



RESEARCH PAPER**Gendered Experiences of Climate Change: A Case Study of Gender Participation in Climate Change Policies in Pakistan (2001-2024)****Aqsa Aslam**

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ABSTRACT

In the discourse of water scarcity and gender discrimination, a feminist political ecological lens offers a nuanced understanding of the complex interplay between gender dynamics and water access. Article highlights that historically, despite of bearing multitude water related miseries, women are altogether excluded from national policy formulation processes and there is inequality of women representation in high ranked positions in ministry of water and Irrigation. In this article, mixed methodology has been used. Article has found out that women bearing water burden compounded with domestic violence results into incapability of women to perform their duties, resultantly it encourages the practice of "Water Wives" and "Water Laborers". Additionally, on basis of their different biological functioning such as menstruation and pregnancy, water scarcity affect women disproportionately. Article suggests that, in water policy formulation, women role should not be compartmentalized only as beneficiaries. Their contribution should be recognized as water drivers, as only such measures can achieve water security.

KEYWORDS

Gender Disparities, Marginalization, Pakistan, Water Scarcity

Introduction

Undoubtedly Pakistan has reflected its commitment to the 2030 Agenda for Sustainable Development. However, the issues of gender inequality are deeply rooted in Pakistani society and the country is still lagging behind when it comes to implementation of targets, ranking at 125th number out of 163 countries. Some statistics in this context portray the reality of gender gap in Pakistan. For instance, according to recent statistics by UN women, girls in their early childhood years (10 years) spend 18.8% of their time in domestic and unpaid labor, in addition to that, girls and women who are in their reproductive years i.e. 15-49 years, are deprived of their basic sexual and reproductive rights. It is a settled fact that women in Pakistan face discrimination when it comes to access to health, education and employment (Ali et al., 2022). However, entangled in the complexities of the evolving society, women have also been subject to discrimination in terms of environmental crisis.

Water, which is a natural and fundamental resource for life, should be available for all, irrespective of their combination of genes. Unfortunately, women, who tend to be the backbone of any community are compelled to bear the disproportionate burden of water scarcity (Afzal, et. al., 2020). Pakistan is a developing country, with a 30-day water storage capacity and 207 million people in the country, owing to the mismanagement of resources, face scarcity of water (Ahmed et al., 2022). According to various reports Pakistan is the third most water stressed country in the world and is anticipated to face absolute poverty by 2025 (Jamshaid, 2022). Women undoubtedly suffer more in this regard as compared to

men. According to the Chairperson of the Women Community Organization in Dera Ghazi Khan, women in rural areas are assigned with the task to fetch water at least three to four times in a day in scorching heat. This becomes more problematic when women, who are already malnourished as compared to their male counterparts, have to fetch water for their household tasks during pregnancy. Moreover, carrying the water pitchers on their heads lead to excessive hair fall and in some worse cases resulted in baldness among women (Asian Development Bank, 2008). Lack of nutritious food and clean water, burden of fetching water pitchers coupled with the existence of early marriages results in miscarriages and complicated pregnancies of women, especially in rural areas of Pakistan (Ghani, 2016). Pakistan is one of the countries where child mortality rate is highest for children under the age of 5 years i.e. 65.2/1000. This figure surpasses the global rate of 37/1000 deaths as of 2020. The most common factors associated with the high mortality rate include complications during pregnancy, poor socio-economic conditions, unhygienic and unsafe deliveries, water borne diseases and lack of nourishment (Tharwani et al., 2023).

Moreover, lack of clean water undoubtedly impacts everyone, nevertheless, unavailability of clean water affects women more in particular. It becomes harder for women to deal with menstruation if they do not have access to clean water, especially for women residing in rural and backward areas where toilet facilities are away from home and lack privacy. This becomes more problematic at night when it is considered unsafe for women to leave their homes, and therefore women tend to have limited access to toilet (British Red Cross, 2023). Poor sanitary conditions to which women are exposed due to lack of availability of clean water is a serious yet undermined issue even in today's age and time.

Interestingly, when we talk about gendered experiences of water, it is not just confined to the lack of availability of water to women, in fact this issue is multifaceted and complex. Taboos, stigmas and cultural aspects also play a significant role in making women more vulnerable and undermine their basic rights. For instance, Pakistan faced a record breaking monsoon rainfall between the months of June and August in 2022, which resultantly caused immense destruction and gave birth to widespread diseases, damage to property and so on and so forth. During this chaos, a remote area known as Basti Ahmed Din situated in the province of Punjab had turned into an island, only accessible through boats, which highlights the level of damage that this community went through. However, what is noteworthy in this case study is the fact that only men were allowed to travel and reach the nearest relief camp where they were provided with basic aids and supplies. This decision was taken by the community elders, and the rationale behind this decision lies in the archaic philosophy of honor being associated with women and therefore, women, in order to preserve the honor of their families should not leave the premises of their homes, and therefore, women in this community were left without basic facilities like clean drinking water and were more likely to become victim of water borne diseases as compared to the male members of this community (Sturridge et al., 2022).

In another tragic tale, a distant village in Sindh named Baluoch Zardari, a women aged 30 and a mother to six children narrated her perilous journey of life. She believes, water, which is a fundamental source of life, is inaccessible to people living in remote areas especially. Due to lack of water, they are deprived of clean drinking water coupled with unavailability of clean water for cooking. Women, who are already malnourished as compared to their male counterparts, face severe consequences in their health due to lack of water. Due to severe weakness women are unable to breastfeed their children which impacts the health of these children as well (Buechner & Haro, 2023). Therefore, health of

women, physical as well as mental, directly impacts the health of their children who are to shape the future of any nation.

As the issue of environmental crisis gained currency in the contemporary age, so did the notion of feminist dimension of environment which gave birth to feminist political ecology. This tend to be a significant subfield of gender and development and throws light upon the relationship between gender and environment through examining the power dynamics on different levels (Elmhirst, 2015). Gender equality and equity is undoubtedly a prerequisite and a foundational pillar of sustainability. Furthermore, education and mobility are two crucial tools through which women can empower and educate themselves and ultimately participate in the issues relevant to sustainability. However, in Pakistan, the conservative religio-cultural fabric of the society curtails the access of women to resources and awareness, and in addition to that deprives them of their right to participate in decision making. Resultantly, their active participation remains a distant dream in public and global struggles for sustainability.

An ironic fact observed within the Pakistani societies, especially in the rural areas, is the existence of vertical imbalance. Women in these communities are given the responsibility of collecting water and carrying out the household chores associated with the availability of water. However, these women are not allowed to become a part of the decision-making machinery of the economic sphere. As the predominant source of income in rural areas of Pakistan is agriculture, the women of these areas have limited or no access to irrigation. In fact, agriculture is considered to be a typical male domain (Memon et al., 2019).

Water scarcity is a gendered phenomenon, not just in Pakistan but in various other countries and regions as well. (Khan, et. al., 2022). Problem lies when gendered roles are specified which in turn result in gendered implications associated with various social aspects of society. And although majority of studies cover the issues faced by women living in rural areas, those who reside in urban settlements are also likely to bear the brunt when it comes to issues related to water scarcity. Unlike men, working women bear additional responsibility of taking care of household chores and children. Especially women belonging to lower social classes who are living in informal settlements face multifaceted challenges. A glimpse of these trials can be witnessed through the case study of Aasia Kamran, a 29 year old, living in a one room quarter situated in Nayabad, in Lyari. Aasia is a mother of three children, aged 6 and 4 years and a new born child. According to her, children often get sick because they do not have access to clean drinking water. As a result of this, mothers like Aasia who are working full time or part time have to take an off from their work which annoys their employers and also brings about an additional financial stress to the family (Ebrahim, 2023). Moreover, making sure that there is sufficient water for cooking and household chores has always been the sole responsibility of women in majority cases. Thus, one can witness the multilayered barriers that women are compelled to confront on daily basis. Their gendered experiences of water are not just confined to limited access to water resources, in fact the issues they face are multidimensional.

Another issue that is neglected and is associated with environmental crisis is the occurrence of mental health problems especially among women. The IPCC (Intergovernmental Panel on Climate Change) synthesis report published in 2023 indicated that mental health challenges are indeed interconnected with environmental change. According to various studies the increase in temperature and water scarcity can lead to stress, anxiety and depression. However, government's priorities reflect that both mental health and environmental crisis are not immediately on the list (Ebrahim, 2023). Women's health and their unique issues cannot be examined through one lens, in fact, lack of

education, poor health care system, poverty, environment, to name a few, are all interlinked (Ebrahim, 2023).

Literature Review

Water scarcity is a serious threat to Pakistan's agriculture sector as it contributes 23% of GDP. In addition, it's posing major threat to 42% labor force, energy security and food security and human rights violation. More than 80% of country's population faces issue of water scarcity. However, women are more subject to water related responsibilities and vulnerabilities. Gender equality is the 5th Goal of Sustainable Development Goals which states that there should be equality at all levels and aspects of the life. Pakistan ranked 153rd out of 156 countries in Global Gender Index Gap report 2021. Studies have shown that in country, there are stereotyping of the gender roles and social constructions of gender inequalities that make women experiences more vulnerable due to water scarcity. Such studies have adopted different methodologies in order to highlight the gender-based struggle women have to make to meet water needs for their families. The review of the studies shows that there stands limitations and research gap in analysis of gendered experiences of water scarcity as well as gendered-oriented water conservation and management policies.

Writer in her article claims that in case of non-availability of water it is the women who are responsible for collecting and carrying out water from long distanced areas. Writer relates the case of Pakistan; she claims that it is estimated that almost 72% of water used for household chores is carried by women. The situation gets further worsened in remote areas of Pakistan. Writer depicts the miserable condition by making a statement that on account of water scarcity in country, a toilet with the facility of water is a luxury for women in Pakistan. Apart from this, the young girls, who are mainly in charge of water collection are unable to attend their schools. Writer refers to the story of Tharparkar, Pakistan that mainly suffers from low precipitation level, increased level of drought that eventually results into water scarcity and food insecurity. On account of low availability of water, in Tharparkar, women face mental agony and depression and high suicide rate are the worrisome of area. To exacerbate the situation, women due to water scarcity are deprived of even basic access to proper water, sanitation and health (WASH) facilities. Poor WASH facilities, lack of privacy for menstrual hygiene management further added salt to injury for women in Pakistan (Jamshaid, 2022).

Writer in his article, claims that water scarcity has become a Global phenomenon. It has hit almost all the states across the world, however, compartmentalization of women in the water policies has made the issue most vulnerable for women. Writer highlights the case of Ndonga; it is facing severe water scarcity issue that is thrusting the men of the area to move towards the urban centers for the employment. However, women are left with burdensome duty of managing water for the family. As far as government strategies in this regard is concerned, it is quite ineffective in the rural areas like Ndonga. Writer's prime focus lays on the inculcating the women in water management policies and water related decision making. Writer vouchsafes the notion that vulnerability due to water scarcity in Ndonga has become more pronounced due to lack of women participation in water related decision making. Water management strategies devised by women are largely undocumented, therefore, they are unrecognized. Writer infers the situation by claiming that vulnerability of water scarcity can be reduced effectively through formulating the water strategies incentivized by women needs, experiences and knowledge as they are the chief users of this non-renewable natural resource (Sigenu, 2006).

In their article, writers claim that water scarcity has become a vulnerable concern for low- and middle-income countries. It is mainly resulting into poverty, food insecurity and human rights violation. Writers have explored the gendered experiences of water scarcity in Gburimani, northern Ghana. This research was aimed at highlighting the significance of having a gender-oriented perspective on the issue of water scarcity. The research has been conducted through participatory method. Research capsules that on account of water scarcity women suffer more vulnerabilities, burdens in terms of gendered responsibilities, power structure and human rights. Despite of the men having equal consumption of water with women but do not share homogenous oppression. Resultantly, research invokes the significance of acknowledging the role of gender in water related decision making (Nordström & Widman, 2022).

Writers in their article highlight that water has always been a significant resource for men and women. In Sub-Saharan Africa, water scarcity has reached to an alarming situation. However, it is the women who face burdens and vulnerabilities with great proportion than men. In response to these anticipations, women suffer more in terms of fetching of water, having lack of (WASH) access and gendered biased water governance. Research concludes that water scarcity in Sub-Saharan Africa causes women disempowerment, human rights of violation, opportunity cost as well as diseases among women. In order to address the issue, research recommends that water-oriented gender equity must be achieved in Sub-Saharan Africa (Martin & Khalid, 2019).

Writers in their article have reviewed that on account of water insecurity gender-based violence has increased. Writers claim that studies have been conducted in sub-saharan Africa and South Asian countries. These studies have claimed that due to ongoing water insecurities women have been subject to physical as well as sexual violence. Physical violence from intimate partner as violence sparks for not fulfilling the domestic duties due to non-availability of water resources. Additionally, women are subject to sexual violence by strangers as women are travelling miles away from their homes in deserted areas for fetching water. Writer concluded from the research that there is a huge dearth of information in assessing the water scarcity and gendered-based violence (Rusyidi, 2022).

Material and Methods

The methodology used for this research study is mixed method of research. For this purpose, qualitative type of data has been collected, with some primary resources data like original reports and documents e.g., Economic Survey of Pakistan, and South Asian Journal and secondary sources of data like books and articles have also been consulted etc. The duration of research is from 2000 to 2024.

Understanding of Gender and Water from Feminism Political Ecological Perspective

Ecofeminism is the offshoot of feminism that investigates the connectivity between the nature and women. French feminist Françoise d'Eaubonne in 1974 has introduced this term. For ecofeminism, a strong bond exists between nature and women. In response to this anticipation, this idea vouchsafe that both women and nature are subject to a society which is dominated by men. Specifically, ecofeminism demonstrates that the methods through which social norms in patriarchal society, treat women and nature unjustly. Additionally, ecofeminism credos for gender equality, canons non-patriarchal structure and demand for a world that values organic processes, non-linear structure and collaboration and merits of intuitions. Ecofeminism is brainchild of the idea that women and environmentalism must be develop some connections in order to promote the protection of women and nature from the long historical oppression of both. Moreover,

eco-feminists claim that social norms in a patriarchal society depicted that women are irrational and to be in control of and dictated by men who are rational, non-chaotic and ordered. Resultantly, this hierarchical structure results into powerful men and exploitation of women. Thus, Eco-feminists canons for undoing the social status of women and nature that could be possible only through non-linear and non-patriarchal structure of society.

Eco-feminist, Rosemary Ruether, urges the environmentalists and women to work together and seek for liberation from male centered society in which both are subject to exploitation. Scholars who share Ruether's, school of thought criticize feminists theories void of environmental ideas and environmentalists who overlook role of women. In 1980s, ecofeminism has developed its roots into two main divisions: Radical ecofeminism and Cultural ecofeminism. Radical eco feminism claims that social norms are ordered by men and establish the norms that exploit both nature and women. Cultural ecofeminism highlights that a strong bond exists between women and nature. Additionally it says that women have intimate relation with nature as food provider, nurturer, in terms of biology such as menstruation, lactation and pregnancy. Along with, cultural ecofeminism also canons that both nature and women redeem spirituality.

Results and Discussion

Gendered Experiences of Water Scarcity in Pakistan

In countries like Pakistan, water has become a deep rooted gendered issue, as it has burden women in disproportionate manners. Climate change-induced activities have aggravated the water scarcity as well as vulnerabilities for women. Additionally, it has exacerbated gender-based violence in Pakistan as it is sole responsibility of women to fetch water for households. Germanwatch issued a report that listed Pakistan among top five countries, which are vulnerable to climate change. Repercussions of climate change are evident in form of water scarcity. By 2023, UNICEF-WHO report vouchsafed the water scarcity issue by specifically stressing the gender. Report affirms that out of ten homes, seven households lack availability of water. In such situations, water fetching is primarily responsibility of girls and women (Sheikh, 2024).

Women are Water Laborers in Pakistan

For many nations, water collection from distant areas has become a social responsibility. Such situation is quite evident in case of country like Pakistan, where approximately 22 million people struggle just to have access to water. In response to such anticipations, the burden of water fetching lays on the very shoulders of women. In patriarchal societies like Pakistan, collection of water is perceived only as domestic chore to be done by women. Bearing such burden compounded with domestic violence results into incapability of women to perform their duties, resultantly water fetching compromises. Such circumstances encouraged the practice of "Water Wives". Men give justify polygamy as the only solution to cope up with water stress. Here the task of additional wives is also expected to serve as "Water Labourers" (Sheikh, 2024).

Women Face Harassment

In Pakistan, the process of water fetching exacerbates the women concerns such as harassment. Multiple times in a day, women have to cove long distance to reach water resources. These long hour trips sometimes meet physical assaults as well as mental anxiety. For instance, in Tharparkar desert a rural area of Pakistan, where incidents of sexual and physical assaults have been reported, as women have to take long journey on

such deserted areas for water fetching (Sheikh, 2024). The Pakistani Rural Household Survey of 2015 affirmed that pertaining to water stress the percentage of women for water fetching has consistently increased. In Balochistan, it has increased to 60% and in Sindh such poll has raised up to 40% (Shabbir, 2016).

Girls most often complained to their family members that while water fetching they are harassed older boys. Women feel insecure on especially going out after sunset. In addition to their worries, getting late at from bringing water results into annoyance of women and casting suspicion at their women. In patriarchal society, such circumstances either lead to feud followed by ethnicity and honor killing. To address the issue, women do group formation for bringing water and mostly in daylight (Ahmed, 2021).

Water Fetching Influences Breast Feeding

Water Fetching affects the medical conditions of women in Pakistan. The hours of standing in long queues and waiting for their turn in intense weather conditions make them lethargic, stressed and sick during menstruation and lactation period. Such tiresome woman miserably fails in paying attention to their children and adding to miseries, no regular water fetching causes dehydration and malnutrition among family members. Such circumstances make women weaker and they are not able to produce enough milk for babies, resultantly it shortens the frequency of breastfeeding. In this situation, women feel low blood pressures and babies irritation. Women in Pakistan have expressed water scarcity, stress and water laboring influence the production of amount of breastmilk (Ahmed, 2021).

In Pakistan, natural disasters are frequent and pertaining to climate change situation has worsened. In case of water scarcity, women population is at risk of discontinuation of their breastfeeding practices. In an interview, one woman from Sindh affirmed that during pregnancy she becomes weak and extra energy is required to fetch water and carry heavy water buckets. Moreover, breastfeeding gets reduced due to lack of water at homes (FGD, 2019).

Biological Functioning

Apart from water labor, women health is affected by poor water quality and contaminated water. On basis of their different biological functioning such as menstruation and pregnancy, water scarcity affect women disproportionately. Moreover, during times of water related disasters such as floods and droughts priority is given to use of water for domestic purposes rather than maintaining feminine hygiene practices (World Health Organization, 2014).

In case of Pakistan, women in rural areas especially in Quetta and Baluchistan suffer from physiological deformity as well as many health concerns. Women walk for miles by holding heavy water canes in their hands that causes deformity in their skeletal systems, spinal issues and pelvic deformity. Such situations among women eventually lead towards early deliveries, impulsive abortions or a prolapsed uterus. Additionally, women bodies are not strong enough to carry heavy weights, bearing hefty water canes cause joint pain, mal-nutrition that can result into anemia and mal-nourishment. Situation gets worsen in rural areas, where ratio of tuberculosis, hepatitis, immobile births, and miscarriages is rising among women (Barech, 2019).

Marginalized Positioning/Domestic Role

It is an accepted and well established fact that cultural values and social norms demarcate the expected role in relation to 'masculinity' and 'femininity'. Such socially created expectations from feminism always translate into the assumption that women and girls are caretakers of homes. In household chores such as cooking, cleaning and washing water scarcity disrupts the normal functioning of these activities. Resultantly, undue pressure exerted on women that causes anxiety stress among women.

Policies in Pakistan

Lack of Representation and Exclusion from Decision-Making Processes

Despite of bearing multitude miseries, women are altogether are excluded from national policy formulation processes. Including women in formulation of climate change policies as well as water scarcity issues can have moral and pragmatic impacts. Morally, it would greatly affect the management of resources. As far as pragmatically it is concerned, for addressing the water scarcity issue in long term, an inclusive and participatory approach is required, in which women role should be centered. As in patriarchal societies, there are the women who considered as sole responsible for bearing water stress burden. Additionally, women on basis of their social role possess knowledge that can prove a significant addition to climate change mitigation strategies and addressing gender based water discriminations. It is unfortunate to claim that there is inequality of women representation in high ranked positions in labor market, parliamentary representation and in ministry of water ad Irrigation. There is beyond doubts, women on basis of their biological nature, women in managing water would give a unique and useful perspective (Pamioli, 2020).

In Pakistan, women mainly remain invisible in water policies. However, the scenario isn't the same for all provinces. One of the provincial Assemblies passed a SWMO-2018 bill for women. In this bill, women were included in water management. Accordingly, through this law women are empowered in two prongs; at first they can improve their socio-economic conditions, second; they can actively participate in decision making. To ensure women empowerment, section 2 and section 3 have been amended. According to section 42 sub-section 1, two women of FO command area shall be landless, and two women of AWB command area shall be member of Board of Management of any FO. Moreover, in section 56 amendments are made, accordingly two women Board of WCA, shall consist of two women members (APP, 2023).

Women substantially remain unseen in water institutions, departments and water businesses. They always bracketed as affectees, of the problem either climate change or water scarcity. In National Water Policy 2018, women participation seems invisible with respect to their representation. Women count across the country is almost 48 %, nevertheless they have been mentioned only once in the said policy. Such mentioning is also limited to stakeholder participation. Accordingly, in section 18.3 of the policy, where the word women has been compartmentalized to only domestic women and promotion of women hygiene. Apart from domestic water use, water is excessively used in agriculture sector, where women provide at least half of workforce. In this sector of NWP 2018, women reference is still invisible. In Pakistan, women role in perspective of water is not limited to water users but also as water custodian. Unfortunately, in Pakistan water rights are generally based on water users but on basis of land ownership. And women ownership of lands in Pakistan is largely smaller as compared to their population. Resultantly, their claim for water right is also limited. Moreover, women aren't vocal in the national level

debate of dams, water infrastructure, irrigation policies and water demands (Kamala, 2018).

Conclusion

In the culmination of this discussion, the intricate nexus between water scarcity and gender discrimination is unveiled through the lens of feminist political ecology. By scrutinizing the gendered impacts of water scarcity in Pakistan, this article elucidates the multifaceted vulnerabilities experienced by women. From their marginalized positioning in society to the burdensome task of water fetching, every facet underscores the disproportionate impact on women's lives. Moreover, the examination of how water scarcity influences crucial aspects like breastfeeding and exposes women to harassment emphasizes the urgent need for gender-sensitive approaches to water governance.

Central to the recommendations drawn from this analysis is the imperative to merge gender equity with the water-related goals of states. Recognizing women as central actors in water management and sustainable development agendas is essential for fostering inclusive and equitable societies. In the case of Pakistan, the empowerment of women emerges not only as a moral imperative but also as a pragmatic necessity for the effective implementation of gender-oriented policies. By amplifying women's voices and ensuring their meaningful participation in decision-making processes, we can pave the way for transformative change that transcends water scarcity and advances gender equality, thereby fostering resilience and prosperity for all.

Recommendations

- Gender equity and quality commitments of state must be merged with water related objectives and goals of state. Through this a smooth mainstream of gender into water sector can be ensured.
- As far as Sustainable Development Goals are concerned, they have potential to put the women to central point for water management. Through this women can build synergies for water conservation, management and development.
- In water policy formulation, women role should not be compartmentalized only as beneficiaries. Their contribution should be recognized as water drivers, as only such measures can achieve water security, food security bloom in economic sector.
- In case of developing countries like Pakistan, credit lines and emerging technologies would be appropriate for the women. Such emerging technological advancement accompanied with agricultural value chains have potential to break down the conventional gender biased division of labor.
- There is a need to replace role of women from subsistence to income oriented that actually means moving women from kitchen gardens to economic gains. Such shift will end up on building women as service providers, experts and researchers.
- Among all measures, women's representation in decision making and policy formulation should be the top priority in countries like Pakistan. Only through this, gender inclusive national water policy framework can be implemented.
- In order to lighten the burden of water wives, the institutes like Tayaba Welfare International Association should be established. It's motto is to Help-2-Others (H2O). Such initiatives address the women water fetching or women water laborer issues.
- In Pakistan's Punjab province, three communities –Rehmatabad, Yazman, and Ather–have actively participated in water management.

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