

THE INTERSECTION OF GENDER AND CLIMATE CHANGE: A CASE STUDY OF RURAL WOMEN IN SINDH

Dr. Ameer Ali Buriro

Associate professor at Institute of Gender Studies University of Sindh.

Email: ameer.buriro@usindh.edu.pk

Junaid Razaque soomro

Teaching assistant at Institute of Gender Studies University of Sindh Jamshoro.

Email: junaydsoomro@gmail.com

Muhammad Ali

Associate Professor, US Pakistan Center for Advanced Studies in Water, Mehran UET, Jamshoro.

Email: mali.uspcasw@faculty.muet.edu.pk

Abstract

This paper investigates the intersection of gender and climate change and its impacts on rural women in Sindh, Pakistan. Using a feminist qualitative research method, it explores how climate-induced events such as floods, droughts, and extreme weather disproportionately influence women's livelihoods, health and social well-being. This study draws attention to the systemic gender inequities aggravating women's vulnerabilities in climate crises by means of document analysis, fieldwork, and the examination of international and local reporting. This study explores that narrative from women across Thatta, Badin and Mirpurkhas. It also looks at how women, with little access to resources and decision-making authority, show resilience and adaptive tactics. This study argues that climate change is not a unisexual occurrence; rather, it mixed socio-cultural shortcomings faced by women for example, limited access to resources, flexibility compels, and marginalization from decision-making spaces. Despite these vulnerabilities, this study also explores that women are not ordinary victims, they show remarkable resilience and adaptive strategies, often navigating

crises with cleverness and strength. The results highlight the pressing need for gender-responsive climate adaptation measures that not only tackle women's particular issues but also improve their involvement in rebuilding and governance activities. Policymakers, development workers, and academics aiming for inclusive climate justice in Pakistan and similar settings will find important new ideas in this study.

Keywords: *Gender, Climate Change, Rural Women, Sindh, Vulnerability, Feminist Research, Adaptation, Resilience.*

INTRODUCTION

Climate change is a threat multiplier, and there is a fundamental disparity in how individuals are affected, with the poorest and least suited to withstand climate shocks and pressures, essentially those who contributed the least to the issue, bearing the brunt of the burden. Low-income countries suffer more than developed countries due to a lack of resources to combat climate change (Government of Pakistan, 2021).

Climate change is making the globe more perilous. Catastrophic storms are devastating lives, homes, and businesses with increasing regularity and severity. Severe droughts are destroying rural livelihoods. Between 2030 and 2050, starvation, malaria, diarrhea, and heat stress are anticipated to cause an additional 250,000 climate-related deaths per year. Everyone is affected by climate change, but the world's poorest and most vulnerable people, particularly women and girls, face the burden of the environmental, economic, and social consequences. Women and girls are frequently the last to eat or be rescued; they face greater health and safety risks as water and sanitation systems deteriorate; and they take on more domestic and care duties as resources deplete (UN Women, n.d.).

Pakistan contributes merely 0.9% to global greenhouse gas emissions, yet it remains one of the most vulnerable nations to the effects of climate change. The impacts manifest as intense flooding, significant alterations in rainfall patterns, the melting of Himalayan glaciers, a rise in vector-borne diseases like dengue, and an overall increase in the frequency and intensity of climate-induced natural disasters. Climate change presents significant challenges and is increasingly recognized as a global existential threat (Government of Pakistan, 2021). Sindh ranks as the second largest province in Pakistan. The geographical terrain of Sindh exhibits significant diversity.

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

Sindh encompasses various landscapes, including deserts, wetlands, riverine and mangrove forests, mountains, hills, agricultural zones, and coastal areas. Climate change has resulted in a rise in the frequency and intensity of natural disasters in Sindh. Climate change and variability will significantly affect food security and malnutrition. These factors will result in prolonged and more severe droughts, while the occurrence of heavy precipitation events has risen across the majority of terrestrial regions. Droughts and water scarcity decrease dietary diversity and overall food consumption, potentially resulting in malnutrition. Climate change exposures are expected to impact the health of millions, especially individuals with low adaptive capacity. This impact may manifest through a higher incidence of diseases and injuries linked to heatwaves, floods, storms, and droughts; rising malnutrition rates; changes in the geographic distribution of certain infectious disease vectors; and an increased burden of diarrheal diseases. Malnutrition, associated with extreme climatic events, may represent a significant consequence of climate change due to its potential impact on a vast population (Government of Sindh, 2022).

The involvement of women has consistently been vital in the realm of global environmental management. The education and empowerment of women in the context of climate change play a vital role in achieving sustainable development. The involvement of women in food and nutrition, enhancing livelihoods, and contributing to the overall well-being of society demonstrates that their complete engagement is essential for the success of any initiative. The Sustainable Development Goals have strengthened the commitment to equitable education for all genders, encompassing environmental education (Imran, Akhtar, Chen, & Ahmad, 2021). The socioeconomic and cultural circumstances encountered by women worldwide influence factors such as poverty and access to income and education related to climate change, thereby increasing their vulnerability to climate-related challenges (Government of Sindh, 2022).

LITERATURE REVIEW

3.1 GENDER PERSPECTIVE AND CLIMATE CHANGE

Dankelman (2010) argued that climate change represents a significant environmental challenge, intensifying problems associated with water, energy, land use, and biodiversity conservation. Human factors have experienced significant transformations, with the relationships between women and men globally exhibiting diverse and dynamic gender characteristics. The alterations in global climatic conditions, their formation processes, and the impacts on individuals, along with their coping mechanisms and adaptations, present significant and complex gender dimensions. Global environmental change, particularly climate change, presents a substantial challenge to contemporary societies, impacting efforts to create a more equitable and sustainable society. Both men and women serve as crucial agents of change and distinct counter-forces in addressing and adapting to global and local environmental changes, as well as in mitigating their impacts. Recognition of these societal roles and functions is essential, alongside the integration of a gender perspective in climate change policies, mechanisms, and actions.

Agarwal (2010) referenced ecofeminism literature to assert that women tend to exhibit greater conservationist tendencies than men, attributing this to their closer connection to nature. Agarwal (2010) addresses the argument presented by Merchant (1980) and Shiva (1988). Women exhibit a closer connection to nature compared to men, which can reinforce nurturing and caring values among humans as well as between humans and non-human nature. Additionally, women are often perceived as being more aligned with nature, while men are associated with culture. Nature is regarded as subordinate to culture, leading to the perception of women as inferior to men. The subordination of women and the exploitation of nature are interconnected phenomena that have historically arisen from a shared worldview. This worldview is grounded in a system of ideas, representations, values, and beliefs that positions women and the non-human world hierarchically beneath men.

Climate change affects men and women. Humanity worries about climate change. The UNFCCC's 2019 gender action plan urges states to respect,

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

promote, and consider their obligations regarding human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities, people in vulnerable situations, the right to development, gender equality, women's empowerment, and intergenerational equity when addressing climate change. The updated gender action plan outlines five main areas of aims and activities to promote gender-responsive climate action knowledge (UNFCCC, 2019).

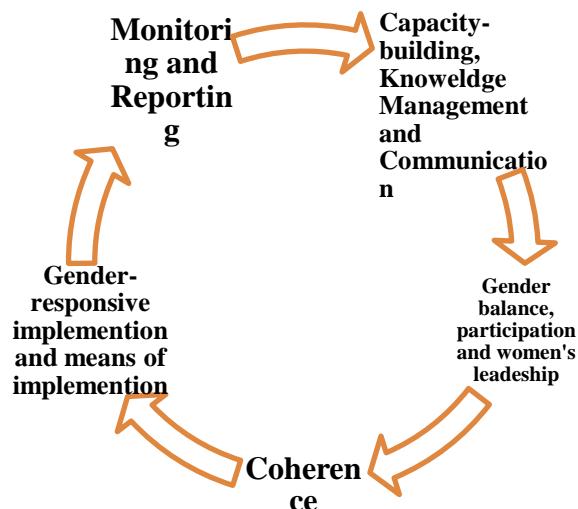


DIAGRAM 1 UNFCCC'S FIVE PRIORITY AREAS

Gender mainstreaming involves incorporating a gender perspective into any action, policy, or law to address everyone's concerns and prevent institutional gender inequality. Gender mainstreaming has been absent from climate change mitigation and adaptation policies and practices. Climate change is causing more catastrophic and slow-onset climate disasters in the 21st century. In climate-sensitive regions, there is mounting evidence that disasters are gendered and that women are especially vulnerable. The gendered experiences of women in climate change require governments to recommit to gender mainstreaming in climate policies, institutions, and laws. A gender mainstreaming study is necessary to understand how

international, national, and local authorities can approach climate issues with gender sensitivity. Because climate disaster responses are founded on intrinsically unequal power relations, resource allocations, and assumptions, failing to do so risks solidifying gender inequities in post-disaster and reconstruction efforts. However, climate change experience provides the context and capacity to re-interrogate gender mainstreaming and its radical potential to modify gender relations in the emergent and dynamic climate and post-disaster area (Alston, 2014).

Malmqvist (2018) posited that the unequal effects of climate change on women's well-being outcomes are becoming a significant concern within the larger relationship between climate change and health. The impact of climate change on women's health is significant. Increasing temperatures, droughts, floods, and wildfires can significantly impact various sectors, including the disruption of supply chains and reduced access to essential medications. They may contribute to food insecurity, increase the risk of complications during pregnancy, affect breastfeeding practices and menstrual hygiene, exacerbate menopause symptoms, and hinder access to women's health services. Addressing the significant and detrimental impacts of climate conversion on women's strength and well-being necessitates recognition of the essential role played by community health workers. A multipronged approach is necessary, commencing with the upskilling and proper equipping of the healthcare workforce, the utilization of technology, and the training of community health workers. Integrated early warning systems and comprehensive policies that prioritize people-centered care can enhance responses to climate change and improve health outcomes for women in crisis situations.

Pakistan is among the most climate-vulnerable nations. Agriculture, which accounts for 23% of GDP, is especially vulnerable to catastrophic weather occurrences. Nearly 7.2 million Pakistani women work in agriculture, the largest employer. Their work is mostly unacknowledged, unpaid, and undervalued. Widespread gender inequality and inflexible gender norms increase climate risk. The 2010 floods demonstrated this inequality. In Sindh, 49% of the 1.5 million internally displaced were women. Flood-affected areas had 381 maternal deaths per 100,000 live

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

births. Balochistan, Punjab, and Sindh are hotspots. These provinces' women farmers grow rice, oilseeds, and dairy, and they often do all the weeding, seed cleaning, and storage. Their work exposes them to floods and climatic hazards. Social conventions expose women in these three regions to gender inequities, compounding their reliance on agriculture. Pakistani women are expected to stay home and do housework. They have limited time and opportunities to learn crisis-coping skills (Puskur & Mishra, 2022).

3.2 Gender and Climate Change in Pakistan

Climate change in Pakistan poses significant risks to the lives, livelihoods, health, and well-being of millions, particularly among the poor and vulnerable populations who lack the necessary financial, technical, human, and institutional resources for adaptation. Anticipated alterations in precipitation patterns, frequency of extreme events, sea level rise, and glacial retreat are projected to impact food security, nutrition, water access, sanitation, housing, health, labor productivity, economic sectors, and household income levels. The proposed changes may exacerbate the existing low levels of human development in the country. Populations that rely significantly on natural resources and face various climate change risks exhibit the highest vulnerability. Urban slum residents, lacking adequate access to basic sanitation, are disproportionately affected by asset damage, disease proliferation, and loss of life as flooding and extreme events become increasingly frequent in the future (Ahmed, Dalal, & Forusz, 2009).

Agriculture is suffering from climate change, which affects water, energy, health, and biodiversity. Temperature fluctuations harm land and aquatic resources and increase the frequency and intensity of natural disasters, such as droughts and floods, which in turn reduce agricultural productivity. Despite its negligible greenhouse gas (GHG) emissions, Pakistan prioritizes climate change mitigation across energy, forestry, transport, industry, urban planning, agriculture, and livestock. To adapt to climate change, Pakistan has taken numerous steps. The list includes domestic and international projects. Punjab, Sindh, AJK, and Gilgit-Baltistan have Provincial Climate Change Implementation Committees to

implement the National Climate Change Policy and Framework for Implementation (2014–2030). In 1984, the Pakistan Environmental Protection Agency was established under the 1983 Pakistan Environmental Protection Ordinance to protect, conserve, rehabilitate, and enhance the environment; prevent and control pollution; promote sustainable development; and other matters. Environmentally sustainable development is difficult in Pakistan (Ministry of Climate Change, 2018).

Heat waves, droughts, rising sea levels, and storms disproportionately impact women, especially in rural areas, due to their higher likelihood of living in poverty compared to men. They also experience limited access to fundamental human rights, including freedom of movement and land acquisition, and are subjected to systemic violence. The Paris Agreement contains explicit provisions aimed at providing sufficient support for women in addressing the effects of climate change. Climate-correlated health threats intensify gender inequalities by increasing the workloads of women, exposing them to both indoor and outdoor occupational risks, elevating psychological and emotional stress, and leading to higher mortality rates in comparison to men. Gender inequality restricts women's ability to participate effectively in climate action. In Pakistan, women exhibit heightened vulnerability to natural disasters as a result of entrenched gender inequalities within the social structure. In Pakistan, women experience restricted access to essential resources, diminished decision-making authority, insufficient information regarding climate change, and constrained coping mechanisms (Batool, Ali, Manzoor, & Mahmood, 2018).

3.3 COMPARISON WITH INTERNATIONAL LEGAL FRAMEWORK

For the first time, the Paris Agreement joins all states to fight climate change and adapt to its repercussions, with more aid for impoverished nations. The Paris Agreement seeks to restrict global temperature rise to 1.5 degrees Celsius above pre-industrial levels and keep it below 2 degrees Celsius this century. The deal aims to improve countries' climate change adaptation and connect funding flows with low-GHG, climate-resilient paths. The Paris Agreement requires all parties to submit and strengthen "nationally determined contributions" (NDCs). Article 7 of the Paris

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

Agreement sets a global adaptation aim to strengthen adaptive capacity, resilience, and climate change vulnerability within the temperature goal. Support and international cooperation are sought to strengthen national adaptation efforts. It understands everyone faces adaptation. All parties should develop and implement a national strategy. Article 8 indicates that the Paris Agreement recognizes the need to prevent, reduce, and mitigate climate change's harmful effects, such as severe weather and gradual shifts, and that sustainable development can reduce loss and damage.

In 2012, Pakistan passed the National Climate Change Policy, which was a major move forward in the country's response to climate change. The National Climate Change Policy lays the groundwork for future initiatives by addressing all aspects of climate change, from adaptation to reduction. Pakistan aims for low-carbon development and climate resilience in its revised National Climate Change Policy 2021. Consequently, it would lay out a thorough plan to deal with the current and future climate change issues in Pakistan. Climate change is projected to have a disproportionate impact on low-income areas, groups, and individuals because of their marginalization, vulnerability, and lack of means to adapt. Predictions indicate that rural Pakistani women will be particularly vulnerable to the effects of climate change in the agricultural and forestry sectors. Pressure on women is expected to increase as a result of climate change, which is anticipated to increase agricultural productivity and subsistence chores such as gathering firewood and water. Women are more likely to be at risk and have to work harder during crises due to gender roles and labor division. Additionally, they have fewer assets and resources to help them cope and recover, making them more susceptible to catastrophic climate events and disasters. A national Climate Change Gender Action Plan (CCGAP) is being developed in Pakistan with the aim of enhancing knowledge and skills, identifying gaps and enabling conditions, and fostering coordination and action to achieve climate change goals through gender-responsive methods and outcomes. A strategy to engage women and youth in climate action is part of Pakistan's revised Nationally Determined

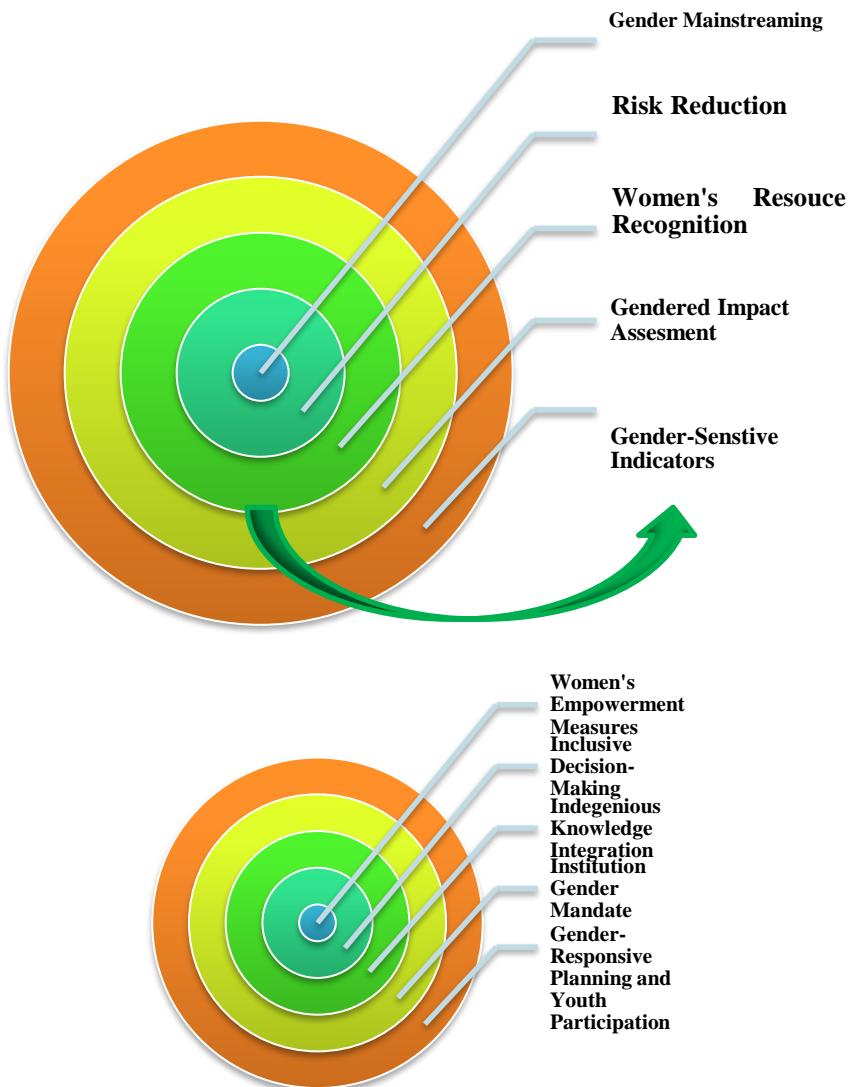


DIAGRAM 2
PAKISTAN'S COHESIVE GENDER-RESPONSIVE CLIMATE POLICY FRAMEWORK

Pakistan is dedicated to achieving a preserving climate future by incorporating action on climate across its most weak regions. The agricultural sector, water resources, renewable energy, carbon markets,

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

green technology, urban infrastructure, ecosystems, and climate financing are the primary areas of concentration for Pakistan's efforts to incorporate climate change concerns into its social and economic frameworks. Sustainability and green economic growth are essential components of this strategy, aligning with the 5E framework established by Pakistan's Planning Commission: Exports, Equity, E-Pakistan, Environment, and Energy. Strategic initiatives such as URAAN Pakistan foster innovation, resilience, and sustainable development. Pakistan ranks among the nation's most vulnerable to climate change, experiencing floods, heatwaves, and droughts, while contributing less than 1% to global greenhouse gas emissions. Extreme weather events have adversely affected agriculture, water resources, and urban infrastructure. The government has established robust environmental regulations to address vulnerabilities, including the National Climate Change Policy (2021), Nationally Determined Contribution (NDC 2021), National Adaptation Plan (NAP 2023), and the Upscaled Green Pakistan Program. The 2023 National Clean Air Policy and Single-Use Plastics Prohibition Regulations emphasize implementation to address historical challenges in policy execution. Pakistan advocates for multilateralism and climate justice, grounded in the principles of equity, Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC), as outlined by the UNFCCC (Alam, 2025).

RESEARCH METHODOLOGY

Using a feminist-theorized qualitative research approach, this study investigates how gender connects to climate change in rural Sindh.

Feminist research represents a unique approach aimed at challenging established power structures, addressing gender inequalities, and elevating the perspectives of marginalized groups. Feminist research acknowledges the intersectionality of identities, recognizing that individuals encounter various forms of oppression or privilege influenced by factors such as race, class, sexuality, and disability. Feminist research examines the mechanisms of power, critiques hierarchical structures, and reveals the systematic disadvantages faced by specific groups. Feminist research prioritizes the

perspectives and experiences of marginalized groups, especially women, who have been historically excluded from social and political contexts. Feminist researchers acknowledge the impact of social location, background, and experiences on research design, data collection, and interpretation. Feminist research often utilizes qualitative methodologies, including interviews, focus groups, and ethnographic studies. These methods facilitate a thorough examination of lived experiences and the contextual subtleties of individual narratives (Stevens, 2024).

Qualitative research was widely considered by feminists in the 1970s and 1980s as a means to completely rethink scientific investigation (Hawkey & Ussher, 2022).

4.1 RESEARCH DESIGN AND APPROACH

This research focuses on rural women in Sindh who are susceptible to the impacts of climate change, such as droughts, flooding, and extreme weather events. Document analysis will be utilized as it is a valuable research method with a long-standing history of application. This method involves the analysis of diverse document types, such as books, newspaper articles, academic journal articles, and institutional reports. Documents that contain text serve as potential sources for qualitative analysis (Patton, 2015). The term "document" encompasses a diverse range of materials, including visual sources like photographs, videos, and films (Merriam & Tisdell, 2016). Morgan (2022) asserts that qualitative researchers utilize diverse methods for data collection. In certain instances, they generate the data, while at other times, they utilize pre-existing data. Utilizing pre-existing data parallels, the employment of data derived from observations and interviews. One might view books, papers, and other publications as texts that mirror the information a researcher collects during an interview. The literature review involved a thorough analysis of existing studies to explore the experiences of women from diverse rural communities, including Thatta, Badin, and Mirpurkhas, alongside reports from various NGOs. Findings will be derived from studies conducted by INGO and government-backed sources. The reports encompass field data, including surveys and interviews. These reports function as valuable primary sources for examination.

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

DATA COLLECTION

Documented analysis has primarily functioned as a supplementary approach to other research methods; however, it has also been utilized independently. There exist specific types of qualitative research that depend exclusively on document analysis. Document analysis is characterized by reduced time consumption, resulting in greater efficiency compared to alternative research methods (Bowen, 2009).

Document analysis, according to Bowen (2009), entails the collection of data through the examination of written materials, including letters, reports, and journals, thereby revealing historical contexts, organizational structures, and personal narratives. Primary documents are produced contemporaneously with an event, including official records, letters, and diaries. Secondary documents consist of analyzed or interpreted records, such as literature reviews and media reports. Digital archival research encompasses online resources and databases that function as significant repositories for qualitative data.

The data for this study was collected through document analysis, using primary and secondary sources respectively that were accessed through online repositories, digital libraries and official website of organization relevant to the study. The document collected as policy reports of government of Pakistan, Sindh government and ministry of climate change. Other inclusions are NGO, INGO reports, research articles, multimedia reports and local media press release and reports from Thatta, Badin and Mirpurkhas that are highly affected by climate disaster.

5.1 DATA ANALYSIS

Feminist research methodologies aim to further clarify social reality by producing knowledge that transcends male-dominated perspectives. Feminist researchers have sought to establish links among the concepts of gender, gender equality, lived experiences, and the phenomenon of intersectional gender discrimination. Researchers have shifted from collecting data for objective purposes to emphasizing gender-sensitive data collection and analysis. Feminist epistemologies interrogate power

structures through various approaches, elucidating the complexities of gender and its interrelations. Feminist research posits that qualitative research methods are most suitable for examining the intricate socio-historical, political, relational, structural, and material dimensions of gender. This study outlines qualitative data collection methods, specifically interviews and document analysis. This study incorporates qualitative methods of analysis, including thematic analysis, document analysis, and discourse analysis, for the purpose of conducting socio-legal research. In the absence of the researcher's involvement, documents typically include textual content and, at times, images. Documents in social research may encompass a range of materials, including personal journals, official organizational records, and state datasets. Researchers have identified additional documents pertinent to social research, including maps, photographs, newspaper reports, autobiographies, and social media or SMS conversations. Electronic and digital documents represent a substantial portion of the documentation landscape in contemporary organizations and institutions (Saeidzadeh, 2023).

The researcher uses a feminist epistemic approach in this study to examine Sindh rural women's experiences with climate change. Instead of merely summarizing the views of academics, the objective was to critically analyze and evaluate the gathered materials using a gender-sensitive perspective. In order to allow patterns and categories to emerge from the narratives, reports, and policy documents that researcher studied, researcher used thematic analysis.

The researcher examined how gender stereotypes, power dynamics, and systematic marginalization are ingrained in both textual and visual data using feminist theory as a framework. The materials were coded for recurrent themes such food insecurity, maternal health hazards, displacement, and resilience tactics as part of the researcher's analysis. The researcher ensured reliability and contextual depth by cross-referencing findings from many sources, including official papers, NGO data, and firsthand accounts.

The researcher's analysis demonstrates a critical engagement with lived experiences and documented facts, rather than merely restating academic

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

opinions. This allows for a deeper understanding of how gender inequality in rural Sindh becomes worse by climate change. Through this method, the researcher argues that the discovery of suppressed narratives and the proposal of inclusive, equitable climate adaption strategies depend on feminist-informed document analysis.

FINDINGS

6.1 INTERSECTING CALAMITIES: FLOOD DISPLACEMENT, AND MATERNAL HEALTH

The UNFPA press release states that the situation has affected 1,000 health facilities in Sindh. The monsoon rains, floods, and landslides in Pakistan have left 6.4 million people in need of humanitarian aid, including almost 1.6 million women. Pakistan estimates that 33 million people are affected, including 8.2 million reproductive-age women. Approximately 650,000 pregnant women in flood-affected areas need maternal health care for safe pregnancy and childbirth. Destroying approximately 1 million households has put many women and children at risk of gender-based violence (GBV) (UNFPA, 2022). Even basic food and water are scarce for many pregnant women nationwide. Many are scrambling to find alternate birthing homes. Healthcare travel is problematic (Thakar, 2022).

The devastating impact of the floods on women can be better explained through the example of Zameeran, who is a resident of Qurban Tanghyani, a village in Thatta district. Her husband works on his small farm and supplements his income by working as a laborer in a goods and transport shop. The floods washed away their home and devastated the standing crops on their farm. Zameeran's husband lost his job in the goods and transport shop as the business was severely affected by the flood and shut down due to the flood-poured shop.

This led the family into economic hardship and uncertainty.

6.2 FIELDS SUBMERGED, FUTURES UNCERTAIN: VOICES FROM FLOOD CRISIS

In Sindh, 4.3 million acres of land are cultivated, while 3.6 million acres have sustained damage due to floods. Cotton and sugarcane crops have been

destroyed, resulting in flooded fields. Many vegetable farms and mango orchards are currently submerged. In addition to agriculture, alternative sources of livelihood, including charcoal and brick kilns where families are employed, are currently submerged, resulting in widespread unemployment. Women have not indicated embroidery or sewing as alternative sources of income (Ali, 2024).

One of the respondent states that, The livestock that we take with us, we are forced to sell our livestock to afford our families' food, health, and other basic needs. This water around us has taken all the stored grain from us. Crops that were on yield were submerged under this water. The grain that we took with us got wasted during emergency evacuations. We are the middle working class and have everything that is required for a balanced life; now we are living with food provided by donors and individuals. May this hardship pass and we return to our homes. May this not happen to anyone; may homes not wash away in rain. We lost all the things, resources, and our home, and now who will help us to build our own house?

6.3 THE UNSEEN EXPENSES OF CLIMATE CHANGE: FROM CYCLONES TO CREDITORS

District Badin in Sindh is a highly vulnerable region where coastal communities experience the adverse effects of climate change, resulting in damage to natural resources and productive assets, including water resources, arable land, and related livelihood opportunities. Fishing, the primary source of livelihood, is significantly affected and increasingly unreliable, characterized by reduced fish catches and diminished returns due to climate change-related hazards (Saqlain & Fullwood-Thomas, 2017). According to Shaffril, Abu Samah, and D'Silva (2017), global climate change affects both the environment and human welfare. Fishermen, encompassing those who operate in marine environments and those who fish in public waters such as wetlands and rivers, depend on natural conditions for their livelihood. Addressing the negative impacts of climate change has necessitated a focus on adaptation strategies.

A climate refugee shared the increasing dangers of living in an area prone to lightning storms, unusual wind patterns, and other extreme weather events. Although our village has never been hit by a cyclone, storm surges

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

have flooded homes, washed away cattle, and sunk boats, and people have drowned as a result. Many of my shipmates' ships went down in a cyclone, so we took out loans, blindly trusting that we could easily repay them because the amounts were very small. But the creditors turned nasty when they loaned us the money, and their treatment of us emotionally hurt us. The original loan amount of 20,000 Pakistani rupees has grown to 80,000 rupees.

CONCLUSION

It is abundantly obvious from the findings of this study that climate change in rural Sindh is not a gender-neutral phenomenon. Women, who already have the fewest resources available to them, face worsened pre-existing disparities and increased demands. When this assumption is put into practice, it means that women are not only confronted with the physical dangers of flooded fields and lengthy droughts, but they are also confronted with significantly larger responsibilities at home, health risks, and increasing food vulnerabilities. Usually, these women carry their burdens in silence. For instance, a Thatta farmer lost her home, the crops that her family grew, and her husband's work as a result of the most recent flood. Despite the fact that she is struggling to provide for her family in spite of the many problems that she faces, her resilience comes through. Stories like hers give the crisis a human face and serve as a reminder that behind every number are genuine people whose lives and hopes have been wrecked.

In order to effectively address the climate disaster, it is imperative that women be given more agency. Converting policies into actionable steps, ensuring that women have an equal voice in recovery efforts, ensuring that they have fair access to aid and resources, and providing them with genuine opportunity to lead local climate planning are all necessary steps. It requires going beyond simply admitting the problem on paper and instead putting into action initiatives that help women improve their abilities, provide them with options for generating a living, and involve them in the decision-making process in its entirety. Strategies that are climate-resilient and gender-responsive are not optional; rather, they are completely necessary. When it

comes to environmental justice, gender equality is the most important factor. It is imperative that policymakers, practitioners, and scholars pay attention to these findings: if we completely disregard the demands and agency of women, our climate solutions will be insufficient. The women of Sindh are among the first to experience the effects of climate change; it is our collective responsibility to bring them up to speed; otherwise, we run the risk of failing the generations who will come after us.



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

References

1. Agarwal, B. (2010). *Gender and Green Governance: The political economy of women's presence within and beyond community forestry*. Oxford University Press.
2. Ahmed, N., Dalal, H. B., & Forusz, S. L. (2009). *The social dimensions of climate change*. In *South Asia: Shared Views on Development and Climate Change* (Working Paper No. 52051, pp. 104–111). Washington, DC: World Bank, South Asia Region, Sustainable Development Department. Retrieved from World Bank publications site: documents.worldbank.org/en/publication/documents-reports/documentdetail/789001468294334973
3. Alam, R. K. (2025, February 7). Translating policies into climate resilience. *Dawn*. <https://www.dawn.com/news/1890339>
4. Ali, S. M. (2024). *From aspirations for climate action to the reality of climate disasters: An investigation of climate change-induced floods and post-disaster reconstruction in Pakistan*. National Commission for Human Rights. <https://nchr.gov.pk/wp-content/uploads/2024/02/Climate-Change-Report-NEW-resizes.pdf>
5. Alston, M. (2014). *Gender mainstreaming and climate change*. *Women's Studies International Forum*, 47(Part B), 287–294. <https://doi.org/10.1016/j.wsif.2013.01.016>.
6. Batool, H., Ali, W., Manzoor, R., & Mahmood, N. (2018). *Women's perception of climate change and coping strategies in Pakistan: An empirical evidence*. *Earth Systems and Environment*, 2(4), 609–619. <https://doi.org/10.1007/s41748-018-0073-7>
7. Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology*. *Qualitative Research in Psychology*, 3(2), 77-101.
8. Bowen, G. A. (2009). *Document analysis as a qualitative research method*. *Qualitative Research Journal*, 9(2), 27–40. <https://doi.org/10.3316/QRJ0902027>
9. Butler, J. (2016). *Gender Trouble: Feminism and the Subversion of Identity*. Routledge.
10. Dankelman, I. (Ed.). (2010). *Gender and Climate Change: An Introduction*. Routledge.
11. Government of Sindh. (2022). *Sindh climate change policy 2022*. Environment, Climate Change and Coastal Development Department, Directorate of Climate Change.
12. Government of Pakistan. (2021). *Pakistan: Updated nationally determined*

SQ3R STRATEGY UTILIZATION AND ITS RELATIONSHIP WITH READING COMPREHENSION AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE CORRELATIONAL STUDY

contributions (NDCs) 2021. Ministry of Climate Change. <https://unfccc.int/sites/default/files/NDC/202206/Pakistan%20Updated%20NDC%202021.pdf>

13. *Government of Pakistan, Ministry of Climate Change.* (2021). *National Climate Change Policy (updated 2021).* Islamabad: Author.
14. [https://policy.asiapacificenergy.org/sites/default/files/Updated%20National%20Climate%20Change%20Policy%20\(2021\)_0.pdf](https://policy.asiapacificenergy.org/sites/default/files/Updated%20National%20Climate%20Change%20Policy%20(2021)_0.pdf)
15. *Harding, S. (2004). The Feminist Standpoint Theory Reader: Intellectual and Political Controversies.* Routledge.
16. *Hawkey, A. J., & Ussher, J. M. (2022). Feminist research: Inequality, social change, and intersectionality.* In U. Flick (Ed.), *The SAGE handbook of qualitative research design* (pp. 1160–1176). SAGE Publications Ltd. <https://doi.org/10.4135/9781529770278>
17. *Malmqvist, A. (2018). Gender and Climate Change: Women's Vulnerability and Resilience.* Palgrave Macmillan.
18. *Merriam, S. B., & Tisdell, E. J. (2016). Qualitative research: A guide to design and implementation (4th ed.).* Jossey-Bass.
19. *Ministry of Climate Change.* (2018). *Year book 2017–18.* Government of Pakistan. <https://www.mocc.gov.pk/Downloads>
20. *Morgan, H. (2022). Conducting a qualitative document analysis. The Qualitative Report, 27(1), 64–77.* <https://doi.org/10.46743/2160-3715/2022.5044>
21. *Jaffar, Saad, Muhammad Ibrahim, Faizan Hassan Javed, and Sonam Shahbaz.* "An Overview Of Talmud Babylonian And Yerushalmi And Their Styles Of Interpretation And Legal Opinion About Oral Tradition." *Webology* 19, no. 2 (2022).
22. *Pakistan Environmental Protection Agency (PEPA).* (2017). *Climate Change and Gender: A Study of Rural Women in Pakistan.* Government of Pakistan.
23. *Patton, M. Q. (2015). Qualitative research & evaluation methods: Integrating theory and practice (4th ed.).* SAGE Publications.
24. *Puskur, R. & Mishra, A. (2022, Oct 4). Rural women in Pakistan are the most affected by 'apocalyptic' floods. CGIAR Gender.* Retrieved from <https://gender.cgiar.org/news/rural-women-pakistan-are-most-affected-apocalyptic-floods>
25. *Saeidzadeh, Z. (2023). Gender research and feminist methodologies.* In D. Vujadinović, M. Fröhlich, & T. Giegerich (Eds.), *Gender-competent legal education* (pp. 183–213). Springer. https://doi.org/10.1007/978-3-031-14360-1_6
26. *Jaffar, Saad, and Nasir Ali Khan.* "ENGLISH: Child Marriage: Its Medical, Social, Economic and Psychological Impacts on Society and Aftermath." *Rahat-ul-Quloob* (2022): 01-09.
27. *Shah, S. Z., Khan, M. S., & Ahmad, Z. (2020). Gender-responsive Climate Policies in*

Pakistan: A Critique. *Asian Journal of Environmental Science*, 15(2), 59-72.

28. Stevens, G. (2024). Feminist research: Key principles. Academic Writing UK. <https://academic-writing.uk/feminist-research/#:~:text=3.%20Centering%20Marginalized%20Voices%3A%20,based%20inequalities%20and%20injustices>
29. Thakar, T. (2022). Gender and climate disaster: A worsening situation for Pakistani women. *Women In International Security*. <https://wiisglobal.org/gender-and-climate-disaster-a-worsening-situation-for-pakistani-women/>
30. United Nations Framework Convention on Climate Change. (2019). Enhanced Lima work programme on gender and its gender action plan (Decision 3/CP.25)unfccc.int. [FCCC/CP/2019/13/Add.1]. Available from https://unfccc.int/sites/default/files/resource/cp2019_13a01E.pdf
31. United Nations Framework Convention on Climate Change (UNFCCC). (n.d.). Key aspects of the Paris Agreement. Retrieved from <https://unfccc.int/most-requested/key-aspects-of-the-paris-agreement>
32. UNFPA. (2022, August 30). Women and girls bearing the brunt of the Pakistan monsoon floods. United Nations Population Fund. <https://pakistan.unfpa.org/en/news/women-and-girls-bearing-brunt-pakistan-monsoon-floods>
33. UN Women. (n.d.). In Focus: Climate action by, and for, women. <https://www.unwomen.org/en/news/in-focus/climate-change>
34. Ayub, Shahzada Imran, Saad Jaffar, and Asia Mukhtar. "ENGLISH-CHALLENGES CONFRONTED BY CONTEMPORARY MUSLIM WORLD AND THEIR SOLUTION IN THE LIGHT OF SEERAH." *The Scholar Islamic Academic Research Journal* 6, no. 1 (2020): 379-409.
35. Waseem, M., Rahman, S., & Ali, A. (2016). Gender and Climate Change: A Study of Rural Communities in Sindh. *Pakistan Journal of Environmental Studies*, 12(2), 45-60.