

ADVANCING GENDER EQUALITY THROUGH E-MOBILITY IN ECUADOR



CHALLENGES, OPPORTUNITIES AND RECOMMENDATIONS



**WE DRIVE
CHANGE**
WOMEN IN E-MOBILITY DRIVE CHANGE

EXECUTIVE SUMMARY

This paper explores gender inequality in the context of e-mobility in Ecuador, a country ranked 50th on the World Economic Forum's Global Gender Gap Index for 2023. Despite notable advancements in gender parity, significant disparities persist in economic opportunities, employment, and safety, particularly within the transport sector. Women in Ecuador face substantial barriers, including higher reliance on public transport, lower vehicle ownership, and frequent safety concerns.

Ecuador's efforts to integrate gender considerations into public policies and climate initiatives are outlined, with specific attention to the National Sustainable Mobility Policy and the E-Moviliza project. However, challenges remain, including underdeveloped e-mobility infrastructure and insufficient support for women in the sector.

Opportunities for advancing gender equality through e-mobility are highlighted, such as implementing gender-responsive design, supporting women-led businesses, and enhancing safety in public transport. Recommendations include increasing gender diversity in decision-making roles, introducing gender quotas, providing targeted training, and improving data collection.

Overall, the paper emphasizes the need for innovative approaches and comprehensive policies to create an inclusive and equitable e-mobility environment in Ecuador, promoting both gender equality and sustainable transportation.

This paper was made possible through the generous funding of the SOLUTIONSplus project, supported by the European Commission's Horizon 2020 programme, and the eMOB and Gender project, a global initiative under GEF7.

ECUADOR

BACKGROUND

Ecuador ranks 50th out of 146 countries on the World Economic Forum's Global Gender Gap Index for 2023, reflecting notable progress in gender parity across economic opportunities, education, health, and political leadership. Although literacy rates between genders are nearly equal, women experience higher dropout rates due to economic pressures, housework, and family responsibilities. The wage gap remains significant, with women earning 15.3% less than men, and they are underrepresented in formal employment sectors, often relegated to self-employed or unpaid domestic roles. This underrepresentation contributes to higher poverty rates and underemployment among women, exacerbating economic disparities. Politically, while women's representation has improved, it has recently declined at the local level. Despite some advancements, women still encounter substantial barriers in employment and political empowerment.

Ecuador is actively integrating gender considerations into public policies and climate change initiatives. The National Council for Gender Equality, established to promote gender equality in public policy, plays a key role in this integration. The government's Nationally Determined Contributions (NDCs) incorporate gender inclusivity within climate strategies, supported by the NDC Support Program's development of gender-sensitive policies and indicators. The Ministry of Environment, Water, and Ecological Transition (MAATE)



advocates for gender mainstreaming in climate projects, as demonstrated by the E-Moviliza project, which aims to advance low-carbon electric mobility. The Commission on Gender and Climate Change (CGCC) works to integrate gender perspectives into climate policies and monitor related actions. Furthermore, the National Sustainable Mobility Policy (PNMUS/NUMP) includes gender equity and inclusion as essential components of sustainable urban mobility strategies.

GENDERED MOBILITY PATTERNS AND SAFETY CONCERNS IN ECUADOR

In Ecuador, public transport usage is notably high, with women relying on it more frequently (47.6%) compared to men (43%), and also engaging in walking more (32.9% of women vs. 28.6% of men). In contrast, vehicle ownership is predominantly male (72% vs. 28% for women), and men are more likely to use vehicles individually. Despite having 2.88 million road vehicles, electric vehicles constitute less than 1% of the total fleet.

Focusing on Quito, women make significantly more trips by public transport (64.4% in 2011 and 56.3% in 2020) and walk more often (16.2% compared to 15.1% for men). Women's primary reasons for using transport are care-related activities (33.3%) and work (30.9%), while men's usage is primarily for work (47.8%).

Women's freedom of movement is profoundly affected by safety concerns, with 90.1% feeling that public transport in Quito is unsafe. Many women encounter harassment or violence while using public transport or walking, including verbal assaults and physical violence. A 2019 study found that 61% of women and 59% of men feel unsafe on public transport in Quito, with sexual violence being a major issue. Research and surveys, including those conducted by UN Women and the Inter-American Development Bank, underscore the widespread harassment and violence against women in public spaces and emphasize the critical need for safer transport options and public spaces.





TRANSPORT LANDSCAPE

NATIONAL POLICIES AND STRATEGIES

Ecuador has implemented several policies to advance low-carbon mobility, including tram lines, a subway, and a cable car as part of its Nationally Determined Contributions (NDCs) to reduce GHG emissions by 9% unconditionally and 21% with international support by 2025. The Energy Efficiency Law mandates zero emissions for new public and commercial vehicles by 2030, extended from the original 2025 deadline. The National Electromobility Strategy and National Sustainable Urban Mobility Policy offer frameworks for sustainable transport, while Quito's Climate Action Plan targets a 30% emission reduction by 2030 and climate neutrality by 2050 through the Sustainable Mobility Master Plan. Despite these efforts, achieving decarbonization goals is hampered by insufficient tools and capacities.

BARRIERS TO LOW-CARBON MOBILITY

Despite regulatory advancements, Ecuador faces significant barriers to low-carbon mobility. Key issues include fragmented institutions with inadequate resources, limited private sector knowledge on e-mobility, and low end-user awareness of EV benefits. Additional challenges are the limited availability of EV types, insufficient local regulations and infrastructure, and underdeveloped vehicle end-of-life management systems. Economic incentives and financial mechanisms to mitigate the higher total cost of EV ownership are lacking, particularly due to subsidized fossil fuel prices. Locally, municipalities, newly responsible for urban mobility, lack the capacity and comprehensive vision required, focusing primarily on transit and permits with poor decision-making data. Furthermore, private public transport operators lack incentives to switch to e-buses due to fare caps and cooperative ownership structures. Freight transport, though promising, is often neglected in planning, complicating the establishment of a supportive e-mobility environment.

ELECTRIC VEHICLES AND CHARGING INFRASTRUCTURE

Electric vehicles (EVs) represent a very small fraction of the vehicle market in Ecuador, with sector information scarce and development in its early stages. The Ecuadorian Association of Automobile Enterprises (AEADE) reported annual sales of battery electric vehicles at under 150 units each year from 2016 to 2020, making up less than 0.11% of total vehicle sales. Hybrid vehicles average sales of 1,807 annually since 2015, but EVs comprise only 0.02% of the total fleet. Most EVs introduced in 2019 were automobiles and SUVs from brands like Dayang, Kia, and BYD, with Guayaquil introducing the first fleet of 20 electric buses. Charging infrastructure is limited, with only 59 public connectors across major cities and no infrastructure outside these areas, posing a significant barrier to widespread EV adoption. Ecuador's electricity generation is predominantly renewable, with 76.3% from hydroelectric power, offering a clean energy source for EVs. The National Strategy for Electric Mobility (ENME) proposes ambitious targets of 10,000 EVs by 2025 and 750,000 by 2040, but the market remains nascent and development uncoordinated. The potential of electromobility in Ecuador remains largely untapped.

Ecuador has introduced several measures and policies to accelerate low-carbon mobility, yet electric vehicles (EVs) only constitute 0.02% of the vehicle fleet. The GEF7 Project, to be implemented by UNEP and executed by UEMI, identifies key barriers including fragmented institutions, limited private sector knowledge on e-mobility, a nascent market, and an insufficient local regulatory framework. Additionally, end-of-life vehicle management systems are underdeveloped.

A comprehensive enabling environment is needed to balance the total cost of ownership, which currently favors combustion engines. The 2021 National Electromobility Strategy outlines economic, operational, and end-user barriers, emphasizing the need for innovative business models, demonstrative pilot projects with measurement, reporting, and verification (MRV) systems, and initiatives to educate the public on e-mobility benefits. At the local level, municipalities, having only recently taken on urban mobility responsibilities, lack the capacity and vision for comprehensive management. They primarily focus on transit and permits, with inadequate data quality for decision-making.

Public transport is mostly privately operated with no economic incentives for transitioning to e-buses, as fare caps and individual ownership structures within cooperatives pose challenges. While there are greater opportunities in urban and last-mile logistics, logistics often remains overlooked in urban mobility planning.

GENDER SAFETY AND INCLUSIVITY INITIATIVES IN QUITO'S TRANSPORT

Local actions and initiatives relevant to gender and priority attention groups in Quito include several measures to combat sexual harassment and promote safety. In 2021, the municipality developed an ordinance to stop sexual harassment in public places, providing concepts, budgets, protocols, and specific arrangements within the municipality to eradicate violence against women. Campaigns such as “Calles libres de acoso” (2012), “Cabinas Cuéntame” (2024), and “Bajale al acoso” (2027) were financed by the municipality to raise awareness and address this issue. The Patronato Municipal San José Unit developed the comprehensive “Bájale al Acoso Strategy” to prevent and address sexual violence in Quito’s Integrated Transport System through technological tools and established a Protocol of Action for cases of sexual violence on public transport. Additionally, 44 Trolleybus stops were remodeled to enhance safety and ensure equal access to public transport services.

Quito’s first subway line incorporates a gender perspective to create a safe and harassment-free integrated transportation system. The subway employs 18 female drivers out of 90 and uses protocols for reporting violence. The campaign “Cero Acoso” aims to stop harassment in public transportation. The subway system is built with universal access in mind, featuring elevators for priority groups (seniors, pregnant women, strollers, and people with disabilities), podotactile flooring for easier navigation, and exclusive access doors marked in blue for priority use.



GENDER MAINSTREAMING IN E-MOBILITY INITIATIVES

Gender mainstreaming involves integrating a gender perspective across all initiatives to promote equality, addressing both women's and men's concerns and experiences. This approach requires evaluating how planned actions affect different genders, ensuring equitable benefits.

Achieving gender mainstreaming involves analyzing gender and age-disaggregated data, understanding the political and contextual landscape, and considering the needs and rights of all stakeholders. It also necessitates inclusive participation from diverse groups and the use of gender-sensitive language throughout the project.

An illustrative example is the SOLUTIONSplus project, which unites various stakeholders—including cities, industry leaders, research institutions, and financing partners—to advance low-carbon urban mobility through innovative e-mobility solutions. Despite progress, gender inequality persists in the transport sector, restricting women's access to essential resources and opportunities. The global agenda, including the New Urban Agenda and SDG 5 on Gender Equality, underscores the importance of eliminating discrimination, addressing gender-based violence, valuing unpaid care work, and ensuring women's full participation in decision-making.



GENDER AND MOBILITY IN ECUADOR

CHALLENGES IN URBAN TRANSPORT SYSTEMS

Despite global initiatives like the New Urban Agenda and SDG 5 promoting gender equality, women in Ecuador face significant barriers in urban transport due to entrenched societal norms and safety concerns. The World Economic Forum's Global Gender Gap Index ranks Ecuador 50th out of 146 countries in 2023, reflecting progress in gender parity across economic opportunities, education, health, and political leadership.

EMPLOYMENT IN THE TRANSPORT SECTOR

Women represent only 7.5% of the workforce in transport and storage, highlighting a significant gender gap. Many women are self-employed or work in unpaid domestic roles, limiting their access to formal labor market benefits such as competitive salaries and social security.

PUBLIC TRANSPORT USE AND GENDER DISPARITIES

Women in Ecuador use public transport more frequently (47.6%) and walk more often (32.9%) compared to men (43% and 28.6%, respectively). Vehicle ownership is higher among men (72% vs. 28% for women), with electric vehicles comprising less than 1% of the total 2.88 million motor vehicles. In Quito, women make more trips by public transport (64.4%) and on foot (16.2%) compared to men. Women primarily use transport for care-related activities (33.3%) and work (30.9%), while men predominantly use it for work (47.8%).

URBAN LANDSCAPE AND TRANSPORT IN QUITO

Quito faces challenges related to urban transport connectivity and gender disparities. The city's transport network includes buses, taxis, and private vehicles, with 42 Bus Rapid Transit (BRT) stations, three electric trolley bus lines, and a metro rail system. The BiciQuito program provides free bicycles, and the metro links northern and southern parts of the city, aiming to improve accessibility and mobility.

SAFETY AND MOBILITY CONCERNS

Safety remains a critical issue, with 75% of women reporting verbal assaults and 70% experiencing physical harassment in public spaces, according to a UN Women survey. Additionally, six out of ten women suffer from domestic violence, reflecting a broader culture of violence against women.

GOVERNMENT INITIATIVES AND POLICIES ON GENDER AND MOBILITY

INTEGRATION OF GENDER EQUALITY IN PUBLIC POLICIES

Ecuador is advancing gender equality through the establishment of the National Council for Gender Equality via Executive Decree No. 1733 (2009). This council focuses on embedding gender mainstreaming in public policies and addressing cultural stereotypes regarding gender roles.

COMMISSION ON GENDER AND CLIMATE CHANGE

Formed in 2018, the CGCC works to embed gender perspectives in climate policies, including the NDCs and the National Climate Change Mitigation Plan. The commission aims to enhance gender integration in climate actions, collaborate with the National Council for Gender Equality, and address gender-related climate impacts.

CURRENT CHALLENGES IN QUITO

Despite progress, women remain underrepresented in the transportation sector, with only 1.83% of drivers being female. Safety concerns, limited options, and societal norms continue to restrict women's mobility. The Sustainable Mobility Master Plan for Quito reveals that 13% of daily trips are related to care responsibilities, which disproportionately affect vulnerable groups such as older adults, children, and pregnant women.

GENDER AND CLIMATE CHANGE

Ecuador's Nationally Determined Contributions (NDC) incorporate gender considerations, reflecting the country's commitment to integrating gender into climate strategies. The Ministry of Environment, Water, and Ecological Transition (MAATE) promotes gender mainstreaming in climate projects and adheres to the Lima Work Programme's guidelines for gender-responsive climate action.

NATIONAL SUSTAINABLE MOBILITY POLICY

Launched on June 21, 2023, PNMUS outlines strategies for sustainable urban mobility with gender equity as a core principle. It mandates that all actions account for the specific needs of women and priority groups.



GENDER ROLES ANALYSIS AND RECOMMENDATIONS

Societal and cultural gender roles significantly impact mobility and hinder the transition to sustainable transportation in Ecuador. Suburban areas often lack reliable and safe public transport, disproportionately affecting women and priority groups who, due to lower incomes, are more likely to reside outside expensive city centers. This geographic and economic disparity limits their access to jobs, education, and essential services.

Traditional gender roles assign primary caregiving responsibilities to women, restricting their workforce participation due to mobility issues and inflexible schedules. The combined burden of household responsibilities and inadequate transportation options affects their work-life balance and engagement in sustainable mobility initiatives. Safety concerns, such as harassment and poor lighting, further deter women from using public transport.

Economic disparities also limit women's access to private vehicles, worsening job and educational constraints. Societal biases discourage women from pursuing roles requiring travel or technical expertise, while limited awareness of gender-inclusive transportation options hinders their mobility.

The SOLUTIONSplus project highlights gender-specific barriers and best practices within Quito's transport sector. Interviews with industry professionals reveal challenges such as societal stigma, lack of inclusive workplace policies, and insufficient support for working mothers, leading to high turnover rates among female employees. Additionally, unreliable transport for suburban residents exacerbates these issues.

SUMMARY OF SHORTCOMINGS

- **Limited public transportation and safety concerns**
- **Restricted access to vehicles and its consequences**
- **Caregiving responsibilities and work-life balance challenges**
- **Societal and cultural norms**

RECOMMENDATIONS FOR ADVANCING GENDER EQUALITY IN E-MOBILITY

Increase Gender Diversity

Boost representation of women and LGBTQ+ individuals in planning and decision-making roles across all SOLUTIONSplus sectors. Implement targeted recruitment, diversity quotas, and inclusive hiring practices to build a representative workforce. Cultivate an inclusive workplace culture that values diverse perspectives.

More Women in Technical Positions

Introduce gender quotas for technical roles and promote mentorship and leadership development programs for women. Encourage partner organizations to appoint women to leadership positions, serving as role models and inspiring others.

Training Public Officials

Provide training for public officials on integrating gender perspectives into electromobility policies and infrastructure. Focus on gender-disaggregated data collection, gender-responsive design principles, and strategies to address mobility inequalities.

Implement Targeted Training Programs

Develop training programs for women and LGBTQ+ individuals in the e-mobility sector, focusing on technical skills, safety, and career advancement. Collaborate with educational institutions and industry partners for certifications and apprenticeships.

Design Pilot Projects with Gender Perspectives

Incorporate gender considerations into pilot projects, addressing specific needs such as care-related trips and safety. Develop e-bike programs tailored to caregivers and conduct preparatory training sessions.

Promote Gender-Responsive Design

Ensure that e-mobility vehicles and infrastructure incorporate gender-responsive design features. Gather feedback from women users to create more accessible and user-friendly transportation solutions.

Establish Supportive Policies

Implement workplace policies that support working mothers and address harassment. Offer flexible work arrangements, childcare support, and enforce a zero-tolerance policy towards harassment in the e-mobility sector.

Address Safety Concerns

Develop strategies to enhance safety in transportation sectors, including improved infrastructure, lighting, and surveillance. Collaborate with local authorities and community organizations to ensure safer commuting environments for women.

Set Clear Goals and Targets

Establish and monitor measurable goals for gender inclusion within SOLUTIONSplus. Track progress in leadership representation, technical participation, and the impact of gender-responsive initiatives.

Disseminate Best Practices

Share successful gender-inclusive initiatives and best practices through case studies, workshops, and online platforms. Promote knowledge exchange to accelerate progress in creating equitable transportation systems.

Improve Data Collection by Gender

Enhance gender-disaggregated data collection on mobility patterns and barriers. Collaborate with research institutions and civil society to fill data gaps and inform targeted interventions.