Advancing Gender Equality through E-Mobility in Ecuador

Challenges, Opportunities and Recommendations

SOLUTIONSplus

The SOLUTIONSplus project recived funding from the European Union Horizon 2020 research and innovation Programme under grant agreement no. 875041

Executive Summary

This paper examines gender inequality in Ecuador's e-mobility sector. Despite progress, women face barriers like heavy reliance on public transport, low vehicle ownership, and safety issues. Ecuador's policies, including the National Sustainable Mobility Policy and the E-Moviliza project, aim to address these disparities, but challenges like inadequate e-mobility infrastructure persist.

Opportunities for gender equality include gender-responsive design, supporting women-led businesses, and improving public transport safety. Recommendations include boosting gender diversity in leadership, introducing quotas, providing training, and enhancing data collection. The paper calls for innovative policies to ensure inclusive and equitable e-mobility in Ecuador, advancing both gender equality and sustainability.

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 on the World Economic Forum’s 2023 Global Gender Gap Index, showing progress in gender parity, but disparities persist. Women face higher dropout rates due to economic pressures and family duties, earn 15.3% less than men, and are underrepresented in formal jobs, leading to higher poverty and underemployment. Political representation for women has improved but recently declined locally.

Ecuador is incorporating gender considerations into public policies and climate initiatives. The National Council for Gender Equality and the Ministry of Environment lead efforts like the E-Moviliza project, promoting gender-sensitive policies in climate action and sustainable mobility. The National Sustainable Mobility Policy also prioritizes gender equity.

Gendered Mobility Patterns and Safety concerns in Ecuador

In Ecuador, women rely more on public transport (47.6%) and walking (32.9%) than men, who dominate vehicle ownership (72%) and individual car use. Electric vehicles make up less than 1% of the 2.88 million vehicles.

In Quito, women use public transport more (56.3% vs. 47.8% for men) and walk more often. Safety is a major concern, with 90.1% of women feeling unsafe on public transport, facing harassment and violence. Studies highlight widespread sexual violence and emphasize the urgent need for safer transport and public spaces.

Transport Landscape

National Policies and Strategies:

Ecuador has introduced various policies to promote low-carbon mobility, including tram lines, a subway, and a cable car. The country aims to reduce GHG emissions by 9% unconditionally and 21% with international support by 2025, as outlined in its Nationally Determined Contributions (NDCs). The Energy Efficiency Law mandates zero emissions for new public

and commercial vehicles by 2030. The National Electromobility Strategy and Sustainable Urban Mobility Policy provide frameworks, and Quito's Climate Action Plan targets a 30% emission reduction by 2030 and climate neutrality by 2050. However, these goals face challenges due to limited tools and capacities.

Barriers to Low-Carbon Mobility:
Despite progress, Ecuador encounters significant barriers, including fragmented institutions, limited private sector knowledge of e-mobility, and low public awareness of EV benefits. Other challenges include insufficient EV options, inadequate local regulations and infrastructure, and poor vehicle end-of-life management. Economic incentives are lacking, especially with subsidized fossil fuel prices. Municipalities, tasked with urban mobility, often lack capacity and focus mainly on transit and permits without adequate data.

Electric vehicles and charging infrastructure

Electric vehicles (EVs) in Ecuador make up a tiny portion of the market, with sales under 150 units annually from 2016 to 2020, representing less than 0.11% of total vehicle sales. The charging infrastructure is limited, with only 59 public connectors in major cities. Although Ecuador's electricity is mostly renewable, EV adoption faces challenges due to a fragmented market, limited knowledge, and a weak regulatory framework. The National Electromobility Strategy highlights economic and operational barriers, emphasizing the need for innovative models, pilot projects, and public education. Public transport lacks incentives for e-buses, and urban logistics remain under-prioritized in mobility planning.

Gender safety and inclusivity initiatives in Quitos transport
Quito has implemented several initiatives to improve gender safety and inclusivity in transport. A 2021 ordinance targets sexual harassment in public spaces, with campaigns like "Calles libres de acoso" and "Bajale al acoso" raising awareness. The "Bájale al Acoso Strategy" aims to prevent and address sexual violence in the city's transport system using technology and a Protocol of Action. Safety improvements include remodeling 44 Trolleybus stops and incorporating gender perspectives in the new subway line, which features protocols against harassment, female drivers, and universal access facilities.

Gender mainstreaming in E-mobility Initiatives
Gender mainstreaming integrates a gender perspective into all initiatives to ensure equality and address the concerns of all genders. It involves analyzing gender-disaggregated data, understanding the political context, and involving diverse groups. For example, the SOLUTIONSplus project promotes low-carbon urban mobility with a focus on innovative e-mobility solutions. However, gender inequality in transport persists, affecting women's access to resources and opportunities. Global frameworks like the New Urban Agenda and SDG 5 emphasize eliminating discrimination and ensuring women's full participation in decision-making.

Gender and Mobility in Ecuador

Despite global efforts like the New Urban Agenda and SDG 5 for gender equality, women in Ecuador face major barriers in urban transport due to societal norms and safety issues. The

World Economic Forum's 2023 Global Gender Gap Index ranks Ecuador 50th out of 146 countries, showing progress in gender parity in various sectors.

In the transport sector, women make up only 7.5% of the workforce, with many in self-employed or unpaid domestic roles, limiting their access to formal employment benefits.

Public Transport Use and Gender Disparities

In Ecuador, women use public transport more (47.6%) and walk more (32.9%) than men (43% and 28.6%). Vehicle ownership is higher among men (72% vs. 28% for women), with electric vehicles being less than 1% of the 2.88 million vehicles. In Quito, women also use public transport (64.4%) and walk more (16.2%) than men. Women mainly use transport for care (33.3%) and work (30.9%), while men use it predominantly for work (47.8%).

Urban Landscape and Transport in Quito

Quito's transport network, including 42 BRT stations, three electric trolley bus lines, and a metro system, faces connectivity and gender disparity challenges. The BiciQuito program offers free bicycles, and the metro improves city-wide mobility.

Safety and Mobility Concerns

Safety is a major issue, with 75% of women reporting verbal assaults and 70% physical harassment in public spaces. Additionally, six out of ten women experience domestic violence, highlighting broader violence issues.

Integration of Gender Equality in Public Policies

Ecuador is advancing gender equality through the National Council for Gender Equality (Executive Decree No. 1733, 2009), which promotes gender mainstreaming in public policies and challenges cultural stereotypes.

Commission on Gender and Climate Change

Established in 2018, the CGCC integrates gender perspectives into climate policies, such as the NDCs and the National Climate Change Mitigation Plan, and works with the National Council for Gender Equality to address gender impacts of climate change.

Current Challenges in Quito

Women remain underrepresented in the transport sector (1.83% of drivers) and face mobility restrictions due to safety, limited options, and societal norms. The Sustainable Mobility Master Plan notes that 13% of daily trips are for care responsibilities, affecting vulnerable groups.

Gender and Climate Change

Ecuador's NDCs include gender considerations, with the Ministry of Environment promoting gender-responsive climate actions in line with the Lima Work Programme.

National Sustainable Mobility Policy

Launched on June 21, 2023, PNMUS promotes sustainable urban mobility with a focus on gender equity, ensuring that all strategies address the specific needs of women and priority groups.

Gender Roles Analysis and Recommendations

Societal and cultural gender roles in Ecuador impact mobility and hinder the shift to sustainable transportation. Suburban areas often lack safe, reliable public transport, affecting women and priority groups who live outside expensive city centers, limiting their access to jobs, education, and services.

Traditional gender roles assign caregiving primarily to women, restricting their workforce participation due to mobility issues and inflexible schedules. This, combined with inadequate transportation and safety concerns, affects their work-life balance and involvement in sustainable mobility. Economic disparities further limit women's access to private vehicles, reinforcing job and educational constraints and discouraging roles requiring travel or technical skills.

The SOLUTIONSplus project identifies gender-specific barriers in Quito's transport sector, including societal stigma, lack of inclusive policies, and insufficient support for working mothers, leading to high female employee turnover and exacerbating issues for suburban residents.

Recommendations for Advancing Gender Equality in E-Mobility

1. **Increase Gender Diversity**: Enhance representation of women and LGBTQ+ individuals in planning and decision-making roles. Use targeted recruitment, diversity quotas, and inclusive hiring practices to build a representative workforce and foster an inclusive culture.
2. **More Women in Technical Positions**: Implement gender quotas for technical roles and support mentorship and leadership programs for women. Encourage partners to appoint women to leadership roles as role models.
3. **Training Public Officials**: Provide training for officials on integrating gender perspectives into e-mobility policies, focusing on gender-disaggregated data, gender-responsive design, and mobility inequalities.
4. **Implement Targeted Training Programs**: Create training programs for women and LGBTQ+ individuals in e-mobility, emphasizing technical skills, safety, and career advancement. Partner with educational institutions for certifications and apprenticeships.
5. **Design Pilot Projects with Gender Perspectives**: Include gender considerations in pilot projects, addressing needs such as care-related trips and safety. Develop e-bike programs for caregivers and offer preparatory training.
6. **Promote Gender-Responsive Design**: Ensure e-mobility vehicles and infrastructure feature gender-responsive designs. Gather feedback from women to enhance accessibility and user-friendliness.
7. **Establish Supportive Policies**: Implement workplace policies supporting working mothers, including flexible work arrangements, childcare support, and zero-tolerance harassment policies.

8. **Address Safety Concerns**: Improve safety in transportation with better infrastructure, lighting, and surveillance. Work with local authorities and community groups to create safer commuting environments for women.
9. **Set Clear Goals and Targets**: Establish measurable goals for gender inclusion within SOLUTIONSplus. Monitor progress in leadership roles, technical participation, and the impact of gender-responsive initiatives.
10. **Disseminate Best Practices**: Share successful gender-inclusive practices through case studies, workshops, and online platforms. Promote knowledge exchange to advance equitable transportation systems.
11. **Improve Data Collection by Gender**: Enhance gender-disaggregated data on mobility patterns and barriers. Collaborate with research institutions and civil society to improve data accuracy and application.