment programs

Expected impact & success

Indicators:

- Increased confidence for women to apply for non-traditional roles
- Increasing diversity of work force
- Equity and equality
- Poverty uplift

A3.4 Infrastructure

Transportation planning and design are commonly regarded as being gender neutral, and transport projects are considered to equally benefit men and women. A lack of disaggregated data on transport needs in planning, combined with little attention to gender in evaluation and cost-benefit analysis, has led to ingrained expectations that a ‘trickle-down’ effect will eventually bring benefits to women. However, investments oriented towards hard infrastructure and planning focusing on speed and capacity rather

than accessibility, often create dis-benefits for women, by severing communities. Women are included in construction projects, but usually only in low-paid and low-skilled jobs. Upskilling and training in engineering, road maintenance, and other skills can be extended to women as well as men, by using quotas. In addition, the relationship between land use and transport planning needs to be strengthened to manage urban sprawl, as many women find themselves and their families pushed further from urban centers, and much of the green belts that they may use for market gardening or small holdings are eroded.

Measure:		Toolbox area			Country types		
The gendered impact of infrastructure		Legal / Engineering Marketing/Infrastructure/ All			All HIC LIC EIM		
Description of measure: Including gender aspects specifically in transport infrastructure projects		Action area:			Local /National /Region		
		Complementary Action Area					
		Road Safety	Green	Efficiency	Urban	Rural	All
Countries	Austria, Tanzania	Scalability			Synergy /Trade off		
		Easy	Mid	Selective			
Instrument	National government						
Typical actions:							
1. Gender mainstreaming in rural transport projects in Tanzania							
Example: Tanzania: Village Travel and Transport Programme VTTP (1995-2004) and Local Government Transport Program							

This program pioneered promising approaches to gender mainstreaming, and achieved 50 percent women's participation, bringing the potential of female transport and their disproportionate transport burden needs to the attention of policy makers. Much of the knowledge acquired during implementation has been incorporated into Tanzania's transport policy and applied in the ongoing Government rural transport program (LGTP). The projects helped to transform gender relationships in the rural transport sector and resulted in more equitable distribution of benefits between women and men. Besides infrastructure works, the projects included various components, such as labor-based training and institutional support to the Ministries of Transport and Finance. Gender perspectives were incorporated into all aspects of the project, and implementation was guided by time- and resource-bound gender equality plans (with qualitative and quantitative indicators). The projects achieved an average of 30 percent women's participation as laborers. Women also benefitted from training, and courses were offered to contractors as well as engineering and non-engineering local government staff. Some women have become subnational, national, and regional contractors. The projects adopted a systematic approach to mainstreaming gender, setting standards and guidelines for subsequent rural road projects. Institutional support included the development of policies, guidelines, and manuals, (some explicitly on gender, and others with a gender dimension).

2. Changing traditional approaches to infrastructure

Example: Regendering Vienna¹²⁵

Austria's capital city, Vienna has carried out more than 60 projects with gender mainstreaming in urban design. In 1999, a large-scale survey on gendered transportation use resulted in a focus on improving pedestrian access, from widening crosswalks to providing more lighting. Another analysis, this time done by two sociologists, revealed stark discrepancies in girls' and boys' access to public parks and recommended redesign of these spaces to make them more approachable for girls, such as by bringing in space for new activities other than football, and increasing numbers of footpaths. More than a kilometer of pavement has been widened to especially benefit pedestrians with strollers (usually women). There have been 26 new street lighting projects, and additional seating has been implemented in nine different locations. A successful pilot apartment complex designed by, and for, women also led to gender analysis requirements for all bids for city social housing contracts. Gender-differentiated analysis has now been institutionalized as a necessary consideration in plans for much of the city's new infrastructure. For example, bidders for social housing construction contracts are assessed not only for functionality and aesthetics but also for their gender impact.

Men's and women's urban mobility experiences are also influenced by the way transport infrastructures and services 'speak' to them. An interesting project against typical gender stereotypes in transport services initiative, *Wien sieht anders* ('Vienna sees differently'), included a campaign to regender-balance public signage. As a result, women were depicted alongside men as active participants in urban transport environments, with female pictograms on pedestrian crossing signals and on road worker signs. Much of this has been achieved because Vienna has a gender focal point for urban design.

Key challenges:

- Follow-through once project is finished
- Documenting and sharing knowledge
- Changing engrained habits
- Upskilling women

ENDNOTES

- 113 Based on present high levels of public transport use and walking
- 114 International Transport Forum web site <https://www.itf-oecd.org/member-countries>.
- 115 Follow up of Swedish Transport Policy objectives 2006, SIKa https://www.trafa.se/globalassets/sika/sika-rapport/sr_2006_4_eng.pdf
- 116 Building an Inclusive Mexico Policies for good governance for Gender Equality OECD 2016
- 117 UN Women, WRI, CTS Mexico
- 118 UK, Indonesia, Egypt, India, Mexico and South Africa
- 119 Driving towards equality - women ride hailing and the shared economy IFC 2017. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/drivingtowardequality
- 120 ILO Women in the Transport Sector Transport Policy Brief, 2013.
- 121 EU funded WISE project
- 122 European Bank of Reconstruction and Development
- 123 <http://iminco.net/women-in-mining/>
- 124 Allen H et al Ella se mueve segura, 2018, Salazar, 2006 (including both quotes); Gutierrez, 2003, pp.17-19. Gutierrez, M. (2003) Integrating Gender into World Bank Financed Transport Programs, Case Study Peru, The World Bank, Washington DC .
- 125 Source Dieke https://apolitical.co/solution_article/vienna-designed-city-women/
- 126 Allowing bus drivers to make on request stops between schedule stops at night

ANNEX IV.

LIST OF POLICY MEASURES

The list of policy measures identified in this paper to achieve the gender target has been consolidated and harmonized with the policy measures to achieve all other policy goals toward sustainable mobility. The Global Roadmap of Action toward Sus-

tainable Mobility provides the consolidated list of measures.

The consolidated policy measures that have an impact on gender are shown in the table below.

Table A4.1: Policy Measures with Description (by toolbox and thematic area, with an impact on gender)

Policy Measure	Policy Measure Description
Toolbox: Regulatory and Institutional	
Thematic Area: Plans and Strategies	
Develop an Integrated National Transport Plan	Develop and implement an integrated national transport plan to cover the four policy goals, all modes of transport, and passenger and freight traffic.
Set Targets across Policy Goals	Set clear targets to be achieved in the long term and in the interim for the four policy goals, aligned with an integrated sustainable mobility plan.
Develop Mobility Plans at the Sub-National Level	Develop a sustainable urban mobility plan and implement strategies at the sub-national level that are consistent with the integrated national sustainable transport plan.
Plan for a Multi-Tiered Rural Access Approach	Use a multi-tiered and multimodal approach to universal rural access in the integrated national transport plan, supporting both early attainment of universal rural access and further upgrading to higher-access tiers based on affordability and feasibility.
Mainstream Gender Aspects in Transport Plans	Mainstream gender into national transport plans to establish and improve the decision-making process on gender-sensitive transport.
Adopt TOD Principles in Land Use Planning	Adopt integrated land use planning that supports transit-oriented development (TOD), mixed land use and compact city planning, reforming development policies and zoning codes, limiting urban expansion, and incorporating rail network development in urban planning.
Mainstream Gender Aspects in Transport Plans	Mainstream gender into national transport plans to establish and improve the decision-making process on gender-sensitive transport.
Thematic Area: Institutional Design, Cooperation, and Coordination	
Coordinate Planning across Government Agencies	Coordinate across agencies to ensure integrated planning and shared responsibility for results across levels of government, jurisdictions, and agencies, including but not limited to the coordination of road safety responsibilities and the coordination of response to extreme weather events.

Policy Measure	Policy Measure Description
Define Roles and Accountabilities across Agencies	Define government roles, responsibilities and accountabilities in the transport sector across the four policy goals, modes of transport, national and sub-national government levels, and passenger and freight transport.
Establish Joint Gender Programs Across Agencies	Establish joint programs with ministries and agencies responsible for gender to include transport in their work program.
Thematic Area: International agreements and regulations	
Establish Maximum Driving Times for Drivers	Establish maximum driving times and minimum rest periods for professional drivers and vehicle operators, for example, road haulage and passenger transport vehicles, or accede to international/regional regulation in this area.
Review Legal Framework for Women's Security in Transport	Review the national framework for security and safety in public spaces used to access transport, and for in-vehicle protection from harassment.
Exclude Drivers with a Record of Gender-Based Violence	Set or improve standards on license requirements for taxis and buses to exclude those that have a history or criminal record of violence against women and minorities.
Review transport regulations periodically	Promote the periodic review of the regulations to allow the fast-moving mobility solutions to evolve towards a sustainable and inclusive transport system
Thematic Area: Regulations for Transport Services	
Define Laws for Key Safety Rules	Define standards and compliance regimes for key safety rules, for example, the use of seat belts and crash helmets for drivers and passengers, child restraints, driving without alcohol or other drugs or fatigue, driving without distraction, restrict the use of mobile phones while driving, considering the needs of women and vulnerable groups.
Require New and Used Vehicles to Meet Safety Standards	Require new and used vehicles to meet high quality safety standards, such as the recommended priority UN regulations, global technical regulations, or equivalent recognized national performance requirements.
Require Crash Protective Designs in Vehicles	Require new and used vehicles to meet high quality safety standards, such as the recommended priority UN regulations, global technical regulations, or equivalent recognized national performance requirements.
Thematic Area: Regulations for Vehicles and Vehicle Use	
Establish Data Protection Regulations	Establish personal and travel data protection regulations, with processes that handle personal data with the appropriate safeguards and ensure that data are not made available to the public without explicit informed consent.
Require Service Providers to Report Standardized Data	Establish standardized data reporting requirements for all transport service providers, including transportation network companies (TNC), public transport operators, and bike- or car-share companies.
Develop Data Repositories and Data Collection Guidelines	Develop centralized data repositories and establish data collection guidelines at the national and metropolitan levels, and facilitate data access to different stakeholders (academics, private sector, etc.) while establishing a legislative framework defining the context and purpose of its use.
Require Use of Data to Support Decision Making	Require using operational data to support decision making and regulatory oversight.

Policy Measure	Policy Measure Description
<i>Thematic Area: Regulations for Data Collection, Share and Use</i>	
Establish Data Protection Regulations	Establish personal and travel data protection regulations, with processes that handle personal data with the appropriate safeguards and ensure that data are not made available to the public without explicit informed consent.
Require Service Providers to Report Standardized Data	Establish standardized data reporting requirements for all transport service providers, including transportation network companies (TNC), public transport operators, and bike- or car-share companies.
Develop Data Repositories and Data Collection Guidelines	Develop centralized data repositories and establish data collection guidelines at the national and metropolitan levels, and facilitate data access to different stakeholders (academics, private sector, etc.) while establishing a legislative framework defining the context and purpose of its use.
Require Use of Data to Support Decision Making	Require using operational data to support decision making and regulatory oversight.
<i>Thematic Area: Procurement and Contracts</i>	
Integrate Gender in Public Procurement and PPPs	Integrate gender in bidding documents for standard public procurement and public-private partnerships (PPPs) by requesting bidders to demonstrate gender experience, by setting gender-specific targets for women's employment and entrepreneurship, for example, quotas for contracts to be awarded to women-owned and managed businesses.
<i>Thematic Area: Capacity Building and Human Resource Development</i>	
Identify and Empower Sustainable Mobility Champions	Identify and Empower Country Champions to Help Move Forward the Sustainable Mobility Agenda, for example, ministers and mayors.
Build Capacity Across Levels of Government	Build national and local capacity across levels of government, jurisdictions, organization, and modes, including providing training and information resources.
Provide Training for Workforce in Leadership Positions	Provide training for the current and future transport workforce in leadership positions, enabling well-trained staff to drive change toward sustainable mobility.
Facilitate Capacity Building at the International Level	Facilitate sector specific capacity building at the international level.
Build Capacity for Local Path and Road Maintenance	Provide capacity building to assist stakeholders to perform their roles in the maintenance of local paths and roads.
Train more Women on Skills Needed in Transport	Create incentives for training more women with the skills needed in transport, for example, operating heavy duty vehicles.
Build Capacity on Gender-Inclusive Accessibility Planning	Build capacity on accessibility planning that includes gender impacts, for example, consider access to centers of interest for women and gendered information on access to jobs and education.
Ensure Legal Protection for Women in the Workplace	Ensure non-discrimination and enforcement of legal protection of women in workplaces, and the removal of barriers of entry to employment for women in the transport sector.

Policy Measure	Policy Measure Description
Include Women in Recruitment and Foster Women's Leadership	Encourage public authorities and service providers to include women in their recruitment processes (gender-neutral job profiling), such as in the maintenance works for rural roads. Foster talent and leadership to create a baseline of decision makers in transport, promoting candidates to positions of power.
Train Security and Transport Staff in Gender Aspects	Train security and transport stakeholders in gendered aspects of transport, especially security.
Create Mentoring Programs and Professional Networks	Create programs to promote role models, mentoring and networks of transport professionals, including programs targeted to women.
Toolbox: Engineering and Technology	
Thematic Area: Technical Standards	
Set Design Standards for Sidewalks and Bicycle Paths	Set high quality design standards for sidewalks and bicycle paths, for example, safe and convenient pedestrian crossing and adequate street lighting, ensuring accessibility to persons with disabilities and considering gender sensitive aspects (for example, dropped kerbs at crossings, size of refuge islands, and timing of traffic signals).
Ensure Transport Project Design Includes Gender Aspects	Include considerations for women and for people with disabilities in transport infrastructure project design and planning.
Thematic Area: Asset Construction	
Expand Public Transport Infrastructure	Expand the public transport network adjusted to demand requirements, with an emphasis on equitable access and considering the most appropriate modes in each context, including bus, rail, demand-responsive service, cable-propelled transport and ferry transport.
Expand the All-Season Road Network	Expand the density of the all-season road network in rural areas.
Improve First and Last Mile Access Infrastructure	Evaluate and improve first and last mile access to major transport services in urban and rural areas.
Repurpose Road Space to Allow Access for All Modes	Repurpose existing road space with complete street designs accommodating diverse users and uses, with access for all modes, particularly pedestrians and cyclists and their access to public transport stations.
Thematic Area: Design and Deployment of Transport Services	
Improve the Quality and Safety of Public Transport	Improve the quality and safety standards of public and private as well as formal and informal public transport operations, such as service frequency, reliability, cleanliness, and safe driving practices, and implement bus lanes and other bus priority measures.
Ensure Access to Transport Services in Underserved Areas	Ensure complete transport services by extending services to underserved areas and populations.
Conduct Accessibility Evaluation and Mapping	Develop tools for measuring the accessibility of different locations and evaluation how various transport and land use changes will affect accessibility for various groups and activities, with a special attention to access for disadvantaged groups.
Thematic Area: Design and Deployment of Programs	

Policy Measure	Policy Measure Description
Support Data Sharing Programs and Platforms	Establish a framework and promote data sharing programs and platforms across different sectors to exchange data relevant for transport policy, such as data collaboratives models including the public and private sector.
Provide Sustainable Alternatives for Commuting Trips	Encourage initiatives that provide sustainable mobility options for employees, such as employer-sponsored transport programs, carpooling schemes, and public transport commuter benefits.
Thematic Area: Asset Management	
Audit the Usability and Safety of Public Transport for Women	Conduct systematic participatory audits to ensure that public transport infrastructure remain usable, safe and secure for women.
Thematic Area: Safeguards	
Ensure Women are not Marginalized during Resettlements	Ensure that women and their centers of interest are not marginalized in resettled because of transport projects.
Ensure Project-Induced Resettlement is Conducted Fairly	Ensure that project-induced displacements are economically justified and handled with fair and dignified treatment of those affected, ensuring that safeguards are in place.
Comply with Gender-Based Violence Prevention Practices	Require contractors to commit to an agreed code of conduct that should be applied to employees and sub-contractors, ensuring compliance with gender-based-violence prevention and response practices.
Mitigate the impact of transport on ecosystems and biodiversity	Manage potentially adverse environmental impacts of transport projects on ecosystems and biodiversity.
Toolbox: Economics and Finance	
Thematic Area: Project or Program Cycle	
Establish Selection Criteria for Feeder Roads Projects	Establish a set of selection criteria for feeder road projects and disseminate these widely among rural communities with a view to attracting their participation in the process.
Establish Performance Monitoring and Evaluation Schemes	Establish performance and result monitoring and evaluation schemes to inform the regular adjustment for projects, policies and programs, for example, the evaluation of road safety interventions and their institutional delivery.
Conduct Impact Evaluation Studies	Conduct impact evaluation studies to improve the evidence base available to policymakers, considering the impact of transport infrastructure projects on economic growth and employment, and considering differentiated impacts on women.
Thematic Area: Pricing for Efficiency and Inclusion	
Make Public Transport Fares Affordable for the Poor	Make public transport fares affordable for the poor using means testes approaches to ensure cost-recovering mechanisms.
Ensure Integrated Fare Payment across All Modes	Develop integrated fare payment systems across all modes of public transport, parking and road charges.
Thematic Area: Innovation Policy and Enhancement	
Provide Education Programs for Innovation	Provide neutral trainings and educational programs to develop up-to-date skills, increase awareness of the latest innovations and support innovation in transport, relying on close cooperation with companies to develop curriculums.

Policy Measure	Policy Measure Description
Toolbox: Communication	
<i>Thematic Area: Consultation and Public Engagement</i>	
Consult with Stakeholders during the Full Project Cycle	Consult extensively with stakeholders during project formulation and establish a framework for continuous consultation during project implementation.
Use Participatory Planning Methods	Use participatory planning methods, including creation of a website, to help communities propose interventions.
Ensure Women's Participation in Consultation Processes	Ensure that voices of women are upheld during pre- and post-project consultation.
Promote Public Discussion on New Mobility Solutions	Promote public discussion with civil society about new mobility solutions to generate new ideas, innovations and tools.
<i>Thematic Area: Promotion Campaigns and Public Awareness</i>	
Implement Awareness and Behavior Change Strategies	Implement awareness and behavior change (ABC) strategies to help shift attitudes towards sustainable modes, for example, public transport, walking and cycling, complementing other engineering, legal or economic measures.
Run Campaigns to Attract Women to Transport Professions	Develop public awareness campaigns to attract women to transport sector professions by promoting that they can be as good (and sometimes better) at traditional male jobs.
Implement Anti-Harassment Campaigns in Public Transport	Implement anti-harassment awareness campaigns in public transport spaces.
Foster a Security Culture in Public Transport	Foster a security culture to improve efficiency and attractiveness of public transport, based on the psychological elements that make passengers feel secure while using buses, trains, and other modes of public transport.
<i>Thematic Area: Knowledge Management and Dissemination of Best Practices</i>	
Share Knowledge on Successes and Best Practices	Share successes and best practices with other agencies at the local, national and international level, based on a well-designed knowledge transfer framework.

