

GENDERED IMPACTS OF HEAT WAVES AND DROUGHT IN ASIA AND THE PACIFIC: A REVIEW IN THE CONTEXT OF EL NIÑO

Photo: UN Women/ZANALA Bangladesh Ltd.

Summary

The cyclical reoccurrence of El Niño every two to seven years exacerbates climatic challenges faced by countries in the Asia and the Pacific region, intensifying heat waves and drought episodes. These extreme weather events have significant effects on food security, health, and economic productivity, among others. These impacts are gendered due to discriminatory gender norms, power relations, and structural inequalities which increase risks for women, girls, and people from other marginalised groups. Therefore, it is crucial to address the gendered effects of these recurring cycles of extreme heat and water scarcity. This policy brief examines the impacts of heat waves and drought on women's food security, economic productivity, and care work, and highlights the alarming occurrence of gender-based and sexual violence during climate-induced challenges. It provides a set of proactive and gender-transformative recommendations for humanitarian and disaster risk reduction practitioners to improve preparedness efforts.

Introduction

The cyclical reoccurrence of El Niño exacerbates the climatic challenges faced by countries in the region by intensifying heat waves and drought episodes. Across South Asia, El Niño intensifies climatic conditions, leading to below-normal precipitation and above-average temperature during the monsoon season in large parts of the region, particularly in South Asia.¹ Its impacts, however, extend beyond this region, affecting countries in Southeast Asia such as Indonesia, Malaysia, and the Philippines, as well as the central Pacific Islands such as Fiji, Papua New Guinea, Timor-Leste, and Tonga, by causing warmer and drier conditions.² Heat waves and droughts caused by these climatic events have significant gender implications. Women face various challenges, including, but not limited to, an increased vulnerability to food insecurity, income loss, an increasing care burden, and the risk of gender-based violence due to discriminatory gender norms and structural inequalities.

¹ ACAPS 2023; FAO and OCHA 2023.

² ACAPS 2023.

Food Insecurity

El Niño disturbs rainfall patterns, with significant implications for agricultural and fish yields.³ The 2023 El Niño’s climatic effects, for instance, had a significant impact on food security in several countries across the region. In October 2023, a Food Security Alert was issued for Timor-Leste due to food shortages exacerbated by the El Niño drought, compounded by successive years of flooding and escalating global rice prices, which pushed 22 per cent of the population into food insecurity.⁴ Myanmar was a country of concern for food insecurity in 2023, as the growing likelihood of above-normal temperatures resulting from El Niño posed an additional risk to agricultural production, contributing to the already escalating food prices.⁵ Bangladesh, classified as one of the top 10 countries with more than 1 million people facing acute food insecurity in 2023, is vulnerable to the high temperatures associated with El Niño, further jeopardizing their agricultural yields and exacerbating the challenges they face in terms of food security.⁶

Food insecurity has gender implications that are felt across the region. In some countries, women play a key role in food security. For instance, in the Pacific, women often bear the responsibility of producing food for domestic consumption and gleaning and harvesting fish and sea life from coastal and inshore areas.⁷ A decrease in crop yields and fish stocks will have an impact on their ability to provide food for their families, leading to more time spent searching for food, worsening

women’s existing time poverty.⁸ In countries across Asia, women also experience discrimination in intra-household food allocation during crises.⁹ Studies from South Asia have documented common practices of women cooking and serving the rest of the family and eating last in the household, or skipping meals altogether.¹⁰ During times of food insecurity, these power dynamics that limit women’s access to food within the household are likely to be exacerbated, with serious health consequences for women. This is particularly concerning, given that the estimated prevalence of anaemia among women in Asia and the Pacific was already at 32.9 per cent in 2019.¹¹



Photo: UN Women/Ploy Phutpheng

3 UN Women 2014.

4 WFP and FAO 2023; WFP 2023.

5 OCHA 2023.

6 ACAPS 2023; FSIN 2023.

7 UN Women 2014.

8 UN Women 2014. Time poverty is defined by Kes and Swaminathan (2005) as “the burden of competing claims on an individual’s time that reduce their ability to make unconstrained choices in how they allocate their time leading to increased work intensity and to trade-offs among various tasks.” Women’s time poverty is rooted in norms that shape gender division of labor and structural inequalities.

9 Akhter 2019.

10 Ali and Vallianatos 2017; Alston and Akhter 2016; Uraguchi 2010.

11 FAO et al. 2022.

Economic Productivity and Care Work

Extreme heat is expected to have the greatest impact on people who work outdoors in sectors with high levels of informality, including street vendors and agricultural workers, as well as workers who lack access to adequate cooling in their workplaces, such as factory or garment workers.¹² This is alarming especially for women in the Asia and the Pacific region as they often engage in informal and vulnerable employment, concentrated in low value-added sectors such as agriculture and retail trade.¹³

Research has shown that heat stress resulted in up to 30 per cent income loss for women homeworkers in South Asia.¹⁴ Likewise, a survey of Cambodian factory workers has shown that heat stress has affected the ability to work for 22 per cent of female workers, with 6 per cent reporting missed workdays.¹⁵ Research conducted in the city of Ahmedabad in the western Indian state of Gujarat has shown that heat waves pose a significant threat to the incomes of fruit and vegetable vendors due to heat-induced spoilage.¹⁶ Likewise, focus-group discussions with women farmers, weavers, sewers, embroiders, construction workers, head carriers, home-based workers, and trash recyclers in Ahmadabad revealed that most women suffer financial losses as raw materials and finished goods perish in the heat or income is lost when they rest during the hottest times of the day.¹⁷ Furthermore, evidence indicates that female outdoor laborers have limited access to early warning systems due to their social vulnerability, such as low literacy levels and a lack of phone ownership.¹⁸

Notably, research conducted across the region has shown that, during times of drought and heat stress, men tend to migrate to meet family obligations. Women often remain behind due largely to care responsibilities and gender norms that restrict their mobility, preventing them from diversifying away from climate-sensitive income sources.¹⁹ Men's migration to diversify their livelihoods in times of environmental distress, coupled with women's restricted opportunities for migration, is associated with a higher probability of women working in agriculture under these difficult climatic conditions, contributing to the phenomenon known as 'feminization of agricultural distress'.²⁰ Adding to this, women farmers are unable to adopt climate-resilient agriculture due to land tenure issues, a lack of knowledge, awareness, and skills regarding technology, climate change, and production methods, which makes them more vulnerable to the effects of heat waves and droughts. In fact, evidence shows that farm plots managed by women lose significantly more crop value than those managed by men during periods of heat stress.²¹ Similarly, farm incomes in female-headed households have been shown to be more sensitive to heat stress and drought exposure than those in male-headed households.²²

Compounding these challenges, studies have shown that droughts exacerbate women's and girls' disproportionate responsibility for unpaid care and domestic work. During droughts, women shoulder the responsibility of securing water for their families, often walking long distances to collect water and queuing for long hours.²³

¹² ADB 2023.

¹³ ILO 2023.

¹⁴ ADB 2023.

¹⁵ ADB 2023.

¹⁶ Hebbar 2024.

¹⁷ Hebbar 2024.

¹⁸ Trahan 2024.

¹⁹ Southard and Randell 2022.

²⁰ Southard and Randell 2022.

²¹ FAO 2024.

²² FAO 2024.

²³ UN Women 2023a.

Likewise, women and girls are often obliged to cope with food insecurity by increasing time and effort spent on providing food for their families.²⁴

Such increase in demand for care work within the family, and the resulting time poverty, may limit opportunities for women to engage in productive labor, potentially leading some to quit their jobs and forego education opportunities. This is critical as women already perform 80 per cent of total hours of unpaid care work in Asia and the Pacific, while the labor participation rate of women aged 25 and older is only 48.5 per cent.²⁵

Gender-Based Violence

Extreme weather events put women and girls at greater risk of human rights violations, particularly sexual and gender-based violence. Heat waves and dry spells, for instance, are associated with early and forced marriages in several countries across the region. Studies have revealed that girls and women between the ages of 11 and 23 were at an increased risk of marrying in the year of, or after, moderate to severe heat

waves in Bangladesh.²⁶ Likewise, in Cambodia and Nepal, a strong association is observed between increasing temperatures and child marriage, as families resort to forced marriage as a coping mechanism.²⁷ In Papua New Guinea, the drought caused by the 2015-2016 El Niño led to increasing risks of gender-based violence, including forced marriage and trafficking.²⁸ Furthermore, droughts and heat waves cause agricultural loss, forest mortality, and drinking water scarcity²⁹, forcing women to travel longer distances to collect food, firewood, and water. Evidence suggests that women are more vulnerable to sexual violence when they travel longer distances in search of these depleted sources and are forced to choose between using unsafe sources, such as dirty or salinized water, and risking violence.³⁰ Moreover, heat waves and droughts triggered by El Niño may also increase the risk of intimate-partner violence (IPV). In Timor-Leste, for instance, increases in relative aridity are found to be correlated with increases in IPV.³¹



Photo: UN Women/Magfuzur Rahman Shana

²⁴ UN Women 2023a.

²⁵ ESCAP 2022.

²⁶ Carrico et al. 2022.

²⁷ UN Women 2023.

²⁸ Care 2017.

²⁹ Miralles et al. 2019

³⁰ UNGA 2023; APWLD 2022.

³¹ UN Women 2023b.

Recommendations: Proactive and Gender-Transformative Measures

The cyclical reoccurrence of El Niño exacerbates the climatic challenges faced by countries in the region by intensifying heat waves and drought episodes. Women experience multiple challenges, including, but not limited to, increased vulnerability to food insecurity, reduced income, increased care responsibilities, and the threat of gender-based and sexual violence as a result of discriminatory gender norms, power relations, and structural inequalities. Therefore, it is crucial to scale up prevention efforts to address the gendered effects of these recurring cycles of extreme heat and drought. The following are a number of key recommendations for humanitarian and disaster risk reduction practitioners to improve preparedness efforts.

Anticipatory Action: Anticipatory action refers to actions taken to prevent or reduce potential disaster impacts prior to a shock or before acute impacts are felt, based on forecasts or predictions.³² Anticipatory action is an effective tool for responding to the gendered effects of heat waves and droughts. It can effectively address women’s contextual and diverse needs and potentially deliver transformative outcomes. Anticipatory actions, for example, can implement specific measures to help vulnerable farmers create climate-resilient livelihoods.

Evidence suggests that climate-smart agriculture not only improves the resilience of women farmers, but it can also increase women’s agency.³³ Training women farmers in climate-smart agriculture and providing them with the necessary tools and technology has the potential to improve their resilience to heat waves and drought, as well as deliver potentially transformative results.

Gender Analyses and Collaboration with Women-Led Organizations: Utilize existing gender analyses and partner with local women-led organizations, as well as disability and LGBTIQ+ organizations/community leaders, in the design of interventions. This analytical and collaborative approach aims to create interventions that not only meet women’s diverse and contextual needs, but also address the root causes of gender inequality and increase women’s agency. Include a gender analytical lens in food security alerts/analyses.



Photo: UN Women/Qiu Bi

³² IFRC 2020.

³³ OECD 2023.

Gender-Transformative Early Warning Systems:

Support community early warning and ensure that early warning systems are gender-transformative.³⁴ This could entail tailoring information dissemination methods for women when conveying early warning messages. In addition, targeted trainings for women who are disproportionately affected by heat waves and droughts, such as street vendors and farmers, can help raise awareness and improve women’s knowledge of these weather events and related risks, thereby improving their responsiveness to early warnings. Evidence shows that when women are empowered with disaster knowledge, they demonstrate their capacity to effectively respond to disasters, ultimately empowering women’s decision-making power in society.³⁵

Awareness-Raising on Gender-Based Violence:

Launch community-based awareness campaigns that actively involve men and boys to challenge traditional gender norms that contribute to child marriage and harmful male coping mechanisms. Ensure that gender-based violence prevention and management are integrated into disaster preparedness and management in accordance with the gender-based violence service principles (rights-based approach, community-based approach, survivor-centered approach, informed consent and information sharing, immediate response and referral, case handling) and processes of integration (assessment and analysis of needs, strategic planning, coordination, resource mobilization, implementation, participation, and monitoring and evaluation).³⁶

Care Burden and Time Poverty: Establish context-specific care modalities, informed by community feedback to alleviate women’s caregiving burden and reduce time poverty, alongside targeted programs that involve men and boys in discussions about caregiving responsibilities.



Photo: UN Women/Montira Narkvichien

³⁴ Practical Action 2019.

³⁵ ICCBV 2022.

³⁶ UN Women and UNFPA 2022.

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