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## Counting the invisible: Why gendered data must lead the climate and health agenda at COP30

*This piece argues that although the Lancet Countdown on Climate Change and Health exposes the vast human and economic costs of climate inaction, gendered impacts remain largely invisible due to the absence of sex-disaggregated data. LSE MSc student Rupsa Chakraborty and Assistant Professor Miqdad Asaria highlight that women, especially those from marginalised communities in low- and middle-income countries, are most affected yet underrepresented in policymaking. As COP30 unfolds in Belém, Brazil, this article calls for gender-based data collection to be a central feature of the new Gender Action Plan to ensure equitable climate action.*

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As the world watches COP30 unfold, the [2025 Lancet Countdown on Climate Change and Health](#) warns that delayed climate action has led to an estimated 546,000 heat-related deaths annually between 2012 and 2021. In 2024 alone, heat exposure resulted in a record-high loss of 639 billion potential work hours—an immense human and economic toll.

Yet these figures reveal only part of the crisis. The gendered and intersectional costs of climate inaction remain largely invisible because the data needed to expose them are missing. [UN Women estimates that by 2050](#), climate change could push 158 million more women and girls into poverty—underscoring that without gender-disaggregated data, climate policies will continue to obscure inequities rather than address them. COP30 must place data equity at the centre of climate action.

Understanding who is most affected by climate change requires gender-disaggregated data, yet such information remains largely absent from global assessments. According to the Lancet Countdown, in 2024, people in India experienced an average of 19.8 heatwave days—6.6 of which would not have occurred without human-induced climate change. However, without gender-based data, we cannot assess how these heatwaves differentially affect men and women, leaving a critical gap in both understanding and policy response. [The evidence from low- and middle-income](#)

**countries** indicates that women often face greater exposure to extreme heat and have fewer resources, such as access to cooling, healthcare, and decision-making power to adapt effectively.

For example, in South Asia, many women spend several hours daily in poorly ventilated kitchens cooking with biomass fuels, which increase the temperature and produce toxic pollutants. In these conditions, the effects of prolonged exposure include dehydration, heat stress, and even death; however, such **indoor deaths rarely appear in the official statistics** because the surveillance systems lack the capacity to capture gender-specific exposures or to distinguish between occupational and domestic heat stress.



*Credit: UN Women 'Progress on the Sustainable Development Goals'*

Experts caution that this lack of data distorts both the understanding of risk and ability to respond effectively. "In much of the Global South, women stay indoors for longer and wear heavier clothing because of sociocultural norms. This increases their body temperature within badly ventilated homes. The current heat surveillance systems do not capture such gendered exposures, hence the underreporting of indoor, heat-related mortality among females," said Dr Dileep Mavalankar, who led the design of India's first Heat Action Plan in 2013. Dr Mavalankar believes that if health and climate surveillance contained data that was segregated by gender, occupation, and location, policies could then be tailored to real vulnerabilities. These could centre on the improvement of ventilation in low-income housing, assurance of cooling for indoor workers, and proper channeling of adaptation funds to those most exposed. Dr Mavalankar argues, "India is lacking the political will to disaggregate climate gendered data...without such data, we are planning blind."

The lack of disaggregated data is a technical and political failure that hits the most marginalised women hardest. In coastal Bangladesh, the impacts of cyclones, salinity, and erosion overlap, and studies have linked contaminated water and bad sanitation **with widespread infections of the reproductive tract**. In India's sugarcane belts, climate-instigated agrarian crises have driven low-income young women to **undergo unnecessary hysterectomies** to keep working, living with lifelong health and economic consequences.

This invisibility extends to the economic research and reporting. In 2024 alone, weather-related disasters caused an estimated US\$304 billion in losses, reflecting the growing economic toll of

climate inaction. Yet these losses are typically calculated using formal labour data, which excludes most women. **According to UN Women**, 80% of women in South Asia, 74% in sub-Saharan Africa, and 54% in Latin America work in the informal economy as street vendors, domestic workers, and subsistence farmers—occupations that are acutely climate-sensitive but poorly documented.

Following the launch of the UK report in London on 30 October, Marina Romanello, Executive Director of The Lancet Countdown commented that “the absence of gender-disaggregated climate-health data hampers our ability to identify how environmental stressors affect women differently and to design equitable, evidence-based adaptation strategies.”

### **The consequences of missing data resonate throughout health systems.**

Maternal health emergencies: Increasingly, rising temperatures are recognized as a **maternal health emergency**, but global estimates seldom disaggregate pregnancy-related impacts. The number of heat-risk days facing pregnant women doubled **between 2020 and 2024 in 222 out of 247 countries**, with rising preterm birth, stillbirth, and complications. In the 2010 floods in Pakistan, poor sanitation and restricted mobility increased infection risks and made childbirth unsafe for thousands of women. These outcomes remain largely anecdotal because health surveillance seldom links reproductive and environmental data –a gap that obscures how climate stressors compound existing inequities in maternal care.

Air pollution and intergenerational inequality: In 2022, fossil fuel and household pollution accounted for **4.8 million deaths in the world**. In India, **113 deaths per 100,000 people** were due to household pollution, with women and girls in poorly ventilated rural homes most exposed to PM<sub>2.5</sub> levels—often as much as 80 times over WHO guidelines. The gendered exposures cascade down through generations: in Bangladesh, prenatal exposure to air pollution has been linked to stunting in boys and respiratory illness in girls, illustrating the intergenerational transmission of environmental inequality.

Social and economic fallout: **Climate-induced displacement** has increased by 41% from 2008 to 2022; 80% of the displaced have been women. **Economic stress and the migration of men** in search of work often leave women behind with heavier workloads, reduced incomes, and increased exposure to violence. In regions such as Colombia, Mali, Yemen, Bangladesh, and Ethiopia, there has been an intensification of climate shocks and escalating **gender-based violence** and child marriage. **Women form 40%** of the workforce contributing to agriculture worldwide but less than 20% of land title holders, thereby excluding them from most mechanisms of adaptation finance.

### **What is needed next?**

Vulnerability can be turned into resilience **if gender-responsive programmes** are supported by disaggregated data. Communities adapt to climate risks more effectively once policies recognize women’s roles. Evidence from Nepal’s women-led forest groups, Bangladesh’s cyclone preparedness committees, and Indonesia’s food cooperatives indicates that inclusive governance

reinforces both sustainability and disaster preparedness. Scaling up such initiatives requires robust, intersectional data to build an evidence-driven framework that makes women's contributions visible to policymakers and ensures adaptation strategies protect those most at risk.

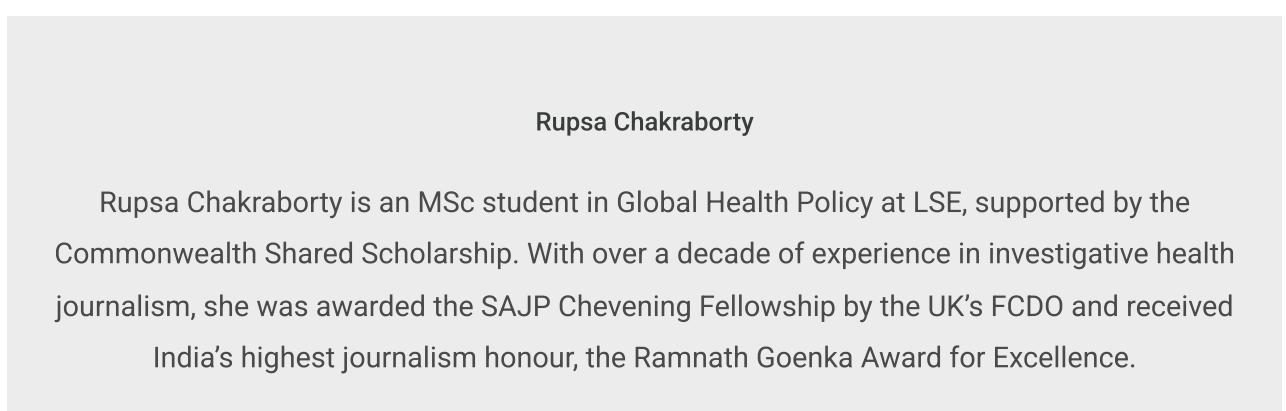
With negotiations moving forward in view of COP30 in Belém, Brazil, **these lessons assume fresh urgency**. The conference is likely to **finalize an enhanced Gender Action Plan (GAP)**, with a focus on data-driven and gender-responsive climate action. Sarah Hendriks, director of UN Women's Policy, Programme, **warned in a statement** that failing to adopt a strong GAP would jeopardise progress on gender equality, weakening women's leadership and participation in global climate action. **Feminist networks are calling for** world leaders to make the collection of intersectional data a core condition of all adaptation and mitigation frameworks.

The most important next step at COP30 is to institutionalize gender- and intersectional-disaggregated data in all climate and health policies. This requires a commitment by governments to systematic evidence-gathering of how climate change is disproportionately affecting women, informal workers, and other marginalized groups. The revised Gender Action Plan should ensure targeted, equitable interventions, such as heat-resilient housing, protection of maternal health, and inclusive climate financing. Financing mechanisms need to prioritize data systems in low- and middle-income countries. Women-led local initiatives should be treated as essential drivers of resilience. This will only be accomplished through more active participation by women. At COP29, **only eight out of the 78 world leaders present were women**, and **only four leaders** mentioned the impact of climate change on women. Women's representation needs to be increased at international, national, and state levels so that gendered issues and data are accurately reflected in policy on climate. At COP30, fair action should start with counting all those who pay the most.

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Feature image of Belem, Brazil sourced from Pexels.

### About the author



Rupsa Chakraborty

Rupsa Chakraborty is an MSc student in Global Health Policy at LSE, supported by the Commonwealth Shared Scholarship. With over a decade of experience in investigative health journalism, she was awarded the SAJP Chevening Fellowship by the UK's FCDO and received India's highest journalism honour, the Ramnath Goenka Award for Excellence.

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