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Ensuring more women-inclusive development of transport infrastructure: Adopting a human security approach in project formulation

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SUMMARY

- Women's everyday movement continues to be a highly gendered experience, with the disparity in mobility patterns between women and men as a source of insecurities and risks related to public commutes.
- Adopting a human security approach in project formulation can help effectively identify the specific needs, vulnerabilities, and capacities of women commuters. This approach leads to more inclusive development of transport projects and infrastructures.
- Participatory approaches, such as Photovoice, enrich the cultural and social contexts in transport project formulation.
- The use of the human security approach to examine women's commuting experience provides insight to the multidimensional and gender-specific challenges they encounter every day.
- Examining women's mobility from a human security lens involves identifying the needed protection and existing empowerment efforts to ensure a more inclusive and dignified movement in urban spaces.

The views expressed in this paper are those of the author(s) and do not necessarily represent the official positions of either JICA or the JICA Ogata Sadako Research Institute for Peace and Development.

1. Women's everyday mobility: A gendered experience

Women make up half of the world's population, yet their daily mobility continues to be a highly gendered experience.¹ Women's mobility patterns differ significantly from men's due to many factors such as employment patterns, life course events (e.g., child-rearing and caregiving responsibilities), and social norms². These differences include the purpose and distance of their travel, as well as the selection of the mode of transportation. Compared to men, women are more likely to take multiple short non-work trips, travel with children and elderly companions, and depend on para-transit modes as a result of traditional gender roles.

The disparity in men's and women's movement patterns is a source of varying insecurities and risks related to their public commute, wherein women often face heightened vulnerability than men when moving in public spaces, not just because of their physiological distinctions but also because of the roles in their spheres of engagement in their family, community, and city. Women's mobility patterns expose them to diverse insecurities, including gender-specific ones (e.g. catcalling, harassment, women-related travel discomfort). These difficulties and inadequate urban infrastructure intensify women's exposure to unsafe travel conditions. Although global initiatives aim to ensure women's safer and more accessible movement (across the age spectrum) (e.g., International Transport Forum 2018), the complex and interconnected issues related to women's urban mobility remain.

2. Human security approach for more women-inclusive development projects

Our ability to move freely and safely constantly challenges, not only during times of conflict or disaster but also in our day-to-day lives. Women and other vulnerable groups encounter various challenges when navigating public spaces, stemming from the complex societal changes and compounded by factors such as gender, race, class, sexual orientation, and physical ability. These intersecting vulnerabilities contribute to distinct experiences of discrimination, oppression, and marginalization, shaping the narratives of insecurity that many individuals, among which women, face daily.

Human security is both a concept and an approach. It has been a doctrine and guide for foreign policies and international development assistance, promoting the involvement of communities and institutions across every level to mitigate and reduce threats' impact and fulfill all aspects of people's vital freedom. Likewise, human security is an approach that offers an analytical framework for addressing cross-cutting challenges for people's survival, livelihood, and dignity through the five fundamental principles of people-centeredness, comprehensive, context-specific, prevention-oriented, protection, and empowerment measures³.

Central to the human security approach is examining the challenges individuals and communities face by posing the following questions: Security of whom? Security from what? Security by what means? In the context of women and their movement in public space, the individual-based questions

¹ Chiang and Khan, 2022; Goel et al., 2023; Joshi and Bailey, 2023.

² Gauvin et al., 2020; Goel et al., 2023; Rau and Scheiner 2020; Warner and Sharp 2016

³ OCHA 2009

include:

- What are the features of women’s commuting experience in urban spaces?
- What are the challenges in women’s everyday commute?
- What projects/policies/infrastructures improve women’s commuting experience? What do women commuters do/what can they do to improve their commute?

A human security approach effectively identifies the root causes and impact of threats, the multidimensional risks and threats, and the interlinkages among these insecurities. The 1994 Human Development Report synthesizes threats across seven dimensions: economic, food, health, environmental, personal, community, and political security (Table 1). To understand women’s mobility, especially in urban spaces, through a human security lens, it is essential to place women commuters at the core of integrated protection strategies and empowerment opportunities to ensure their well-being and dignified movement in urban areas.

Mapping women’s commuting needs, vulnerabilities, and capacities across these dimensions can aid in formulating more inclusive development projects. More so, it paints a more comprehensive picture of the interrelated challenges and gaps in implementing more inclusive protection and empowerment strategies for a safer and more dignified movement of women in public spaces.

3.Recommendations

Under the research project [“Human Security and Practices of Empowerment in East Asia,”](#) an offshoot study [“Everyday Mobility: Examining the Empowerment of Women Commuters in Urban Philippines”](#) was developed in 2023 to identify the interconnected and compounded human security threats and challenges women face during their commutes using Photovoice. Based on this study, the authors offer the following recommendations:

3.1 Participatory approaches such as Photovoice complement the human security approach by considering specific contexts when formulating transport projects

Participatory approaches provide opportunities to expand the focus of problem identification to cover the overall transport experience (i.e., from start to end of the journey), instead of just one part. This is especially relevant for urban areas in Asia, where commuting typically involves multiple transfers from origin to destination. The transport experience, therefore, involves a “system” that may have both formal and informal actors and components. The system's effectiveness as a whole becomes significant in people’s travel decisions, especially their choice of public transportation. Although it would often be unrealistic to consider all the components of the system in project formulation, having a clear understanding of it and the impacts on the overall transport experience can help expand typical project scopes or identify action points for project stakeholders. This is especially relevant for developing countries where the interplay between regulations, governing institutions, and political

factors contribute significantly to systemic issues that directly or indirectly impact the success of transport projects. A more comprehensive articulation of mobility needs to facilitate discussions on how different stakeholders can cooperate to achieve the project's objective in the short, medium, and long term.

While there have been many studies on women and transport⁴, the discussions of women's challenges are often contained in surveys and researcher-led interviews. Using "photovoice" can complement the human security approach in examining women's commuting experience. This participatory approach involves the participants taking photographs that represent their individual perspectives and lived experiences⁵. These pictures are then shared and discussed with study participants to draw out connecting themes. Through Photovoice, participants were empowered to capture their commuting narratives, identify their interconnected challenges, and reflect on ways to address the issues and be resilient.

Placing the data collection in the hands of female commuters empowers them to create their own narrative in defining their human security, addressing the [individual-based security question](#). Giving the participants the freedom to select when and where the photos are taken provides insight into the parts of their trips that they find meaningful. This also provides photographic evidence of cultural and social contexts that objective surveys may not easily capture. More so, "photovoice" allows the inclusion of background issues related to infrastructure components that are not typically considered in the scope of formulated projects. For example, the quality of connections, such as roads and lighting on the way to transport stops, as well as the availability and quality of transfer modes that serve as last-mile connectivity options for commuters, can serve as barriers for users in using a particular bus or railway line.

3.2 Using the human security lens to examine women's commuting experience sheds light on the multidimensional and gendered challenges they face every day.

It is important to note that women's movement in the public space is not limited to a single activity. Women take public transportation more frequently than men, as they also have to take other trips related to their care function, like caring for children and elderly relatives and other tasks beyond commuting for economic opportunities. Thus, the challenges they experience cover the multiple aspects of their lives. For instance, personal security risks faced by the respondents, such as theft, sexual harassment, and violence, occur as a result of overcrowding as well as a lack of sufficient protection measures during periods of low passenger demand. Exposure to environmental hazards such as the warming climate or flooding leads to discomfort, stress, and even sickness that affects passenger health. Avoiding risks associated with public transport leads to women incurring additional costs as they shift to a more expensive but safer transport mode, thereby threatening their household budget allotted for food and other necessities. Delays due to congestion or difficulty getting

⁴ Law, 1999; Root, Schintler, and Button, 2000; Fernando and Porter, 2002; De Madariaga, 2013

⁵ See: Budig, K. et al. 2018; Wang, C. and M. A Burris. 1997.

a ride also led to lower incomes, loss of productivity, and missed opportunities, threatening their economic security.

There are also challenges distinct to women. Sexual and reproductive health concerns are more pronounced (if not exclusively) experienced by women commuters. For example, women's menstrual cycles and prenatal conditions affect commuting comfort, which becomes a significant factor in their commuting decisions. Overcrowded spaces and poorly built infrastructures add to the stress and physical discomfort that women experience.

By systematically identifying these challenges and the accompanying insecurities through the seven human security dimensions, we can comprehensively map and present the insecurities that women experience concerning their everyday commute. [Figure 1](#) illustrates the list of leading issues that commuting women experience and the interactions of these issues with various human security dimensions. The problem of theft in public spaces is a significant concern for women commuting, and this is not just an issue of personal security. However, it impacts their economic and food security. Appreciation of the interlinkages of different commuting issues that women experience aids in identifying and expanding the impacts of a specific project or intervention on the welfare of its users.

3.3 Evaluating women's mobility through a human security lens involves understanding the needed protection and current empowerment efforts to create more inclusive and dignified movements in urban space.

In understanding women's urban mobility through the human security lens, it is necessary to situate women commuters at the core of the combined demand for protection strategies and empowerment opportunities to ensure their well-being and dignified movement in urban spaces. Identifying the protection needs and their empowerment efforts confirm that realizing a more comprehensive response to these commuting challenges requires the complementary participation of the state, other stakeholders, and regular commuters.

Determining the needed protection and empowerment initiatives drawn from women's daily commuting experiences can help develop more targeted programs to improve women's commuting experience (protection) and further increase women's capacities (empowerment) for a safer and more comfortable commute. Based on the study, the identified needed protection for women commuters includes more significant government intervention by improving the public transport system, implementing more gender-sensitive policies, and increasing the visibility of enforcers in public areas. The anticipated improvement in public transport service quality includes increased capacity, improved reliability, and training for drivers and conductors, among others. Infrastructure improvements are not limited to roads and bridges but also include well-functioning elevators and better connectivity, which would enhance the convenience and comfort of commuters while increasing accessibility for different vulnerable groups, such as older people and people with disabilities. Long-term protection requires investments in climate-resilient infrastructure and low-carbon transport options such as solar-powered vehicles and promoting active transport modes (e.g.,

cycling and walking). These needed protections are not limited to what is expected from the state but also from other actors and stakeholders.

Adopting a human security approach in transport project formulation can aid in clearly identifying inclusive solutions that consider the required top-down protection and those that empower women commuters themselves. [Figure 2](#) illustrates how the human security lens can be used to present this complementarity between women's needed protection and their own empowerment efforts. The figure reveals two critical points: (1) it identified various solutions to address the various commuting insecurities for women (text at the center), and (2) it shows where women are most empowered to provide their own interventions and issues where they require support from other actors.

Complementing the protection initiatives are women's commuter-initiated empowerment strategies to address issues they face, such as taking alternative commutes (using motor taxis) to make it to their appointments on time and paying the exact amount in cash to avoid being shortchanged. Efforts from women to avoid overcrowded transport include early commuting time, which contributes to easing the challenges in their everyday travel. Women commuters employ individual measures to increase their vigilance against crimes. This includes increased alertness about their surroundings while commuting and bringing their own tool for self-protection, such as a pocketknife, pepper spray, a whistle, or a flashlight. Further enhancement of women's capacity to respond to unsafe environments can be done through self-defense training.

Although women employ creative empowering strategies to avoid harassment in public transport and ensure a more comfortable commute to reach their destination, protection mechanisms through more women-inclusive infrastructure are needed. Improved infrastructure and increased public transport reliability heavily rely on better transport policies and support from multiple stakeholders. Advocating for policy measures to benefit women, establishing women's groups, and backing women commuter advocacy networks help develop sustainable solutions and enhance women's participation for safer and more dignified commutes.

Table 1: Human Security Dimensions⁶

Dimensions	Description
Personal security	The threats include various forms of violence that require security from physical violence and various threats. People are increasingly threatened by sudden, unpredictable violence (e.g., threats from the state through physical torture inflicted by the military or police); threats from other states such as wars; threats from international or cross-border terrorism; threats from other groups of people such as ethnic or religious conflicts; threats from individuals or gangs against other individuals, or street violence; threats from hostage-taking; threats directed against women such as domestic violence, abuse, or rape; threats directed against children such as child abuse, neglected child labor, or child prostitution; and threats to one's self such as suicide or drug abuse.
Economic security	The main economic threat is poverty, which requires an assured basic income - either from productive and remunerative work (through employment in the public or private sector, wage employment, or self-employment) or from government-financed social safety nets.
Health security	This includes injury and disease, which requires access to healthcare and health services, including safe and affordable family planning. The threats to health security are greater for poor people in rural areas, particularly women and children, who are more exposed to disease.
Environmental security	The threats are pollution, environmental degradation, and resource depletion, which requires a healthy physical environment, security from the degradation of the local ecosystems, air and water pollution, deforestation, desertification, salinization, natural hazards (e.g., cyclones, earthquakes, floods, droughts, or landslides) and man-made disasters (e.g., due to road or nuclear accidents or poorly built slum buildings).
Community security	This refers to the threat to the integrity of cultural diversity and requires security from oppressive traditional practices, the harsh treatment of women, discrimination against ethnic or indigenous groups and refugees, group rebellions, and armed conflicts.
Food security	The threats include hunger and famine, which requires that all people at all times have both physical and economic access to basic food - that they should be entitled to food by growing it for themselves, buying it, or using the public food distribution system. Food availability is a necessary but not a sufficient condition for food security. People often go hungry because they cannot afford food, not because food is unavailable.
Political security	The threat here is political repression, which requires respect for human rights, protection from military dictatorships or abuse, political or state repression, the practice of torture, ill-treatment, or disappearance, and political detention and imprisonment.

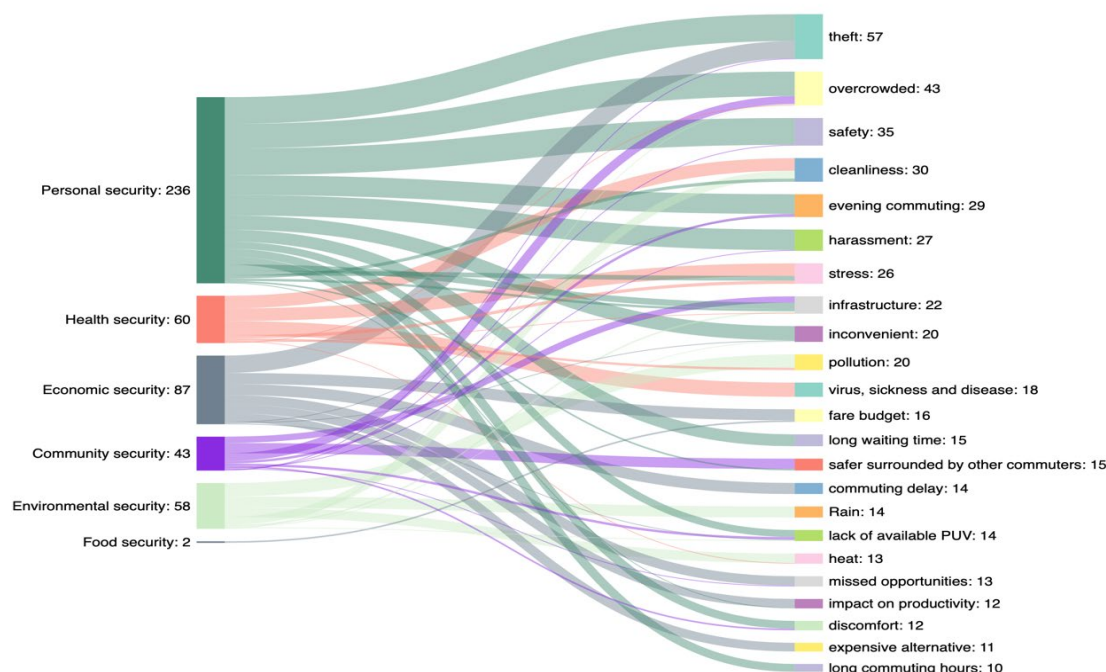


Figure 1: Commuting issues across human security dimensions. *Source: Authors.*

⁶ Adapted from Tadjbakhsh and Chenoy (2007) synthesizing the threats to human security in seven components as mentioned in the 1994 UNDP Human Development Report.

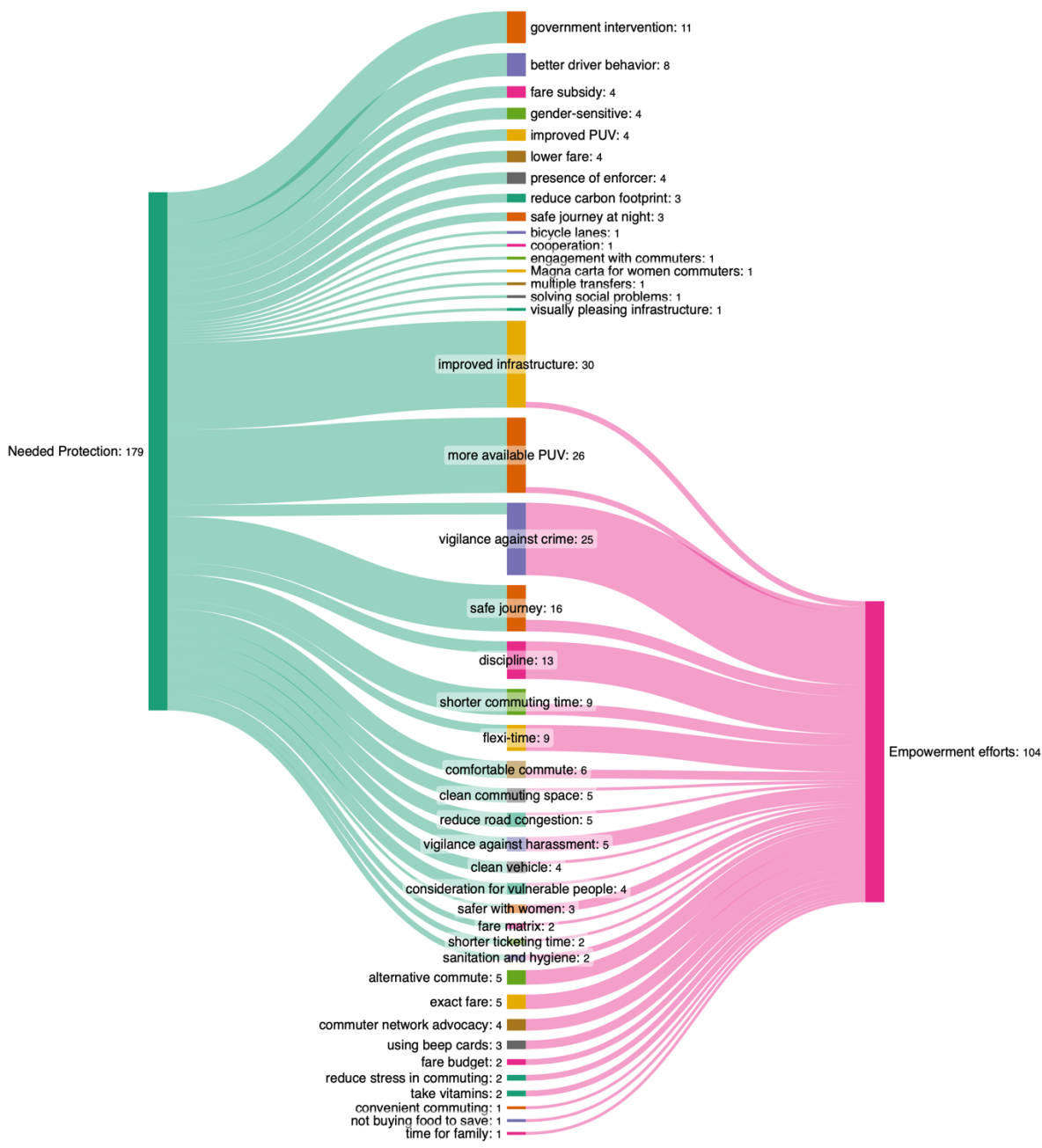


Figure 2: Needed protection and empowerment initiatives by women commuters.

Source: Authors.

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References

- Budig, K. et al. 2018. "Photovoice and empowerment: evaluating the transformative potential of a participatory action research project." *BMC Public Health* 18 (432), 9pp.
- Chiang, A.P. and P.R. Khan. 2022. "Women Need a Greater Role in Designing Transport Systems in Asia." Asian Development Bank. Available at: <https://blogs.adb.org/blog/women-need-greater-role-designing-transport-systems-asia>
- De Madariaga, I.S. 2013. "From women in transport to gender in transport: challenging conceptual frameworks for improved policymaking." *Journal of International Affairs* 67(1):43–65.
- Fernando, P. and G. Porter. 2002. *Balancing the load: women, gender, and transport*. London: Zed Books.
- Gauvin, L. et al. 2020. "Gender gaps in urban mobility." *Humanity Social Science Communication* 7 (11), 13pp. <https://doi.org/10.1057/s41599-020-0500-x>
- Goel, R. et al. 2023. "Gender differences in active travel in major cities across the world." *Transportation* 50, 733-749 (2023). Available at: <https://doi.org/doi.org/10.1007/s11116-021-10259-4>
- International Transport Forum. 2018. *Women's Safety and Security: A Public Transport Priority*. Paris: OECD Publishing.
- Joshi, Saakshi, and Ajay Bailey. 2023. "What happens next? Exploring women's transport motility through the story completion method." *Journal of transport geography* 107: 103547.
- Law, R. 1999. "Beyond "women and transport": towards new geographies of gender and daily mobility." *Progress in Human Geography* 23 (4): 567–88.
- Office for the Coordination of Humanitarian Affairs (OCHA). 2009. "Human Security in Theory and Practice: Application of the Human Security Concept and the United Nations Trust Fund for Human Security." New York: Human Security Unit, Office for the Coordination of Humanitarian Affairs. <http://ochaonline.un.org/humansecurity>
- Rau, H. and J. Scheiner. Eds. 2020. *Mobility and Travel Behaviour Across the Life Course*. Cheltenham, Massachusetts: Edward Elgar Publishing. <https://doi.org/10.4337/9781789907810.00009>
- Root, A., L. Schintler, and K. Button. 2000. "Women, travel and the idea of "sustainable transport" *Transport Reviews* 20 (3): 369–83.
- Robles, L.R., and S.M. Gaspay. 2024. *Examining women's commuting experience in urban Philippines: A photovoice exercise on human security*. JICA Ogata Research Institute Discussion Paper No.18. Tokyo: JICA Ogata Research Institute for Peace and Development.
- Tadjbakhsh, S. and A. Chenoy. 2007. *Human Security: Concepts and Implications*. 1st ed. New York: Routledge. <https://doi.org/10.4324/9780203965955>
- Wang, C. and M. A. Burris. 1997. "Photovoice: Concept, Methodology, and Use of Participatory Needs Assessment." *Health Education and Behavior* 24 (3): 369–87.
- Warner, C. and G. Sharp. 2016. "The short- and long-term effects of life events on residential mobility." *Advances in Life Course Research* 27: 1–15. <https://doi.org/10.1016/j.alcr.2015.09.002>

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