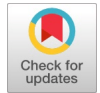


Gendered Vulnerabilities in Disaster Responses: A Case Study of Majuli Island, Assam

Josephine Nongmaithem



Abstract: *This study employs a qualitative research methodology to study the gender disparities in disaster responses, focusing on the case study of Majuli Island in Assam, India, to provide nuanced insights into the distinct vulnerabilities experienced by women, particularly in the context of floods. Through an in-depth exploration of social norms, behavioural restrictions, and resource allocation practices, the research elucidates how women's roles as caregivers and providers constrain their mobility and exacerbate their susceptibility to harm. The gendered ramifications of disasters on health, encompassing reproductive health issues and malnutrition, are underscored, alongside the psychological and physiological impacts that precipitate enduring mental anguish and heightened risks of violence and abuse. The findings underscore the imperative for gender-sensitive approaches to disaster preparedness, response, and recovery, advocating for comprehensive strategies that foreground women's safety, well-being, and empowerment. By adopting a qualitative research methodology grounded in descriptive investigation, the study delves deeply into the lived experiences of communities grappling with disaster risks, offering invaluable insights for policymakers, practitioners, and communities striving to foster inclusive and resilient societies.*

Keywords: *Disaster Responses, Gender Disparities, Gender-Sensitive Approaches, Majuli Island, Vulnerabilities*

I. INTRODUCTION

Gender disparities persist in societies worldwide, diverting resources away from women and towards men. This inequity encompasses various aspects of life, including roles, responsibilities, needs, and interests. Efforts towards gender equity aim to eradicate discrimination based on sex, yet significant numbers of impoverished women in India still grapple with gender-based inequalities (Blackie et al., 1994, [2][20][21][22]; Fothergill, 1996, [6]). The relative power dynamics within families are shaped by social and economic factors, influencing individuals' ability to negotiate and access resources (Agarwal, 1992, [1]).

Assessing the impact of disasters typically involves examining casualties, injuries, and damage to property and livelihoods. However, disasters affect men and women differently, influenced by their social and economic standing.

Women, often relegated to subordinate roles within patriarchal systems, face heightened vulnerability due to limited control over resources and participation in decision-making processes (Swain, 2007, [18]). Disasters can shift women's roles from caretakers to income earners, further exacerbating their challenges.

Disaster responses are not impartial but shaped by cultural, ideological, and religious beliefs, underscoring biases in our reactions (De Mel, 2007, [4]; De Mel, McKenzie & Woodruff, 2010, [5]). Poverty exacerbates women's vulnerability during disasters, compounded by socio-cultural barriers that restrict their access to resources and opportunities (De Alwis, 2002, [3]; De Mel et al., 2010, [5]). Limited access to credit, training, and ownership rights hinder women's preparedness and mitigation efforts, reflecting broader issues of empowerment (Motsisi, 1993, [12]; 1994a, [13][24]; 1994b, [14]).

Disasters disrupt not only physical but also socio-cultural structures within households, affecting rituals, education, and marriage practices, particularly in agrarian economies (Swain, 2007, [18]). Widows, often stigmatized and marginalised, face constraints on participating in social and religious activities, compounding their hardship (Sahoo & Parida, 2007, [16]). Moreover, vulnerable women may be coerced into undesirable marriages or endure abuse while striving to fulfil multiple roles within their families (Philip, 2005, [15]). These challenges underscore the urgent need for comprehensive approaches to address gender disparities in disaster contexts.

The Indian sub-continent, blessed with abundant natural water resources, experiences annual flood events of varying magnitudes. The north-eastern region singularly constitutes one-third of the aggregate run-off of the nation through the Brahmaputra and Barak River systems, attributed to the significant precipitation amassed by their catchments (Wiebe, 2006, [19]). India's precipitation patterns exhibit significant spatial and temporal variations (Mohapatra & Singh, 2003, [11]; Sen, 2010, [17]), with average annual rainfall ranging from over 2800 mm in areas such as the Western Ghats, Andaman and Nicobar Islands, Assam, and Meghalaya to around 300 mm in the western part of Rajasthan. Ranked fifth globally in terms of discharge, the Brahmaputra River carries a mean annual flood discharge of 48,160 m³/sec and sediment load of 400 million metric tons at Pandu, Assam (Goswami & Das, 2003, [7]). Monsoonal rains from May to October contribute 82% of the Brahmaputra's mean annual flow at Pandu (Goswami, 1985, [9]).

Manuscript received on 24 February 2024 | Revised Manuscript received on 09 March 2024 | Manuscript Accepted on 15 March 2024 | Manuscript published on 30 March 2024.

* Correspondence Author (s)

Josephine Nongmaithem*, Ph.D Scholar, Department of Social Work, Delhi University, New Delhi India. E-mail: jossy611@gmail.com. ORCID ID: [0000-0002-9767-5340](https://orcid.org/0000-0002-9767-5340)

© The Authors. Published by Lattice Science Publication (LSP). This is an open access article under the CC-BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

Majuli, situated amidst the Brahmaputra River in Assam, India, holds the distinction of being the largest river island globally. However, the island is facing the imminent threat of extinction due to the gradual loss of land area caused by severe bank erosion and flood inundation. The flow of the Brahmaputra river is already exhibiting changes in volume and intensity (IPCC, 2007, [10]). The flood plains of the river are among the most hazard-prone regions in the country, with over 40% of its land (3.2 million hectares) vulnerable to flood damage (Goswami, 2008, [8][23]).

Disasters, particularly floods, pose significant challenges to communities worldwide, impacting individuals and societies in multifaceted ways. Within disaster contexts, gender disparities often exacerbate vulnerabilities, with women facing unique challenges that are frequently overlooked in relief and recovery efforts. The case study of Majuli Island provides a valuable opportunity to examine the gendered aspects of disaster responses and explore the specific vulnerabilities faced by women in flood-prone regions. By investigating social norms, behavioural restrictions, and resource allocation practices, this study aims to shed light on the disproportionate impact of disasters on women and the systemic barriers that contribute to their heightened vulnerability. Furthermore, the examination of the gendered impacts of disasters on health, including reproductive health issues, access to sanitation and healthcare services, and risks of malnutrition, highlights the urgent need for gender-sensitive approaches to disaster management. Additionally, the psychological and physiological impacts of disasters on women underscore the importance of addressing the mental and emotional well-being of disaster-affected populations, particularly women who often endure ongoing mental anguish and heightened risks of violence and abuse. By understanding and addressing the gendered dimensions of disasters, policymakers, practitioners, and communities can work towards building more inclusive and resilient societies where all individuals, regardless of gender, are empowered to effectively cope with and recover from disasters.

A. Relevance of the Study

The study of gendered vulnerabilities in disaster responses, particularly in the context of Majuli island in Assam, India, is relevant due to the lack of comprehensive research addressing the specific challenges faced by women in this disaster-prone region. By studying the social norms, behavioural restrictions, and resource allocation practices that influence women's experiences during disasters, this study aims to fill a critical gap in the existing literature and provide valuable insights for policymakers, practitioners, and community leaders involved in disaster management and risk reduction efforts. Understanding the disproportionate vulnerabilities faced by women, including limited access to essential resources, healthcare, and protection from violence, is essential for developing gender-sensitive approaches to disaster preparedness, response, and recovery. Moreover, by examining the psychological and physiological impacts of disasters on women, this study seeks to inform evidence-based policies and interventions aimed at promoting the resilience and well-being of women in Majuli and similar disaster-affected regions, ultimately contributing to the creation of more inclusive and resilient societies.

II. RESEARCH METHODOLOGY

A. Research Design

The study employs a qualitative research methodology, focusing on descriptive exploration to delve deeply into the lived experiences of communities grappling with disaster risks.

B. Sampling Framework of the Study

For sampling, the study selects sites in Majuli, including Salmora, Dakhinpat, Besamora, Baghargaon, Jengraimukh, and Kamalabari. Ninety households are randomly sampled, with 15 from each village. Primary respondents include heads of households, women. NGO functionaries from organizations such as South Asian Forum for Environment (SAFE), Impact NE, MIPDAC, NEICORD, Oxfam, ACTED, Save the Children, PAD, Prachodhan, and Rural Volunteers Centre are purposively sampled, alongside government officials.

C. Sources of Data Collection

Data collection involves primary and secondary sources. Primary sources include heads of households, women, NGO members, and government officials associated with responding to gendered disaster impacts. Secondary sources encompass documents from relevant government and non-government agencies and previous academic and empirical studies related to the study theme.

D. Methods of Data Collection

The methods of data collection include interviews with heads of households and selected women members and members/officials of government, non-government, and other bodies involved in responding to gendered disaster impacts. Additionally, non-participant observation and transect walks are employed.

E. Tools for Data Collection

Tools for data collection consist of interview schedules for heads of households, women, interview guides for officials of government and non-government agencies, and a non-participant observation guide.

III. FINDINGS AND DISCUSSIONS

A. The Influence of Social Norms and Behavioural Restrictions

Social norms and expectations of gender roles significantly amplify the vulnerability of women during disasters, placing them at a marked disadvantage in rescue efforts and increasing their susceptibility to disaster-related fatalities. Women's vulnerability during disasters arises from their limited control over resources, restricted access to information, and marginal participation in decision-making processes. Their recovery tends to be slower than that of men due to the gendered division of labour, which leaves them less mobile and burdened with domestic responsibilities, often neglecting their own well-being and allowing minor health issues to escalate.

In Majuli, women have reported being primarily responsible for safeguarding children, the elderly, and household property, which impedes their own escape and rescue efforts. Additionally, their attire often restricts their mobility, hindering their ability to move quickly or swim during floods. Social biases against women learning to swim further decrease their chances of survival in such situations. Society expects women to uphold and embody moral duties, and over time, men have enforced social norms to control women, holding them to unrealistic standards of moral perfection, which can hinder their ability to respond effectively during natural disasters.

Moreover, women have mentioned that behavioural constraints limit their ability to relocate without the consent of male family members, thereby impeding their movement and access to vital flood-related information. Discriminatory practices in resource allocation, particularly in food distribution, contribute to higher mortality rates among female infants and young children. Some men even prioritize feeding their sons over their daughters during floods, citing the importance of perpetuating the family lineage.

Women have also highlighted that men predominantly control and allocate assistance provided to affected families, with relief efforts being primarily managed and overseen by men. This systematic exclusion disregards the unique needs, capabilities, and experiences of women, further disadvantaging them. Women and girls also face discrimination in the distribution of food relief following the destruction of crops and farmland during floods. While relief efforts aim to support the entire population affected by disasters, reliance on existing resource distribution structures that reflect patriarchal norms marginalize women's access to relief resources. Additionally, women are disproportionately affected by the damage to economic livelihoods, as they often bear the responsibility of securing water, food, and heating resources for their families. When floods diminish household purchasing power, women suffer even more, as men typically receive preferential access to available resources.

Many women have consistently been regarded as the primary providers for their families. Their roles become even more critical during disasters such as floods. Society places the responsibility of ensuring food on the table squarely on women, and they are the ones who often make sacrifices for the sake of their families. Traditionally, it is the women of the household who ensure that everyone is fed and clothed. When floods necessitate rationing of food, it is women who bear the brunt of this situation. Even under normal circumstances, they typically prioritize feeding their husbands and children before attending to their own needs. Women consistently prioritize the needs of their families, often at the expense of their own well-being. This selflessness can make them more vulnerable to malnutrition, as they readily forgo their own needs to provide for their loved ones.

B. Gendered Impacts of Disasters on Health

The profound consequences of floods on community infrastructure extend to impeding access to essential resources such as food, sanitation, healthcare, and clean

water. Women, bearing the brunt of reproductive responsibilities, face disproportionate adversities, particularly when healthcare services suffer due to diverted resources for disaster management. This leads to diminished obstetrical support, elevated occurrences of miscarriages, and heightened rates of maternal and infant fatalities. One woman shared her experience, recounting the challenges of being heavily pregnant when her home was engulfed by floodwaters, rendering mobility tough and self-evacuation a daunting prospect.

In Majuli, the majority of rural households, particularly those along the riverside, lack adequate toilet facilities. Even during mild floods, makeshift toilets situated some distance from homes become fully submerged. This poses significant challenges for the entire community regarding sanitation, with women bearing the greatest burden. The absence of functional toilets forces people to resort to using boats for defecation. However, this process is neither straightforward nor private. It necessitates an additional person on the boat to maintain stability, often against the current, with one side slightly inclined towards the water for defecation and subsequent cleansing. While men may find it easier to manage this task due to their clothing or the freedom to expose themselves publicly, women face considerable obstacles, especially if attired in traditional garments like mekhela-chador. Consequently, women have no choice but to compromise their privacy. As expressed by a woman in Salmora, *"Aside from the inconvenience, it is simply embarrassing for us, particularly during menstruation."* Moreover, when an entire area is submerged, defecating from a boat becomes a form of *"open defecation"* as there is nowhere to hide oneself. For women, surviving a flood means sacrificing their everyday privacy and losing basic dignity.

Moreover, women and girls encountered even more significant hurdles in the dire health and hygiene conditions within refugee camps. The situation was worsened by the inability to uphold privacy and segregation from men in these camps. Several young women recounted their ordeals of suffering from persistent rashes and urinary tract infections during their tenure in refugee camps. They grappled with properly cleansing and drying menstrual cloths due to a scarcity of private facilities and access to clean water. Frequently, they had no choice but to wear damp clothing, making their challenges even worse.

The interruption of civic services, especially the water supply, during floods poses significant challenges for the women of Majuli. They are forced to go on lengthy journeys to fetch clean drinking water, often lugging heavy containers and cans across substantial distances. Ensuring an ample supply of safe water for various household needs becomes their responsibility. Furthermore, with food supplies scarce, many women endure hunger, particularly those with limited influence in family decision-making. Consequently, these Majuli women face an increased risk of malnutrition and various deficiency ailments.

Gendered Vulnerabilities in Disaster Responses: A Case Study of Majuli Island, Assam

Conversely, it has been observed that women with more significant roles in their families are better positioned to advocate for their own and their children's needs, making them less susceptible to malnutrition. The nutritional requirements of pregnant and breastfeeding mothers in Majuli are further compounded by the ongoing need for sufficient nourishment and care. Inadequate nutrition during pregnancy can result in birth defects and maternal malnutrition. Breastfeeding mothers, in particular, rely on a consistent food supply to sustain their infants. The absence of this supply significantly impacts the health of these women. Government initiatives such as the Integrated Child Development Services (ICDS), which distribute food items, also tend to face disruption in Majuli due to the severity of the floods. The temporary cessation of such services exacerbates the issue of malnutrition, affecting both the mother and her child.

At the time of floods, the local populace faces the formidable challenge of sustaining themselves through scarce daily wage jobs. This scarcity leaves both adults and children frequently skipping meals or experiencing undernourishment. In this scenario, women and girls, primarily responsible for household cooking, bear the brunt of these hardships. Many impoverished families, even those with Below Poverty Line (BPL) or Antyodaya Anna Yojana (AAY) ration cards, struggle to afford the allocated rice due to their limited financial means. This once again underscores concerns regarding the efficacy of these schemes in severely affected rural areas, emphasising the imperative to identify alternative means of support for families unable to afford even subsidised grains.

However, mothers find solace in knowing that children receive cooked meals through the Midday Meal Programme in schools and Anganwadi centres, ensuring they get some nutritious food during the day. Nonetheless, the floods have raised concerns about the academic future of many students, particularly girls, as floodwaters have swept away books, school uniforms, and other belongings.

A young girl expressed, *"When decisions are made about who can continue attending school and who must drop out, it's always the girls who end up sacrificing. As a result, I worry that I may not have the chance to pursue my education further."* Being the eldest sibling in the family with two younger brothers, she faces the highest level of risk.

The areas severely affected by floods suffer from a significant lack of institutional support, leaving the impacted population, particularly women, without access to any assistance system. While a small number of elderly individuals and some widows qualify for modest financial aid through the Old Age Pension and Widow Pension schemes, they have received such assistance only once or twice in their lifetimes. Disheartened by their past experiences, they no longer make attempts to access these funds.

C. The Psychological and Physiological Impacts on Women

Discussions with women revealed that they are frequently obliged to take on multiple roles during and after a flood. They not only become frontline responders and

survivors but also caregivers, responsible for nurturing and maintaining the well-being of others. This caregiving duty heightens when they are in relief camps with insufficient food and water supplies, generating immense pressure and inducing psychological distress.

Amidst floods, women recounted enduring ongoing mental anguish concerning the safety of their loved ones. The upheaval of household and social structures during floods leaves women more prone to stress and anxiety. They also observed that they seldom have the chance to mourn the loss of family members, resulting in symptoms of post-traumatic stress disorder (PTSD). As a result, numerous women disclosed experiencing post-disaster reactions, including nightmares and a fear of floods in the days to come.

Several women shared their experiences of postnatal distress when floods occurred shortly after childbirth. One woman recounted, *"Amidst the flood, I had recently given birth to a baby, yet I found myself juggling household chores, tending to young children, and partaking in manual labour alongside other women. Despite receiving some aid from relief agencies in the form of old clothes, grains, utensils, etc., I lacked the specialised care essential for a postnatal woman."* The emotional strain on these women is further exacerbated as flood-related resource depletion makes it difficult to meet their family responsibilities, leading to feelings of helplessness and depression. Meanwhile, biological events like childbirth have specific consequences and demand special attention, which is often overlooked in flood relief efforts. Another woman respondent shared, *"I had delivered a baby shortly before the flood. At a time when I needed complete rest, proper care, and nutritious food for both myself and my child's physical well-being, I found myself confined to a relief camp. After some days, the baby fell ill, and I struggled to provide adequate breastfeeding. With no other means to feed the baby, I felt weak and frequently nauseous. Additionally, I had to tend to my four other children. My husband, deeply distressed by the loss of property and my condition, was unable to seek work."* For nearly a month, another woman found herself in a crowded relief camp alongside other families impacted by the floods. Throughout her stay, she grappled with severe stress and mental strain, overwhelmed by feelings of uncertainty and a loss of confidence. Her anxieties centred around the loss of livestock, property, crops, and land, exacerbating her distress. The constant echoing cries in the camp environment only added to her sense of suffocation and helplessness.

The study also shown an increase in violence against women during and after disasters. Incidents of spousal abuse, rape, sexual harassment, and sexual abuse become more frequent as families lose their traditional support structures and protective mechanisms during floods. Women affected by the Majuli flood expressed deep concern about their husbands' alcoholism. With limited job opportunities, many men turned to alcohol and card games to pass the time.



When advised to abstain from such activities, wives often faced physical abuse, with husbands asserting their right to control spending of family property. Moreover, overcrowded relief camps left unaccompanied women and girls particularly vulnerable to sexual abuse and rape.

Women also described how the recent flood resulted in reduced income and increased pressure on their husbands to provide for their families. Most women agreed that the lack of job opportunities and growing uncertainties due to the flood heightened tensions within their families, leading to incidents of domestic violence. Many women expressed feelings of vulnerability and anger but felt powerless to change their situations. One woman shared, "My husband resorts to physical violence against me if I question him." Additionally, women recounted instances of sexual abuse when they were unaccompanied in crowded relief camps.

IV. CONCLUSION

The case study of Majuli Island in Assam, India, offers valuable insights into the gendered aspects of disaster responses, particularly floods. The examination of social norms, behavioural restrictions, and resource allocation practices underscores the disproportionate vulnerabilities faced by women during disasters. Women's roles as caregivers and providers often limit their mobility and access to resources, exacerbating their susceptibility to harm. Moreover, the predominance of relief efforts managed by men overlooks the unique needs and experiences of women, further marginalizing them in disaster contexts.

The gendered impacts of disasters on health reveal profound challenges faced by women, including reproductive health issues, lack of access to sanitation and healthcare services, and heightened risks of malnutrition. Disruptions in civic services exacerbate these challenges, leaving women particularly vulnerable to adverse health outcomes. Despite government initiatives aimed at addressing these issues, the severity of floods often disrupts relief efforts, exacerbating the issue of malnutrition and hindering access to essential resources.

Furthermore, the psychological and physiological impacts of disasters on women highlight the multifaceted nature of their experiences, encompassing ongoing mental anguish, post-traumatic stress, and heightened risks of violence and abuse. Despite facing significant vulnerability and powerlessness, women often endure abusive situations due to societal norms and limited resources for seeking help.

Overall, the findings underscore the urgent need for gender-sensitive approaches to disaster preparedness, response, and recovery. Addressing the unique needs and experiences of women in disaster contexts requires comprehensive strategies that prioritize their safety, well-being, and empowerment. By recognizing and addressing the gendered dimensions of disasters, policymakers, practitioners, and communities can work towards building more inclusive and resilient societies, where all individuals, regardless of gender, can effectively cope with and recover from disasters.

DECLARATION STATEMENT

Funding	No, I did not receive.
Conflicts of Interest	No conflicts of interest to the best of our knowledge.
Ethical Approval and Consent to Participate	No, the article does not require ethical approval and consent to participate with evidence.
Availability of Data and Material/ Data Access Statement	Not relevant.
Authors Contributions	I am only the sole author of the article.

REFERENCES

1. Agarwal, B. (1992). The gender and environment debate: Lessons from India. *Feminist Studies*, 18(1), 119-158. <https://doi.org/10.2307/3178217>
2. Blackie, M. J., Zimmermann, K. S., & Crane, S. B. (1994). Gender equity and women's employment: Patterns in industrial countries. *International Labour Review*, 133(5-6), 611-630.
3. De Alwis, M. (2002). Gender and post-tsunami reconstruction: The case of Sri Lanka. *Gender and Development*, 10(3), 43-48.
4. De Mel, S. (2007). Conflict, gender, and violence: The case of Sri Lanka. *The Journal of Development Studies*, 43(2), 353-375.
5. De Mel, S., McKenzie, D., & Woodruff, C. (2010). Are women more credit constrained? Experimental evidence on gender and microenterprise returns. *American Economic Journal: Applied Economics*, 2(4), 1-32. <https://doi.org/10.1257/app.1.3.1>
6. Fothergill, A. (1996). Gender, risk, and disaster. *International Journal of Mass Emergencies and Disasters*, 14(1), 33-56. <https://doi.org/10.1177/028072709601400103>
7. Goswami, A., & Das, S. (2003). Sediment load analysis of the Brahmaputra River at Pandu, Assam. *Journal of Hydrology*, 20(4), 125-140.
8. Goswami, D. (2008). Managing the wealth and woes of the river Brahmaputra. *An Introduction to Qualitative Research*, 2(4).
9. Goswami, S. (1985). Monsoonal influence on the flow of the Brahmaputra River. *International Journal of River Research*, 10(2), 75-88.
10. IPCC. (2007). Climate change 2007: Impacts, adaptation, and vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press.
11. Mohapatra, P. K., & Singh, S. V. (2003). Indian summer monsoon rainfall: Climatology and variability. *Journal of Geophysical Research: Atmospheres*, 108(D6), ACL 8-1-ACL 8-14.
12. Motsisi, K. (1993). Gender and disaster management in Botswana. In J. R. Watson (Ed.), *Natural disaster management* (pp. 213-221). Oxford University Press.
13. Motsisi, K. (1994a). Disaster management in Lesotho: The need for women's involvement. In P. Austin (Ed.), *The role of women in disaster management* (pp. 87-92). Natural Hazards Research and Information Centre.
14. Motsisi, K. (1994b). Women's role in natural disasters: A case study from Lesotho. *Disasters*, 18(2), 152-162.
15. Philip, G. (2005). The silence of women: A gender perspective on the 2004 tsunami and 2005 earthquake in South Asia and Southeast Asia. *International Journal of Mass Emergencies and Disasters*, 23(2), 129-152.
16. Sahoo, B., & Parida, R. K. (2007). Role of social capital in disaster management: A case study. *Disaster Prevention and Management*, 16(2), 245-258.
17. Sen, P. K. (2010). A century of Indian summer monsoon rainfall: Impacts on society. *National Academy Science Letters*, 33(5-6), 151-156.
18. Swain, A. K. (2007). Disaster and gender: The case of the 1999 Orissa super cyclone. *Indian Journal of Gender Studies*, 14(2), 265-285. <https://doi.org/10.1177/097152150701400204>
19. Wiebe, H. (2006). River flooding and erosion in Northeast India: Exploratory consideration of key issues. In Northwest Hydraulic Consultants (NHC), Alberta, Canada.

20. Fomunyam, K. G. (2020). Women as Canons in Engineering Theorizing their Experiences and Exploits. In *International Journal of Engineering and Advanced Technology* (Vol. 10, Issue 1, pp. 487–496). <https://doi.org/10.35940/ijeat.a1861.1010120>
21. Elbaar, E. F. (2019). Adaptation Strategies of Woman in Fishing Community towards Environmental Change in Administrative Village Of Kereng Bangkirai, the City of Palangkaraya. In *International Journal of Innovative Technology and Exploring Engineering* (Vol. 8, Issue 11, pp. 865–874). <https://doi.org/10.35940/ijitee.k1536.0981119>
22. Dash, Dr. S. (2022). Women of Real and Virtual World: Exploring the Opportunities and Challenges During COVID 19. In *Indian Journal of Social Science and Literature* (Vol. 1, Issue 3, pp. 1–4). <https://doi.org/10.54105/ijssl.c1010.031322>
23. Thomas, T. G., & Kumar N.S., Dr. P. (2019). A Portrayal of Ecological Perspectives on Climate Change in Indian Cinema. In *International Journal of Recent Technology and Engineering (IJRTE)* (Vol. 8, Issue 3, pp. 4250–4255). <https://doi.org/10.35940/ijrte.c5153.098319>
24. (Mukherjee), D. B., & Pan, Dr. U. (2023). Empowerment of Rural and Urban Women in West Bengal A Case Study in Birbhum District. In *International Journal of Management and Humanities* (Vol. 10, Issue 4, pp. 1–5). <https://doi.org/10.35940/ijmh.d1673.1210423>

AUTHOR PROFILE



Josephine Nongmaithem is a dedicated research scholar, propelled by a profound interest in social work and political science. Her academic journey began at Daulat Ram College, Delhi University, where she attained her Bachelor of Arts (BA) with Honours in Political Science. This foundational education ignited her passion for unravelling societal complexities and dynamics. Driven by an insatiable thirst for knowledge, Josephine pursued advanced studies in social work at the Department of Social Work, Delhi University. Here, she earned her Master of Arts (MA) and subsequently her Master of Philosophy (MPhil), specialising in Social Work. These academic pursuits not only deepened her comprehension of social issues but also endowed her with the requisite skills to effectuate positive transformations within communities. Unfazed by the rigours of academia, Josephine persisted in her quest for excellence by embarking on a Doctor of Philosophy (PhD) journey at the esteemed Department of Social Work, Delhi University. Here, she endeavours to push the boundaries of knowledge, delving into the realms of social justice, welfare, environment, and community development.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of the Lattice Science Publication (LSP)/ journal and/ or the editor(s). The Lattice Science Publication (LSP)/ journal and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.