



Urgent Imperatives: Advancing Gender Equality in Climate Action

Neha Saigal¹ · Saumya Shrivastava¹

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Abstract

The impacts of climate change are inequitable and gendered and women in the Global South bear disproportionate burden of the climate crisis. This holds especially true for women who are poor and disadvantaged due to different intersectional vulnerabilities. These gender inequities, perpetuated by the climate crisis, need to be seen in context of these countries' colonial histories, which established its rule on extractive relations and capitalism. They introduced laws that impacted women, especially those from marginalised communities, further widening gender relations and inequities. This paper aims to initiate an inquiry and develop a new framework or discourse around the climate crisis which is based on feminist epistemology and climate justice. The paper outlines the methodology of such an inquiry and describes root causes of gendered climate impacts. It also outlines potential areas of intervention, and envisaged outcomes, which could potentially be adopted in different contexts of the Global South. The paper proposes this as a Gender-Transformative Climate Framework, which challenges the dominant approaches to climate action and focuses on gender equality and justice as a pathway to change. It aims to find climate solutions — at intersections of mitigation, adaptation, and resilience — driven by women and based on the diverse contexts of different communities of women. The framework integrates women and marginalised groups in climate change decision-making at all governance levels, and leverages feminist leadership that challenges patriarchal norms. It envisions alternative economic systems which place care and social safety nets over perpetual economic growth. The framework thus provides an alternative to the current policy paradigm on climate solutions which is largely driven by patriarchy and neo-colonialism, promoting top-down, one-size fits all, technocratic solutions.

Keywords Gender-transformative · Climate change · Climate justice · Gender-climate framework

Introduction

Climate Change: A Global Crisis Requiring Urgent Action

Climate change is a global crisis facing humankind today, requiring urgent, concerted action. As per the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), this decade is critical to act on climate change as the world faces unavoidable and multiple climate hazards. All regions of the world are witnessing widespread disruptions even at present levels of global warming and with predictions of the global warming levels reaching levels close to 1.5 °C between 2030 and 2035, the threat is urgent and severe

(Intergovernmental Panel on Climate Change, 2023a). In fact, in November 2023, it was reported that we briefly crossed the threshold of 2 °C global warming above pre-industrial levels (Ray, 2023). This highlights that the pace of global warming has increased at unprecedented levels, which will likely have far-reaching disastrous impacts across the globe.

There is evidence that human activities and actions over the past one and a half century are responsible for climate change and the resultant extreme weather and climate events. The increasing pace of global warming and climate change has and will continue to harm life on earth and the ecosystem. It will lead to severe food insecurity, water scarcity, depletion of natural resources, and increased incidence of diseases, and impact people's livelihoods, drive people into poverty, and worsen their overall well-being, threatening their very existence. For example, it is estimated that with 1.5 °C global warming, over 350 million people will experience extreme water scarcity, several glaciers will melt, and over 14% species will face extinction risk (Levin et al., 2022).

✉ Neha Saigal
neha.saigal@asar.co.in

¹ Asar Social Impact Advisors, Bangalore, Karnataka, India

Impacts of Climate Change Are Inequitably Distributed

Climate change does not impact everyone equally: its impact is inequitably distributed. As per the IPCC Synthesis Report, globally, 3.3 to 3.6 billion people are living in contexts highly vulnerable to climate change. They face threats to their lives and livelihoods due to extreme and rapidly increasing weather events (Intergovernmental Panel on Climate Change, 2023a).

Both historical contributions to climate change and vulnerability to present climate extremes are highly heterogeneous, and those who have contributed least to the climate change crisis are most vulnerable to its impact (Intergovernmental Panel on Climate Change, 2023a). This holds true across the world where the Global South compared to the Global North will bear a much higher burden of the current climate crisis, despite historically and presently contributing significantly less to the same. For example, in year 2019, 48% of total global CO₂ emissions were due to actions of the top 10 emitters, while the bottom 50% emitters contributed only 12% to total CO₂ emissions taken together (Chancel, 2021). The same study further highlights that “current trends are reflective of historical emissions inequalities” where Europe and North America have contributed half of all emissions since the Industrial Revolution. They continue to follow the same trajectory today. The problem is due to the process of intensive appropriation of natural resources by the Global North. Kelly (2022) highlights how France’s occupation of Madagascar between 1897 and 1958 led to large-scale deforestation and conversion of the agricultural system for production of economic commodities. Similarly, Portugal set up sugarcane industries in Brazil through rampant and large-scale deforestation. This trend of exploitation of natural resources in the Global South countries has continued through neo-colonialism. Even today, Global North’s reliance on these countries for resources like materials, labour, and land is very high. For example, “for the period 1990–2015, nearly a quarter of the Global North’s GDP, i.e., USD 242 trillion, was gained from activities conducted in the Global South.” (Kelly, 2022).

At a global level, climate change is a problem of inequality and politics that continues to promote economic models that ensure appropriation and aggregation of wealth by a few. Excess energy use by the wealthier countries located in the Global North and the energy poverty in regions of Global South is reflective of this trend. It is estimated that in low and middle-income countries, climate change induced hazards will result in 70% more income losses for the bottom 40% populations, compared to the average (Chancel et al., 2023). The Climate Risk Index 2021 highlighted that extreme weather events and disasters hit poorest countries

the hardest owing to their high vulnerabilities and low coping capacities (Eckstein et al., 2021). Because of this, these countries also find it difficult to recover from such events, with the process of recovery and rebuilding slow and difficult. IPCC has highlighted that while populations of Africa, Asia, and Latin America have contributed least to the climate crisis, they are suffering disproportionately from dangerous droughts, floods, and storms, whose intensity and frequency are ever increasing (Intergovernmental Panel on Climate Change, 2023b).

Discourse on climate change has been driven by the inter-linked dynamics of colonialism, patriarchy, and neo-liberalist forms of development. As a result, climate change discourse has largely been a Western, masculinized endeavour, with focus on natural sciences and technological strategies (Williams, 2018). Even in the Global South, not all countries and regions or population groups are equally or similarly vulnerable to impacts of climate change. The socially marginalised and the poorest are worst hit by climate change compared to those who are better-off. Their vulnerability is shaped and determined by their access to resources, information, assets, and choices available to them. These are in turn determined by the existing power relations and structures which shape the socio-cultural, political, and economic contexts (Tschakert, 2012; Djoudi et al., 2016). Those at the intersections of gender, caste, poverty, and ethnicity face compounded vulnerabilities to the climate challenge, worsening their situation and leading to a vicious cycle of deprivation (Islam & Winkel, 2017). This leads to differentiated vulnerabilities and capacities to adapt or respond to change, where marginalised populations such as the women, other marginalised, diverse genders, and socially backward groups face higher vulnerability to climate change and have lesser resources to deal with the same. Thus, all action and strategies in fight against climate change must be cognizant of the colonial history and persistence of the same colonial thought and its institutionalisation (Gerardo Bandera, 2022).

Women Bear the Disproportionate Burden of Climate Change Crisis

Women from the Global South, especially those from marginalised communities, face higher vulnerability to climate change. Several factors such as ethnicity, religion, race, caste, poverty, age, and asymmetric power relations intersect with gender and exacerbate the vulnerabilities faced by women (Thomas, 2020). Climate change is not the cause of gender inequities but will most definitely exacerbate existing inequalities making women more vulnerable. Due to persisting gender inequities, climate change impacts women in three ways: first, it increases exposure of women to adverse impacts of climate change; second, it

increases their susceptibility to damages caused by climate change; and third, inequities decrease women's capacity to cope with and respond to climate change induced hardships (Islam and Winkel, 2017). These inequities, rooted in unequal and asymmetric power relations, make women more vulnerable. In a certain setting, men will have access to various services—such as credit, land, productive assets, and resources, better than women because they have power in certain spaces that women do not have (IDRC n.d.). As noted by Nelson and Stathers (2009), four factors determine the relative exposure and abilities of men and women in face of climate change. These are participation in decision-making and politics, division of labour within and outside households, access and control over resources, and knowledge and skills.

Several studies have highlighted the disproportionate adverse impacts of climate change on women and focused on how women are the worst hit by climate change. These studies also highlight that women have lesser resources to adapt or mitigate the climate impacts which affect different aspects of their well-being. For example, women comprise 70% of the 1.3 billion people living in conditions of poverty globally, and women-headed households comprise over 40% of the poorest households in urban areas, resulting in severely limited resources to deal with climate impacts (Osman-Elasha, 2009). In addition, women spend a disproportionately high time in unpaid labour and caregiving, which will increase significantly due to climate change. To elucidate, time spent in unpaid labour is 84% for women, compared to 20% for men as per the India's First Time Use Survey. Women's caregiving burden is high—they spend over 4.5 h every day caring for children, elders, ill, or disabled (compared to 1 h for men). This is likely to increase manifold with increased incidences of diseases, natural disasters, and other climate-induced health stress (Ferguson, 2021).

In India, these trends of disproportionate impact on women are similar to those seen globally. For example, climate change will adversely impact agriculture production and productivity in India, a disproportionate burden of which will be borne by women. Women in India carry out over 80% of farm work and comprise over 42% of farm labour, but only 13% of them own land (The Hindu Businessline, 2013). Due to a lack of ownership rights, they have limited access to assets, resources, credit facilities, insurance, markets, and information and technology, which restricts their adaptive capacities (Barooah et al., 2022). Women are also largely dependent on informal sectors for livelihoods in India, which are expected to bear the greatest brunt of climate change, affecting women's economic well-being.

Natural disasters will be more frequent and more severe in the face of climate change and they impact women and men differently. Data shows that women and children are 14 times more likely to die when disasters strike. This is

visible in mortality data from different natural disasters. For example, in the Indian Ocean Tsunami in 2004, over 230,000 people died, of which 70% were women (Okai, 2022). The aftermath of natural disasters also results in women and girls facing increased gender-based violence, incidence of trafficking, increased loss of livelihoods, poor nutrition in wake of food insecurity, adverse health impacts due to limited healthcare facilities, and loss of education. Disruptions in healthcare services in the aftermath of disasters also impact women more, affecting their health, especially their reproductive health. It also leads to an increased care burden when family members fall sick. Climate adversities and disasters also lead to widespread displacement. As per the United Nations Human Rights Office of High Commissioner (2022), 80% of people displaced by climate change globally are women. Climate Action Network South Asia's recent report showed that climate change induced displacement and migration result in over 12–14 h of additional work for the women (Choudhuri, 2022).

Rationale for a Gender-Transformative Climate Framework

United Nations Framework Convention on Climate Change (2023a) notes that women play a critical role in tackling the climate crisis, whether it is adaptation, mitigation, or building resilience. They further observe that climate change action requires women's active involvement, since they not only bear disproportionate burden of the crisis but are also instrumental to arriving at sustainable climate solutions. They are also at forefront of and first responders in community response to natural disasters. The women bring a different perspective to the table sharing different lived experiences and priorities which need space in all decision-making. It has also been shown that higher representation of women in Parliaments is linked to higher ratification of international environmental treaties (United Nations Framework Convention on Climate Change, 2023b). The Synthesis report by the UNFCCC Secretariat on gender dimensions highlighted that if women are included in governance at all levels, they can be effective change agents. Their leadership leads to long-lasting and effective climate policies which can be done with a gender-transformative, rights-based, and socially inclusive approach (UNFCCC, 2022). The same report notes that not just women, but women from marginalised communities should be included in climate action and decision making at all levels to ensure “social equity in general and gender equality, specifically”.

An engagement with feminist theory suggests that the dominant approaches to climate change policy often construct the knowledge of the problem through a narrow scientific and technocratic lens. They position the issue as universal and distant rather than differentiated and embodied (Bee

et al., 2015). Existing gender norms and power inequalities shape the ability of men, women, and people identifying as non-binary gender to adapt to climate risks. These gender norms are, in turn, shaped by the prevalent culture and knowledge systems, which are defined and contested in everyday life (Nelson & Stathers, 2009). The neoliberal climate governance ignores these experiences, knowledge, roles, access, and responsibilities shaping the actual subjects impacted by climate crises, in this case, women. It ignores the specific contexts and power relations that define a person's position in society, which in turn is shaped by their gender, caste, class, race, and other factors. These have a huge bearing on how climate crises impact them and their well-being and how well they can deal with it (Bee et al., 2015).

Climate policy and solutions are limited by the dominant discourse on climate change which, is driven by a technocratic and top-down worldview. They ignore the power dynamics and differentiated impacts of the climate crisis. This research paper aims to initiate an inquiry and develop a new framework or way of thinking about the climate crisis based on feminist epistemology and climate justice. The paper outlines the methodology of such an inquiry and describes root causes, potential areas of intervention, and impact that could potentially be adopted in different contexts of the Global South. The Gender-Transformative Climate Framework challenges the dominant approach to climate action and brings the focus to gender equality and justice as a pathway to change.

Methods

The conceptualisation and drafting of the Gender-Transformative Climate Framework were done keeping in mind the key principles of feminist research. These include promoting social change through generation of new knowledge, grounding it in feminist values and beliefs and ensuring diversity, interdisciplinary and transdisciplinary, ensuring that concerns of women coming from very different perspectives form its basis. It further intends to empower women and change the unequal power relations and inequality (Brayton et al., n.d.). These principles guided the entire process of framework conceptualisation.

The conceptualising of the framework was carried out in two phases. First, a review of the existing literature was carried out at both global and national levels. The insights and understanding from this, coupled with practical understanding of the authors, helped in drafting an outline of the framework. Relevant government schemes were mapped against the proposed gender-climate actions to contextualise them in the Indian context. Based on these, an outline of the gender-transformative climate framework was

prepared. Second, once the outline of the framework was developed, a series of structured in-depth interviews were held with gender and climate change experts to seek inputs and feedback. These were used to redefine and finalise the framework, which is presented in this paper.

The stepwise process for the same is given below:

I. Review of the Existing Literature and Developing an Outline of the Gender-Transformative Climate Framework:

An extensive review of the existing literature was undertaken to understand the framing of the problem and main discourse around gender and climate change — globally and in India. Key words and phrases which guided the research include — gender, climate change, adaptation, mitigation, resilience, power relations, gender-transformative, gender framework, climate framework, gender justice, intersectional, climate action, women, and climate change. Academic papers and studies, research reports, case studies, media articles, blogs, government policies, and reports (for India) were analysed for the review. Through this review, different gender, climate change, and development theories and frameworks were studied and the problems of climate change and gender inequities were understood in those contexts. Gender-transformative approaches to developmental issues were analysed to adapt them for gender-transformative climate action and propose strategic pathways for achieving the same. Specifically, discourse on history of colonialism, historical development paradigm on Global North–South divide, principles of feminist political ecology, and feminist approaches to climate justice were reviewed. These formed the basis for conceptualising the framework on gender and climate change.

To identify and map the relevant government programmes, in addition to the above, guidelines of different government schemes and programmes, web portals, annual reports, outcomes budgets, result framework documents, and press releases of key ministries were analysed to understand the objectives of the schemes and their target beneficiaries. Schemes which had stated objective/s as climate mitigation, adaptation, or resilience across sectors were selected in the first round. Of these, those schemes which had women as target beneficiaries or had specific gender components in the scheme design and provisions were further shortlisted. These shortlisted schemes thus met twofold criteria — having stated climate action as their objective/s and having clear gender components in their design and provision. These were then mapped against the proposed climate actions in the framework, to build a case for scalability of these actions in India.

Analysis from Literature Review and Drafting of the Gender-Transformative Climate Framework:

First, the key principles underlying the framework were laid out with the framework drawn in accordance with the

identified principles. The insights from the literature review were then analysed using a mix of thematic and discourse analysis. The key insights were categorised under different themes — problem statement, causes, remedial actions — and tabulated into an Excel. These were further analysed to create additional layers within each theme. Problem statements were contextualised for women in the Global South, for women experiencing intersectional forms of marginalisation. Climate-induced vulnerabilities were segregated across six broad groups. The causes of gendered climate vulnerabilities were divided into three kinds of basic causes. A series of gender-climate interventions were then listed based on authors' practical experience and insights from literature. The authors contextualised the learnings based on their own practitioners' lens and experience, which helped in identifying the relevant interventions and actions as a part of the framework. The impact was also envisaged and listed. The government schemes were mapped against the proposed gender-climate actions. This completed the first draft of the gender-transformative climate framework.

II. In-depth Interviews with Stakeholders to Inform and Input into the Framework:

Once the draft framework was developed, stakeholder interviews were conducted to further redefine the framework as per inputs of the experts in the field. In-depth interviews (IDIs) were conducted with stakeholders and organisations working on different sectors/areas in the realms of gender and climate change. This was done to inform the problem statement and potential solutions for gender-transformative climate action in India. These stakeholders included a diverse group, with a focus on ensuring diversity with respect to gender, caste, ethnicity, area of work, mix of grassroots actors, and top-end policy level advocates, to ensure that insights are inclusive. The selection of stakeholders was done based on authors' mapping of key actors and organisations working in India on issues of gender and climate change in the development and academic space. Purposive sampling was followed to include experts from different focus areas within the overall ambit of gender and climate, such as financial inclusion, common property resources, health, livelihoods, agriculture, issues of marginalised women, and women's labour, among others. Final IDIs were conducted with 15 stakeholders and organisations, given the willingness and availability of the stakeholders contacted. In addition, the authors conducted three focused group discussion (FGDs) with different communities of women in three states, each with a group of 10–12 women. This was done to understand perspectives of women who grapple with increasing climate-extremes every day, towards the crises, and seek their inputs on what would help them the most.

The IDIs and FGDs were conducted as a listening exercise using semi-structured, open-ended questionnaires with

the respondents, and these interactions were held both online through video conferencing and in-person. Some of the key questions were around understanding the respondents' perspectives on gendered impacts of climate change, their inputs to the proposed framework, prioritisation of key areas for defining scope of the framework, and possible gender-transformative solutions to the gendered-climate challenges. The interviews were transcribed by the authors during the interview.

Analysis from the Stakeholders' IDIs and Finalising the Gender-Transformative Climate Framework

The insights from the transcriptions of the IDIs and FGDs were analysed using a narrative analysis and inputted into an Excel format under different headings to capture insights as feedback and as inputs to the problem statement, sectoral and constituency insights, causal factors and proposed solutions, and areas which need greater attention. Several suggestions were made in these IDIs with respect to the framing of the problem and revisions in the areas which need focus for proposed gender-climate actions, as well as the way the framework was structured. The stakeholders also contributed from their own work and cited examples of how different gender-climate actions can play out in the Indian context.

Based on these insights from the IDIs and FGDs, the framework was further revised by the authors. The proposed gender-climate actions were modified to the ones presented in the paper, which also helped set broad boundaries for the framework. Based on the suggestions, the outcomes were also divided into short-term and long-term. The different components of the framework were then arranged as different layers, each layer leading to the next — basic causes, climate-induced vulnerabilities, gender-transformative climate interventions, and impact.

Limitations of the Framework

It is acknowledged that gender is non-binary and we are referring to the system of gender inequality rather than specific genders. However, given the lack of secondary data and evidence, a lot of our focus has been on women, aligning with the availability of literature as well as practical experience of stakeholders.

The framework assumes that proposed interventions can be scaled up and implemented sustainably through existing government schemes and programmes and that these schemes have the resources and capacity to respond to climate change, though this may not always be the case.

The framework's focus is on contextualisation only in India. While authors feel that it can be tweaked and adopted to different contexts of the Global South, the authors have not had the scope to test this.

Results

The proposed framework adopts a gender-transformative approach to the issue, which involves addressing the root causes of gender inequality, rigid gender roles and norms, and reshaping the unequal power structures between men and women towards equity (UNICEF (n.d.)). The framework highlights and addresses the basic causes of gender inequality which will be exacerbated due to climate change. It views gender inequity as an issue to be addressed to tackle women's enhanced vulnerabilities to climate crisis. The framework attempts to reshape women's agency, social structures, and relations to address strategic gender interests as well as women's practical needs. By focusing on the basic causes and viewing gender-climate crises as a political and social problem, the framework envisages an impact which will be more sustainable and lasting.

Principles Underlying the Framework

Based on the insights from the literature, inputs from the IDIs, and authors' own understanding and experience on the issue, key principles underlying the framework were laid out. These include:

- Framework is centred around intersectional vulnerabilities of women and other marginalised, diverse genders from different communities and recognises the need to constantly engage with women to understand these vulnerabilities.
- Climate change is not the cause of gender inequities but will most definitely exacerbate inequalities making women and other marginalised genders more vulnerable (Economist Impact, 2023).
- Climate change is seen as a political problem rooted in unequal power structures and oppressive social norms.
- Strategy should address the basic causes of climate-induced vulnerability for women and other marginalised, diverse genders.
- Climate solutions driven by participatory decision-making led by women and other marginalised genders are at the intersection of mitigation, adaptation, and resilience. They are based on the diverse contexts of the community of women and other marginalised, diverse genders.
- Leverage government schemes where there is an opportunity and potential.

Components of the Gender-Transformative Climate Framework

This section presents and explains the different components which make up the proposed gender-transformative climate framework.

Basic Causes at the Root of Increased Climate Vulnerability of Women

IPCC (2012) has defined vulnerability as the propensity to be adversely impacted by climate change, recognising that this is shaped by a person or group's historical, socio-economic, cultural, political, institutional, and environmental conditions. These influence their capacity to anticipate, cope with, and resist and recover from climate change impacts. Where a person is situated in the larger socio-economic-political-cultural structures is therefore important in determining their vulnerability to climate change.

This framework recognises that gendered vulnerabilities faced by women due to climate change are a result of some basic causes. The authors identified power asymmetries between men and women, women's lack of ownership or limited access to resources, and women's role in society and within homes, as basic causes which increase women's vulnerability to the climate crisis (Ferdous & Mallick, 2019; Yavinsky, 2012; Thomas, 2020, Irish Aid, 2023, Bryan et al., 2024).

The asymmetric power relations in all spheres between men and women exacerbate their vulnerability to climate change, tilting the scale against women. As Francis (2000) notes that power asymmetries lie at the root cause of the gender differences, we see in all spheres and "domination of men over women is one of the most fundamental and widespread forms of power asymmetry in human society". This leads to their economic, social, and cultural oppression and marginalisation resulting in women facing several additional challenges and restrictions. Women experience different forms of additional vulnerabilities, impacting their overall well-being, adaptive and coping mechanisms, and ability to recover from shocks.

These power asymmetries in turn also have a bearing on women's access, control, and ownership over assets and resources. Hans et al. (2019) note that women's location within the existing power structures is key to determining their access to different resources and the degree of agency they will have to bring about positive change. As discussed previously in the paper, data as well as evidence from ground shows that women hold limited or no ownership over productive assets or resources. This severely limits their ability to cope with or respond to any climate adversity, at the same time increasing their vulnerability to the same. Roy (2018) notes that unequal access to resources between men and women limits women's access to opportunities and information. This in turn limits their capacity to cope with climate adversities, "exacerbating even newer manifestations of gender inequality".

Further, the differential roles women and men play in the society and within homes also shape the women's exposure and vulnerability to climate change as well as their capacity to respond to the same. These roles and responsibilities which women shoulder shape their own exposure to and

coping capacities to climate adversities, resulting in several additional vulnerabilities. Y. Carvajal-Escobar et al. (2008) highlight that it is important to recognise the differential productive, reproductive, and community roles men and women play when discussing vulnerability to climate change or designing climate actions.

“Women typically shoulder almost the entire burden of meeting household needs such as collecting fuelwood, water, as well as the caregiving burden for the entire family. With the changing climatic conditions, the situation is getting worse for the women. With increasing water scarcity, women have to walk much longer distances to collect water; in Rajasthan (India) women have to sometimes walk 5–6 km every day to collect water. With increases in incidence of diseases, women have to spend more and more time caring for their ill family members. Every day climate change is increasing women’s drudgery and caregiving burden, everywhere”, shared an expert during the IDIs, citing that these are just some examples of how women’s roles shape their own vulnerabilities to climate crises.

Nature of Climate-Induced Vulnerabilities Faced by Women

Basic causes result in an increased vulnerability of women to climate change, where climate change exacerbates the existing gender inequities impacting women disproportionately. These vulnerabilities have been broadly clubbed as societal norms, biological roles, lack of enabling environment, poverty, lack of economic opportunities, control over resources, lack of rights over assets such as housing and land, and intersectionality. These categorisations are adapted from the work by Dasra and ICC (2022).

To elucidate, gendered roles within households and in society place the burden of fulfilling the household’s basic needs like water, firewood, and the burden of caregiving on women, which results in a disproportionately higher impact of climate change on them. Due to climate change-induced scarcity of resources such as water or firewood, women are forced to walk greater distances to collect water for their families’ daily needs, significantly increasing their workload. In seven out of ten households without water on premises, women and girls bear the responsibility of fetching water and spend more time doing it, each day having to walk longer distances to collect water (UNICEF, 2023). UN Women (2023a, b) also highlighted that in India women and girls spend over 50 minutes each day collecting water, compared to only 3 min for boys and men. This situation will worsen with increasing droughts and water scarcity due to climate change. One such example is from Maharashtra, India, where in 2020 it was estimated that around 19,000 villages had no access to water, primarily due to recurrent droughts and above normal temperatures.

Collection of water is the primary responsibility of the women in the household. Due to scarcity, women were required to walk several long kilometres to fetch each day’s water needs. This was in addition to the multitude of other household chores they did. Water scarcity led to polygamy in several villages, giving rise to a practice known as “water wives,” where men take many wives to collect water and undertake the multiple household chores. Women were reduced to being treated as a source of water collection and a means to carry out household chores (Behal & Behal, 2021). Similarly, Madhya Pradesh, a central Indian state, faced severe water scarcity in 2016. This was due to droughts as a result of erratic rainfall and scorching heat. Women, who were the sole water collectors within households, were forced to wake up at the crack of dawn to walk long distances to collect water for their homes. The startling fact was that the government closed its government run schools early, just so that children, especially the girls, could also pitch in with collection of water everyday (Lal, 2016).

Sorensen et al. (2018) note that men and women are impacted differently by climate change impacts on health due to various biological, social, economic, and cultural differences. An increase in disease burden due to climate adversities such as vector-borne diseases increases the caregiving burden of looking after the sick in their families. Women also face a greater vulnerability due to their biological roles, where pregnant women and foetus in specific, and women generally, are more susceptible to adverse health impacts from climate change and extreme weather conditions. This coupled with any disruption in health services during times of disaster or climate change induced disease outbreak places them in greater danger. Moreover, it is predicted that gender-based health disparities will widen due to climate change in India (Sorensen et al., 2018). For example, Smith et al. (2021) cited an example from Delhi, India, where heavy rainfall caused an exponential rise in vector-borne diseases, such as dengue and chikungunya. Since women shoulder the bulk of the caregiving burden, including caring for the sick, women were forced to spend, on average, an additional hour per day caring for family members with climate-related illnesses. They further highlighted that women were also twice as likely to suffer from sleep deprivation owing to the increased caregiving burden due to climate change.

At the same time, women own and have control over lesser resources, have lesser economic opportunities, and are poorer than men. This results in greater economic stress and restricted capacity to cope with and respond to any climate adversity, and will in turn push more women into the poverty trap. Saigal and Bhatkhande (2024), share the story of an indigenous woman leader in Odisha, India, and about the plight of the women in her village which had worsened considerably due to climate change. This village was considered the “jungle gaon” (forest village) owing to lush green cover, in and around the village. However, in the past years, climate-induced challenges like erratic rainfall made it difficult for the

women in the village to gather adequate and relevant forest produce to meet their needs. Agriculture was also hit hard due to climatic vagaries. At the same time, over-exploitation of forest timber by big corporations and timber mafia impacted the livelihoods of Indigenous women who had been conserving these commons for decades and their lives and livelihoods are dependent on them. The authors reached out to this woman leader — Malati — and included her in the IDIs for the present research. During the IDIs, Malati shared that, *“The weather has become very unpredictable impacting our agriculture and forest produce, which we have always depended on for survival. We, women, work as farm labourers and do not have ownership over these agricultural lands or forest commons. We can’t benefit from government schemes for agriculture insurance or crop improvement and lack resources to adopt resilient agriculture practices. Whatever minor produce we were getting from forests is also much less now and also uncertain. We are getting pushed deeper and deeper into poverty and feel helpless”*, when speaking about the impact of climate change in her life.

The IPCC Synthesis Report notes that vulnerability to climate change for women can increase significantly due to “gender-differentiated access to social, economic and financial resources” (IPCC, 2023a). UN Women data shows that in all regions of the world, female poverty rates are higher than the male poverty rates, using both global as well as national poverty lines (Azcona & Bhatt, 2022). The situation is projected to worsen due to climate change. A recent report by Turquet et al. (2023) also highlights that climate change may push an additional 158 million women and girls into poverty by the middle of this century, compared to 16 million more men and boys.

In addition, women also lack rights over ownership of assets such as house or land, which severely limits their ability to deal with climate stress. This is because they lack financial safety nets and are unable to access credit or extension services to help them tide over the disaster event. As per the latest National Family Health Survey (IIPS 2022), only 42.3% women (in the age group 15–49 years) own a house and only 31.7% women own land either individually or jointly as of 2019–2021. One should also be cognizant of the fact that mere ownership of an asset by the women in India may not mean that she also enjoys decision making power over the same. Agarwal et al. (2021) analysed data for nine states in India and found that women constitute only 14% of landowners in the agriculture sector, and own only 11% of agricultural land in rural landowning households, averaged across states. Women’s access to credit remains limited. Data shows that 90% of women entrepreneurs in India have not availed credit from formal financial institutions due to absence of any collateral (IFC, 2022). As per Dhanraj (2023), financial resilience is a major challenge for

women, where a study of 900 women in Karnataka showed that more than half of the women in the study would find it difficult to access emergency funds of INR 5000/- in a month, unless they took help from friends and relatives.

In India, government compensation for crop failure and financial losses shields farmers from severe yield decline caused by climate change. For instance, Gujarat’s Mukhya Mantri Kisan Sahay Yojana, introduced on August 10, 2020, addresses risks like drought, heavy rain, and unseasonal rain, but only farmers in Gujarat who own agricultural land are eligible beneficiaries. Similarly, the compensation packages and schemes introduced to manage climate change risks for Gujarat’s farming community were all associated with land ownership. Even if all landowners had received compensation under the schemes, women would only make up only 10–15% of the beneficiaries. This is coupled with other gender barriers like lower mobility, exposure, and awareness of relief packages. The situation worsens when compensation for climate-related crop risks is directly deposited into bank accounts. Because men predominantly own the land, they receive the funds, leaving women without access or control over the compensation. In many instances, women are even unaware that the compensation has been deposited (Vasavada, 2022).

This is further exacerbated since women lack an enabling environment to take lead, participate in, or inform climate action. Women have a low representation in political and government decision making spaces which restricts their agency, their needs are not adequately voiced or addressed, and they are not seen as agents of change. As per UN Women (2023a), women’s participation in government delegations to the UN COP conferences was only 35% in 2022, a marginal increase of 5% from 2021 (when it was 30%). The Synthesis Report by the IPCC (2023a) further notes that compared to men, women find it harder to get their voices heard owing to existing gender norms and socially constructed gendered behaviour. This is despite recognition that women, especially from indigenous communities, make decisions which support climate responsible actions.

“Panchayati Raj Institutions (PRIs) (institutional structures for local governance in rural India) are critical institutions for planning and implementing local level climate action which is contextual and need-based. The PRIs have several provisions for enabling leadership of women in governance. But often when women are elected as PRI members, they are unable to have meaningful leadership since they are dominated by the men in the family and remain official representatives only on paper. The women’s voices thus remain unheard even when they are placed in positions of power, owing to prevalent gendered power asymmetries”, shared an expert working with elected women representatives in rural areas of India during the IDIs.

Intersectionality, when women's gender identities intersect with their other identities such as caste, ethnicity, religion, or other social, demographic, and economic identities, further increases the vulnerabilities they face in wake of climate change. Women from disadvantaged communities face deprivation of basic necessities for survival even in absence of climate change. Climate change induced hardships make their situation worse, exacerbating their challenges and making survival difficult. Intersectionality lens helps understand the interactions among multiple dimensions of social and power relations which determine how climate change affects women, how they respond to it, and how climate policies and measures impact them (Davis, 2008; McCall, 2001). Sultana (2018) also notes that "Intersectionality of social difference, especially along gender and class lines, differentiate the ways in which impacts of climate change are experienced and responded to." Thomas (2020) highlights that gender intersects with characteristics like ethnicity, age, poverty, and marginalisation, which lead to greater vulnerability for women. Climate-induced vulnerabilities need to be seen as context (for example, unequal access to opportunities) rather than outcome (Bohle et al., 1994).

Gender and Climate Strategic Interventions

Climate justice is fundamentally about climate change impacting people disproportionately and redressing the injustices in fair and equitable ways to reduce marginalisation and oppression and enhance equity (Sultana, 2022). Adding feminist insights to the climate justice approach engages with intersectionality that focuses on women's lived experiences. It elevates different voices and demonstrates how patriarchy further adds to socio-ecological crisis (ibid). Climate justice theory notes that those on the frontline of the climate crisis are most knowledgeable of its impacts and how this should be addressed. This places women at the forefront of struggles around climate justice (Perkins, 2017). As stated by indigenous leader Melina Laboucan-Massimo at the New York Climate March in 2014, violence against the Earth causes violence against women and we need to resolve both these to resolve colonial mentality and values of patriarchy and capitalism, which exploit the land and the women (ibid). In the 1970 s, ecofeminist movements demonstrated the inter-linkages between women's health and lives to the destruction of nature. The commonalities to these movements were the awareness of women's vulnerability to environmental degradation and the need to have their voices in decision making. The 1973 Chipko movement that began in defence of the Himalayan forests and subsistence economy led by women is one such example (Bianchi, 2012).

Based on this theoretical foundation, the intersections of gender and climate change can be understood under three themes where interventions at different levels can be imagined—leadership, vulnerability, and benefits (Kovaleva et al., 2022).

(a) Leadership

Leadership and empowerment aim to reduce power imbalances and increase capacity of women and other marginalised groups to participate in decision making and contribute to the climate solution strategies. This challenges the current leadership in climate change which is characterised by male domination, limiting decision-making power of women (Kovaleva et al., 2022). The barriers to women representation in climate change leadership positions are knowledge, expertise, skills, and political will, especially in sectors like energy and transportation where men are better supported (ibid). Leadership emerged as an important intervention during the interviews with stakeholders. This was with the additionality of building leadership of existing women leaders which includes government representatives and frontline social workers like the Accredited Social Health Activists (ASHAs) and the Anganwadi Workers,¹ and other networks working on gender equality. Building leadership on climate of the frontline social workers with the government systems was especially highlighted. This is because they are the first point of contact between the community and the government system, who the communities trust and look to for guidance and information.

"When women's leadership is built and they are capacitated, they do a wonderful task of leading the communities to undertake the most sustainable and environmentally friendly approaches. We have seen this especially among the indigenous women, who when trained and their capacities are built, are doing great work, taking true leadership and leading the efforts for conservation of natural resources in their Gram Panchayats, and urging the communities to adopt more sustainable practices Investing in women's leadership is the best way of investing money", shared an expert working in rural Odisha with indigenous women during the IDIs.

Another barrier that was identified during the stakeholder interviews was the language of climate change. This language, stakeholders shared, was primarily Western centric and distant from the realities of communities in countries of the Global South like India. The need to create new language and new narratives on climate change that are feminist and led by marginalised communities of the Global South was identified as important.

During the IDIs, women from the community in Maharashtra and Odisha shared that *"We, women, experience impacts of climate change every day but are una-*

¹ ASHA and Anganwadi Workers are frontline service providers of the government who work with the communities, for health and women and child development, respectively.

ble to articulate it as such, since we do not know the technical words or concepts of climate change. We lack the vocabulary to explain what is happening around us. It would be good if we can have a local language of our own to explain how we experience climate change and relate to it.”

Media discourse around climate change was nearly absent, especially in regional languages. The women shared that there needs to be a systematic approach to ensure that information around climate change reaches people in the right way. For this, journalists can undergo rigorous training on two things — Climate Change Fundamentals and Reporting on Climate Change. They can then be incentivised to do stories in their respective languages and regions which can be packaged and disseminated through popular media platforms. These reporters can then become Climate Champions and create awareness about the issues in their respective communities.

“We don’t hear enough about climate change issues in our regional media, which we and local communities follow. For us this discourse is nearly absent. There needs to be a systematic approach to ensure that information around climate change reaches people in the right way. Women, and even local women journalists, should be trained on climate change reporting and basics, and incentivised to do stories in their respective languages and regions which can then be packaged and disseminated through and on popular media platforms. These reporters can then become Climate Warriors and create awareness about the issues in their respective communities”, shared community women from Maharashtra, India, during the IDIs.

(b) Vulnerability

Gendered differences increase vulnerability to climate change. Barriers to reduce vulnerability for women and other diverse genders include skewed decision-making power, lack of land ownership rights, limited access to natural and financial resources and knowledge, and gender-blind policies and measures (Kovaleva et al., 2022). The impacts and vulnerabilities to climate change can be addressed by ensuring social protection as evidence has shown that these schemes respond to climate extremes like floods, storms, and droughts (Costella et al., 2023). The literature on social protection and climate change suggests that it can provide an income basis to support behavioural change and adoption of adaptation measures like shifting livelihood strategies and protecting homes. This can be combined with complementary schemes that provide financial services and skill development (ibid). Just transition is an important move towards

addressing the gender-differentiated vulnerability of the climate crisis. Central to this is a shift in providing access to finance, technical support, and markets for women-owned solutions (WEDO, 2023).

The interviews with stakeholders revealed that social protections schemes, social safety nets, and financial inclusion are critical for building climate resilience of communities of women that are at the forefront of the climate crisis and experience marginalisation and oppression. Existing government schemes for pension, maternal care cash transfer, housing, water, and sanitation, among others, and their timely accessibility to marginalised women and communities become essential in building resilience to address vulnerability. Moreover, they also support adoption of climate adaptation and mitigation strategies. Additionally, stakeholders felt that behaviour change interventions which include men will support in shifting mindsets and oppressive social norms that perpetuate gender inequality and increase climate-induced vulnerability.

“Social protection schemes, insurance models and Direct Benefit Transfers by the government for women help them in the face of or aftermath of climate change induced calamity and are extremely helpful, especially when women lose their livelihoods. One has to think beyond loans for the women when it comes to building their resilience. Focus should be on strengthening social protection measures to provide them safety nets when they lose everything due to climate calamities or adversities. What would help a woman most when she loses her livelihood or earnings?” shared an expert working on financial inclusion of women during the IDIs.

(c) Benefit

Recognising the gendered vulnerability of the climate crisis and addressing this could provide a range of climate change related benefits. These can improve the effectiveness of climate solutions and involvement of women as powerful agents of change who can build community resilience, adaptive capacity, and mitigation strategies (Kovaleva et al., 2022). An example of this is the gender-just transition, as the shift to a hundred percent renewable and sustainable societies cannot happen by the transfer of power of one hegemonic industry like the fossil fuel industry to another. It requires a fundamental shift in economic, political, and decision-making power and a structural approach that address underlying systems that breed injustice (WEDO, 2023). A gender-just transition will shift power to cooperatives, micro and small-scale industries, and social enterprises which are likely to be led by women and gender-diverse people (ibid). Women have long subsidised capitalist economies by providing underpaid and unpaid care and reproductive work.

Therefore, a gender-just transition should recognise, redistribute, and remunerate unpaid care work (ibid). The generation and assurance of livelihoods through cooperatives and commons are more prevalent than we realise. They allowed Black Americans to find alternative economic strategies and economic independence in the face of competition and racial discrimination (Perkins, 2017).

The findings from stakeholder interviews from India corroborate this evidence from the literature review and reveal the importance of women-led co-operatives for livelihoods and access to basic services like health and finance during the COVID- 19 pandemic. This reinforces that these models could be equally effective in generating benefit for communities in the climate crisis. The role of common pool resources, according to stakeholders, emerged as an important climate mitigation strategy. The experts shared that they are equally important in providing livelihoods to marginalised communities in the face of the climate crisis, especially indigenous women whose lives, tradition, and culture are intertwined with the natural commons.

“For women, cooperatives and SHGs have become extremely important, not just for providing livelihoods and a means of earning but also to be able to access basic amenities and government services. These federations also act as safety nets for women, especially in times of climate adversities, ensuring women have livelihoods and earnings, basic services and support in times of need. Through cooperatives women can have access to ready cash in times of need, something which can be critical in the aftermath of disasters. Women find kinship, agency, economic independence and safety through these cooperatives, making them critical for building women’s resilience in wake of climate change adversities”, shared experts who support formation of women cooperatives for sustainable livelihoods and economic empowerment, during the IDIs.

“Commons for the women have remained an important source of not just livelihoods but also a means to meet their food, nutrition, health, cultural needs. Their traditions, festivals, customs are all linked to the commons. There is an urgent need to invest in building women’s leadership for climate action and sustainable management of natural resources, to preserve the fast-depleting commons. Investing in women cooperatives and SHGs, farmer producer organisations can help the women generate incomes for themselves and for other women through sustainable practices, preserving the commons. Women producer companies can also be invested in by providing them capital which in turn supports their livelihoods”, shared an expert working on natural resources management with women, during the IDIs.

Impact

Gender justice is a strategic move to advance a nation’s climate resilience. It can catalyse societal change, challenge stereotypes, dismantle barriers, and create an equal and inclusive society, making the climate change issue a fundamental human rights one (WEDO, 2023). The focus should be to move away from the victim narrative and the fascination with resilience narratives to co-constructions and partnerships (Sultana, 2022). The gender-transformative climate framework understands impact on the basis of a complex understanding of climate change and the consequent injustices. It does so through theories of anti-racist, anti-capitalist, and feminist praxis that focus on abilities of communities of people to cope, adapt, and renew (ibid). The impact for this framework has been identified through the lens of communities of people especially marginalised, to cope, adapt, and renew in the context of the climate crisis. In the short term, the desired impact would be access to resources, assets, knowledge, and financial products which support communities to cope and adapt to the crisis. In the long term, the impact is focused on the renewal and regeneration of communities through a greater focus on commoning and care, partnerships, and solidarity through diverse networks and a greater voice for women and other marginalised genders in climate change decision making.

One such example is from Uganda, where women play an important role in management of natural resources and agriculture, but face challenges due to absence of rights, financial and resource constraints, and limited access to information and services. This made it difficult for them to adapt to adverse climatic impacts on agriculture and natural resources, especially in wake of increased caregiving burden due to climate change. “Women’s Empowerment for Resilience and Adaptation Against Climate Change”, an initiative in Uganda, aims to enable women to have equal control over factors of production and participate meaningfully in development processes. The initiative has formed women-led groups to collect small individual savings to generate a pool of funds, which acts as a pool for savings for all women. They can then borrow from the same and invest in income-generating activities to address climate change impacts. Women have used these funds to invest in interventions like land planning, clean energy, agro-forestry, and soil conservation. The project has resulted in twofold benefits — increased resilience and adaptive capacities of women and restoration and preservation of the environment. The initiative has led to 218,294 women having access to clean water, 1835 women using solar energy, and 135 women groups harnessing honey from beehives, for an income of USD 540,000 from honey sales annually. In addition, 1800 hectares of wetland has been conserved, and clean energy sources have been adopted, which led to adoption of

sustainable and resilient agricultural practices, and reduced deforestation by 8% (United Nations Framework Convention on Climate Change, 2023c).

Similarly in Lake Tarapota, Colombia, Lilia Isolina has been leading Indigenous women to protect the Amazon ecosystem which is being exploited due to overfishing. They partnered with Conservation International's Amazonía Verde program and established fishing agreements to safeguard fish populations, promote food sovereignty, and protect the broader ecosystem's impact on aquatic species. These efforts included monitoring and managing fisheries while preserving them through traditional knowledge. These resilient women are not only protecting their cultural heritage but also advocating for Indigenous and environmental rights. Their community-driven initiatives emphasize sustainable practices and reject unsustainable technological fixes, promoting a future where both the environment and diverse communities can thrive together. They highlight the importance of inclusive decision-making with women at the helm.

In Mexico, Melipin beecheji are a bee species which are very important to Mayan culture and tradition. Approval of Monsanto's programme by the Mexican government to grow modified soybeans led to large-scale deaths of these bees. A traditional Mayan beekeeper, Leydy Pech led a campaign against this programme. She took up the cause by legally challenging the programme, raising awareness academically and in public discourse. As a result of these parallel campaign strategies, and the legal case filed, the Government of Mexico revoked the Monsanto programme. This case created an example for other indigenous groups to use campaigning for preservation of the ecosystem. "Lech shared that her endeavour was not just to protect the bees, but an effort to safeguard and protect their communities, ecosystems and lives, which the industrial agriculture (soybean in this case), large scale deforestation and climate change are threatening" (WECAN, n.d.) (Fig. 1).

Discussion

Climate change is a problem of inequality and injustice, and can fundamentally be seen as a human rights issue with highly heterogeneous impacts, as those who have contributed the least to the crisis are bearing its higher burden. This is evident in the differentiated impact of the climate crisis between the Global North and the Global South. The mainstream discourse on climate change is Western and masculine with a focus on natural sciences and technical fixes. It is driven by the interlinkages of colonialism, patriarchy, and neo-liberal forms of development. There is a need to recognise and challenge the persistence of colonial thought and institutionalisation as we develop new frameworks for

inclusive climate action. Gender is a critical intersectionality in climate change, often a side-dish in a discourse that is highly Westernised and promotes solutions based on economic models that exploit certain genders and marginalised groups for the appropriation and accumulation of wealth by a few. While climate change is not the cause of gender inequality, it will most definitely exacerbate it by strengthening the structures of exploitation and oppression. This will make women and other disadvantaged genders more susceptible to the impacts of climate change while they have limited capacity to cope with the crisis.

The leadership role played by women, especially those from marginalised communities, frontline social workers, and those at the forefront of climate change, in tackling the climate crisis through a combination of strategies around mitigation, resilience, and adaptation, is important for the issue on intersectionality of gender and climate change. It is not just limited to the adverse impact of the crisis. The perspective, priorities, and experiences that women especially from marginalised communities and other diverse genders share need space at decision making platforms. Building climate leadership of women in existing networks working on gender and frontline social workers is also critical for this. While the UNFCCC's 5-year gender plan is an attempt to bring in gender equality into climate action, it falls short of addressing systemic and structural issues of gender inequality and fails to advance the leadership of grassroots and indigenous women. There has been continuous engagement by feminist groups through the Women and Gender Constituency (WGC) of the UNFCCC. The WGC has been working on moving forward the agenda of gender and environmental justice globally, across key issues around gender just transition and climate finance, loss, and damage among other things (WGC, 2022). Yet there is a colossal gap specifically at national and sub-national levels in understanding and integrating the perspective and practice of gender equality and gender justice in climate action and policy. This requires a radical approach of new frameworks that shift the current discourse which is top-down, power blind, neo-colonial, and one size fits all.

The gender-transformative climate framework developed with a focus on the Indian context which can be tweaked and adopted in other contexts of the Global South, is a step in that direction. It adopts a feminist epistemological lens and is founded on climate justice theory, ecofeminism, and feminist political ecology that emphasise the importance of mundane and everyday spaces that affect people's daily lives making the climate crisis relatable, differentiated, and embodied. Through this inquiry, there have been experiences and evidence from the ground that require a context-specific response that will enable gender-just climate action. It will improve the participation of women and marginalised identities as climate leaders and advance climate goals at national level.

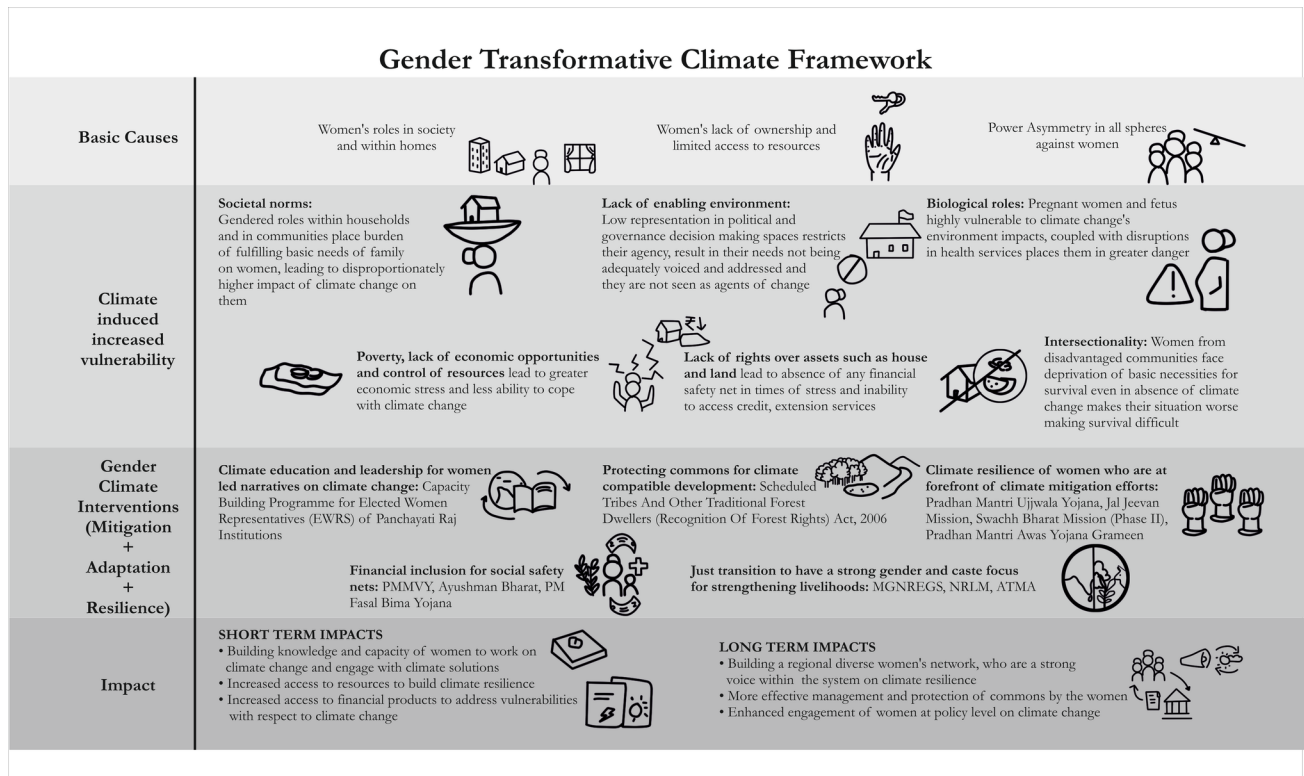


Fig. 1 The gender-transformative climate framework (Click [here](#) to see a high-resolution image of the framework)

The gender-transformative climate framework links the basic causes of gender inequities which are structural: roles, power, and access to resources and assets, to increased climate-induced vulnerability. The core of the framework is understanding the vulnerabilities that different communities of women experience due to the climate crisis and they could range from societal, economic, biological, and political. The five strategic interventions that are suggested in the framework are interlinked and mapped against key Government of India schemes so they could be implemented at scale on their own or in combination to address the underlying vulnerabilities. Overall, the interventions address the vulnerabilities, and build leadership that is feminist and bottom-up, in order to gain benefit for communities who are in need. It does this by building resilience and implementing mitigation and adaptation strategies. The framework defines impact for most marginalised communities of women and other gender identities to cope and adapt to the climate crisis and renew, and to transform the basic causes ensuring gender equality and climate justice. The gender-transformative framework is an intentional process to move away from colonial and patriarchal imaginations. It is an attempt to reimagine the framing of the problem and solutions to the climate crisis to include those that are marginalised and underrepresented.

There will be some challenges in translating the framework into practice and these insights are shared from lived

experience in the Indian context. Many of the climate-induced gendered vulnerabilities are rooted in patriarchal and feudal societal norms which will need policy makers and practitioners to address structural issues around gender inequality. The framework's success is reliant on the State's intervention and support with welfare schemes and that has dependency with political will and stability. Finally, there is a domination and top-down promotion of masculine interventions around climate solutions that also translates to resource allocation. This could result in gender equal climate action being under-resourced and limited to the periphery.

Conclusion

This gender-transformative climate framework is an attempt to revisit and refine the way gender is seen in the climate change discourse, as an externality in the domain of a technocratic, masculine, and neo-colonial world. The framework views climate change as a political and social issue requiring actions and shifts in existing power structures, norms, access to, and control over resources, favouring women and other genders. This will enable a meaningful and lasting change towards a gender-transformative, socially just, and inclusive society. This is critical for women and other marginalised, diverse genders to adapt to, build resilience towards and

mitigate climate change impacts. While the framework borrows from theoretical understanding of the subjects, it proposes actions that are implementable, scalable, and adaptable to different contexts. This makes them relevant to the whole of Global South, with scope to update and revisit the framework as per changing realities. The inquiry and development of the gender-transformative climate framework highlight the urgency of addressing gender equality to strengthen climate action at national and sub-national levels. It also calls for collaboration between international, national, and grassroot level stakeholders to increase the level of knowledge, data, evidence, and action on gender-transformative climate action.

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Declarations

Conflict of interest The authors declare no competing interests.

Disclaimer The views expressed in the paper are of the authors and do not necessarily reflect the view of the affiliated organisation.

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