

Chapter One

Why a Female-centered Approach?

Rural women in developing countries suffer disproportionately from the disastrous effects of climate change. As caregivers, subsistence food producers, water and fuel collectors, and reproducers of human life, their health and wellbeing are severely degraded by constant exposure to climate change disasters. Increased global awareness of this situation has led some organizations to bring to the task remediation and adaptation for women and girls in the Global South.

One such initiative began in 2011 when the Women and Gender Constituency (WGC) obtained observer status in the United Nations Framework Convention for Climate Change (UNFCCC). This constituency worked to ensure that women's voices were heard, and that their rights were protected. To support and advocate for those whose lives are constantly threatened by massive floods, droughts, food insecurity, and migration, the WGC established a network of 33 women's and environmental civil society organizations and over 600 private citizens from around the world.¹ Gaining momentum from the Paris Climate Accords in 2015, it also developed awards programs to showcase women-led environmental projects: Most notable is *Gender Just Climate Solutions (GJCS)*, which holds an annual ceremony at the UNFCCC's climate change conference to announce the three top projects, presents the winners with seed grants (over time, between 2,000 and 3,000 Euros to each awardee), and organizes mentoring opportunities through its extensive network. Past award winners include feminists who promote women-led irrigation systems in rural areas, clean energy cookstoves, train-the-trainer education, and recycling programs.² In addition, the *GJCS* recognizes several other entrepreneurs and innovators who are engaged in devising ways to empower women to help their communities adapt to and mitigate against climate change.

While awards programs are laudable, the fact remains that many United Nations (UN) member countries pay lip service and provide little support for addressing climate justice. As a result of a report issued by the UN and another

**Empowering Female Climate Change Activists in the Global South:
The Path Toward Environmental Social Justice, 5–18**



Copyright © Peggy Ann Spitzer, 2023. Published by Emerald Publishing Limited. This work is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of these works (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licenses/by/4.0/legalcode>

doi:10.1108/978-1-80382-919-720231002

one from the medical journal, *Lancet*, in October 2022, the *New York Times* published the following assessment:

Countries around the world are failing to live up to their commitments to fight climate change, pointing Earth toward a future marked by more intense flooding, wildfires, drought, heat waves and species extinction The [*Lancet*] report raised concerns not only about the direct health consequences of rising temperatures, including heat-related mortality, pregnancy complications and cardiovascular disease, but also the indirect costs, including the effects that drier soil could have on malnutrition and how a changing climate can expand habitats suitable to mosquitoes that carry dengue fever or malaria, ticks that carry Lyme disease, and the pathogens that cause diseases like cholera and Valley fever.³

One year earlier, the UNFCCC ignored requests from the WGC and other groups to offer an online platform for those who could not travel to Glasgow, Scotland, during the pandemic to attend its climate change conference (COP26). Thus, the voices of rural women from developing countries – where the effects of climate change are the most severe – were largely unheard.⁴ And, at the 2022 conference in Sharm El-Sheikh, Egypt, the WGC felt that it was necessary to distribute guidelines on the safety and likely surveillance of women who were attending COP27. It also developed hashtags (such as *#SilencedCOP27*) to show solidarity for political prisoners and environmental defenders.

It is worthy to understand the historical context within which the above actions occurred: In 2015, the UN General Assembly established Sustainable Development Goals (aka SDGs), which included a commitment “to empower all women and girls.” Within this frame, the UN focused on females as victims of violence and discrimination – with respect to a lack of access to equal wages, education, and health care. In taking this stance, however, it minimized the many ways women and girls promoted solutions and challenged the rising numbers of those who are suffering from the effects of climate change.⁵

In this chapter, I introduce an American environmentalist – one of the WGC’s early awardees – who developed a new way of thinking about women’s empowerment in climate-challenged regions of the developing world. Second, to address potential leadership roles for women, I discuss findings from recent field studies to identify problems and prospects in climate change adaptation in the Global South. Third, building upon the field studies, I present a female-centered approach to climate change initiatives that, I believe, integrates women’s agency into existing structures. Finally, I set forth the complexities of intersecting social, economic, and political structures as revealed in a project that sought to establish a women-led irrigation technology in India.

New Ways of Thinking About Women’s Leadership

One of the first UNFCCC award recipients, Jeanette Gurung, an American environmentalist who worked for many years in South Asia, asserts that women’s political

participation must radically change the hierarchical, male-dominated status quo to garner the benefits of women's intellectual capacities.⁶ Gurung notes that "radical change" does not mean promoting women's agendas to the exclusion of men; rather, it incorporates women's strengths and perspectives to "hold up half the sky." As founder and director of Women Organizing for Change in Agriculture (WOCAN), Gurung drew upon her extensive experience in Asia working with international aid organizations (such as CARE and the Peace Corps), where she pushed against the glass ceiling for over 30 years in the male-dominated field of forestry. After leaving that work, Gurung set about creating tools for women to become part of a critical mass for collective change.⁷ Here are the key elements of her training program:

1. *Transformation.* The woman must have experienced an "awakening" to move from a low-to-high level of self-confidence. (The process of internal development and consciousness-raising essentially enables the woman to acknowledge her leadership potential.)
2. *Transcendence.* She must move beyond the official title and the established class hierarchy.
3. *Cooption.* Her impulse is to focus on ways to bring others along – to use or take control for her own purposes.
4. *Eloquence.* She effectively and forcefully communicates messages.
5. *Articulation.* She listens deeply to others and, in response, articulates a vision that her audience/colleagues can appreciate.
6. *Ownership.* She works toward gaining an economic advantage on behalf of the organization to which she belongs.
7. *Breakthrough.* She "breaks through" existing levels of secrecy within existing male-dominated institutions.⁸

Gurung's initiatives were the result of her own experiences in dealing with sexist attitudes emanating from the Global North in organizations such as CARE and in the Peace Corps where she had worked as a volunteer.

The above elements are cornerstones of her training; and now they need to be integrated into how a woman masters the subject matter of the field in which she is engaged. Because of gender bias, a woman may need to be *more* knowledgeable and *more* expert than her male colleagues to have her worth and value recognized and accepted, even if grudgingly or resentfully by patriarchal mossbacks. Her experiences may be directly applicable to racial, religious, caste, class, and other obstacles to egalitarian opportunity and leadership roles as well as to the gender dimension. One can find numerous examples of women and others who have been disadvantaged by hierarchical, male-dominated social structures that have culminated in the *Black Lives Matter* and *MeToo* movements. Thus, Gurung's approach applies to women who champion women's rights globally.

Results from Field Studies⁹

Current research on women's roles in climate change adaptation serves to reinforce the complexities Gurung deals with in developing her WOCAN training

programs in Bangladesh, Cambodia, Cameroon, India, Kenya, Madagascar, Malawi, Mozambique, Nepal, the Philippines, South Africa, Thailand, and Zimbabwe. My analysis of current scholarly research, based on field work that took place in Africa, provides policy recommendations for programs in Central America and Asia. For example, one in-depth study of 156 households in rural Kenya by M. W. Ngigi, U. Mueller, and R. Birner found that government programs do not support women in leading climate change initiatives.¹⁰

At the community level, women often are hindered by insecure land rights and limited access to capital, which empowers men in their communities to pursue agroforestry and conservation agriculture. Consequently, rural women focus on how to achieve a measure of financial independence and financial stability by creating safety net programs through individual and group-based income generating activities, often achieved through savings and loans and access to credit through women's organizations. Yet, their opportunities to lead a movement to change agricultural practices to adopt eco-friendly approaches are severely limited.

Another study, conducted in Nicaragua by N. Gonda, noted that the government's climate policy merely reinforced "hegemonic masculinities and patriarchy" and, as a result, undermined women's confidence in their abilities to implement climate change adaptation projects.¹¹ In short, *climate policies ignored women's deep knowledge of natural resource management and indigenous oral traditions*. Field researchers in Nicaragua concluded that the only way to change the status quo was through a systematic transformation within the government to alter climate change politics. In Ethiopia, research by S. Balehey, G. Tesfay, and M. Balehegn revealed that while women contribute more labor to their communities than men during droughts and famines, they do not have access to capital, nor do they have the power to make decisions to implement environmentally sustainable activities.¹² In yet another study conducted by R. B. Kerr et al., in addition to the lack of land rights, lack of self-confidence, and limited financial resources, interviews with 425 Malawian farmers indicated that, although women were the ones to develop informal networks to promote eco-friendly farming techniques, men had the final decision in whether the techniques would be implemented.¹³

All four of the above studies demonstrated that women's power to make changes is severely limited, even though they are more inclined than men to participate in programs that: (1) build community and a collective identity; (2) make visible agency and capabilities in enacting different subjectivities; and (3) visualize diversity and differences in unity.¹⁴ To date, scholars have not yet developed a "patriarchy index" in which countries could be classified, using a composite of factors including land ownership, primary head of household, voting trends, educational level, and so on.¹⁵ If this were created, countries could receive a rating according to the degree of patriarchy embedded in their cultures, societies, and political institutions. Obviously, many other factors could go into developing such an index.¹⁶

Correspondingly, N. Rao et al. conducted a literature review of research throughout Asia and Africa that reveals that women are more apt to participate in decision making in smaller settings with fewer people.¹⁷ In fact, if given the opportunity, they may serve as intelligence gatherers and consensus builders by

developing relationships with several different groups and communicating the practicality of altering farming practices that are detrimental to families and communities. And yet, notwithstanding this capability, a research study in Bangladesh by J. C. Jordan concludes that the only way to make significant changes in the balance of power with respect to decision making regarding agricultural practices is through radical, transformational, gendered, and power-sensitive dimensions.¹⁸ In short, a feminist revolution.

When climate-related disasters devastated farming communities in Ghana, researchers in one study found that more men than women described themselves as providers, hard laborers, and family finance managers, while women were portrayed as dependents who relied on men to provide for them and perform only labor-intensive tasks. W. Adzawla et al. concluded that climate change programs must adopt strategies to incorporate men *and* women in the community to empower women to use women's knowledge of the land and skills in problem solving, communication, and collaboration.¹⁹ However, it is unlikely that this can occur in culturally grounded patriarchal societies where women are exploited in numerous ways.

A second 2020 study in Ghana, conducted by I. Goli, M. O. Najafabadi, and F. Lashgarara found that, because men adhere to traditional roles as landowners and "heads of households," they are the first to gain access to an arsenal of climate adaptation strategies. This study listed multi-tiered suggestions to discuss the best ways to utilize "gender preferences."²⁰ *However, a "preference" implies a measure of free will that women laborers are not allowed and do not have the time or energy to pursue or that the societies and cultures in which they live recognize as part of their humanity.*

In addressing this problem, another study, a five-year pilot project in Senegal conducted by H. A. Patnaik that examined the Decentralized Climate Funds initiative, reported mixed results: (1) younger and less educated women who follow indigenous religions had a harder time developing the confidence to voice their needs; (2) in two geographical regions of Nirole and Kaffrine, women's collective empowerment and unity enabled them to increase their bargaining power in both their communities and their households; (3) in another geographical region, Keur Sette Awa, women felt self-conscious about engaging in discussions of their needs and ideas in public community forums; and (4) in some areas, a significant cost for women actively participating in community affairs was a heavier workload. It is likely that, over the long term, traditional social norms will continue to prevent women from participating in public life.²¹ Women in traditional, patriarchal societies are not apt to take on the same types of leadership roles as their male counterparts.

Reframing a Female-centered Approach

Women's oral histories combined with new perspectives on gender theory reveal the ways traditional societies may use a female-centered approach to better address climate-related disasters. First, oral histories involve self-reflections about

how women value their achievements over time. Second, a well-tested “gender schema theory” provides a method for identifying the ways men and women see themselves *within the context of* social norms and existing hierarchies. In this chapter, I suggest that drawing upon both bodies of knowledge – that is, oral histories and gender schema theory – enables a greater understanding of the roles that women can play in promoting innovative solutions in regions most affected by the disastrous effects of climate change.

There are not many oral history collections that systematically identify women’s reflections on their careers in hierarchical organizations. One that I developed to teach a course on *Women in US–Asian Relations*, was adapted from a general, non-gender specific, oral history schema developed by the Library of Congress in Washington, D.C.²² My adaptation contains reflections from about fifty women and points to four requirements needed to challenge formal established structures.²³

First is continuing to advocate for integrating a female perspective into traditionally male-centered organizations, despite the formidable challenges discussed in the previous section. Second is developing sophisticated (and forceful) communication skills to confront the inevitable challenges. (Two examples, using a safety-in-numbers strategy, are when women approach a male supervisor as a group to confront inequity; and when they interrupt male-only meetings to express their ideas.) Third is promoting “non-binary” approaches, that is, proposing multiple solutions to a problem as a way of breaking down and resisting “either/or” mindsets. And, the fourth requirement of a female-centered approach is considering – and maintaining a focus on – nurturing and cultivating future generations of leaders.

In the *Women in US–Asian Relations* oral history collection, women reflected upon why it is important to change social and environmental constructs and redefine the concept of education to include experiential learning and traditional cultural practices that support rather than restrict them. For example, a director of a prominent foundation stated that the concept of “education” needs to be redesigned to incorporate experiential learning into interdisciplinary studies of multiple subjects.²⁴ She and several others described how to change education so that it includes the following: using teacher volunteers from other countries; reforming educational structures to provide technical training;²⁵ offering women empowerment training, even during periods of conflict and reconstruction; involving men and women in the community in training initiatives;²⁶ organizing public awareness campaigns;²⁷ attracting outside support from colleges in the Global North; and mandating professional development cross-cultural training for business executives and managers from the Global North who intend to work in the Global South.²⁸

In the area of traditional cultural habits or practices, one woman who pursued a career in the culinary arts reflected on the importance of learning about how women feed their families, including the traditional and daily dishes they make.²⁹ Though not mentioned in her oral history, which focused on immigrant experiences and maintaining traditions from her home country, her thoughts may be related to the lifestyles of rural women who are left behind to tend the ancestral hearth and continue to use highly polluting wood-burning cookstoves, and the biologies of women, as their bodies are not built to adapt to excessive heat.

Traditional cooking habits likely increase the incidence of asthma and respiratory disease. In fact, women dissipate less heat through sweating than men, which causes conditions such as stillbirth and congenital birth defects, along with hypertension.³⁰ In the realm of climate change adaptation, changing traditional cooking practices is a key aspect of women's survival.

Another oral history focused on the way women express themselves through poetry and song in Arabic.³¹ By visiting coffee shops and conversing with women poets, Clarissa Burt interacted with Egyptian women who used the power of literature and poetry to preach their own concerns about the environment and become involved in politics. Throughout her career, Burt experienced a feminist consciousness in the Arab world that was articulated differently from country to country. She noted that backlash from the Egyptian Muslim Brotherhood's candidate winning the presidential election in 2011 and subsequently being overthrown by the military exacerbated hostility towards women on the streets and has been a continuing problem that contributes to the suppression of women.

Other oral histories reflected on the skills women acquire within traditional gendered roles.³² Margarethe Adams, who pursued a career in ethnography, noted: "Being a woman allowed for a different type of experience ... women have more familial connections in these societies through children and other children's parents."³³ Others noted that oral traditions reveal a spirituality that connects to concerns about the environment; and creates a global awareness and understanding through culturally sensitive films and documentaries and diverse artistic patterns.³⁴ Perhaps men and women have different roles and social status in these spiritual traditions. In many societies, women are shamans and faith healers, for example. Spirituality connects to female stewardship and nurturing of the natural environment.

Women's oral histories illuminate the risks that women face because of climate-related disasters. According to a human rights attorney who has worked in the United States and Asia, women from the Global North and the Global South must address gender justice together. She mentioned that her work increases women's agency to align with values of anti-women discrimination.³⁵ Other women noted that, when they first began their careers, "society" considered them to be odd, unusual, and even radical. This included a woman who organized interventions at the UN Sub-Commission on Human Rights and delivered fiery speeches to gain international attention;³⁶ one who integrated arts education with international and domestic anti-human trafficking programs;³⁷ and one who pursued a career in the male-dominated field of financial services and banking.³⁸

It is interesting to note that when women assumed high-level positions in philanthropic organizations, they used a collaborative (consensus-driven) strategy that combined several different issue areas, encouraged small business development, and maintained long-term relationships with grant recipients in the Global South. It is possible that this type of integrative collaboration may be a gendered response. On the other hand, one could argue that collaboration is essential in team sports that males play, in warfare, and in predominantly male activities like firefighting, just to name a few. Perhaps the gender difference is that in

12 Empowering Female Climate Change Activists in the Global South

sports – which women, of course, also play – there are winners and losers, so team collaboration is needed to defeat opponents. In fact, none of the above women’s oral histories mentioned “competition” in reflecting on their career trajectories; though they did focus on social collaboration that seems to lack a competitive dimension: It is not a zero-sum game, but a win–win for all involved. One woman stated:

I like the way I can contribute in a very physical and concrete way building up things like the rule of law, empowering women, or working on environmental issues to develop resources to combat climate change.³⁹

Another woman noticed changes in universities that are now combining disciplines to better educate the next generation, which reflected her integrative capacities. Helena Kolenda noted:

One reason we were interested in the Asian environment is because we were seeing a growing interest in environmental studies on college campuses in the United States, as well as a growing interest in Asian studies: Why not put them together?⁴⁰

In the past and even in the present day, foundations tended to fund programs with a short timespan; and the initiative would disappear at the end of the funding cycle. An emerging trend, which seems to coincide with more input from women, as one woman noted from her experience, is allocating resources to establish long-term and direct contact with local communities.⁴¹ Women may take on roles that require more staying power and persistence, which may be related to their primary role in child-rearing and education in most societies, activities not governed by quarterly financial reports or short-term gains (and losses).

In 1981, a psychologist, Sandra Bem, posited that society teaches children sex-related associations; and that the dichotomy between “male” and “female” is pervasive in every aspect of a child’s life. As a result, she maintained, human behaviors and personality attributes should be understood *within* a gender schema as an organized set of beliefs and expectations; and guide a person’s understanding of gender or sex.⁴² She and many other researchers conducted extensive tests in various countries to refine and categorize both sets of feminine and masculine behaviors in hopes of better understanding how gender roles and societal expectations affect one’s self-esteem and general mental health.

Among the many ways Bem’s gender schema theory has been used in the present day are studying sex typing in Asian American communities;⁴³ investigating the moderating effect of gender in FinTech in Indonesia;⁴⁴ setting the historical context for the increasing recognition of intersectional feminism and trans-affirmative perspectives in the 2010s;⁴⁵ better understanding Nobel laureate Wangari Maathi’s persona as an environmental activist;⁴⁶ confronting the lack of gender equality in farming communities in Sulawesi;⁴⁷ identifying the roles of women and young people to initiate peace-building in Kenya;⁴⁸ exploring leadership challenges for African American women;⁴⁹ examining Iranian female

identity;⁵⁰ investigating patriarchal gender norms in the micro-finance industry in Bangladesh;⁵¹ and charting the dynamics of race, migration, and citizenship in Brazil.⁵²

In these and other current studies, Bem's premise that most societies impose a dichotomy of feminine and masculine behaviors and characteristics makes the recognition of a non-binary approach – and women's empowerment – even more valuable in making informed decisions about climate change. For example, while “real men” assert that climate change is a threat to national security,⁵³ it is imperative to acknowledge that climate change *transcends* national boundaries. Furthermore, thinking within established boundaries does not contribute to collaborative, global scale solutions, but rather, to an “every country for themselves” sort of approach. As one of my students, Yasmeen Watad, pointed out, “Climate change shouldn't be seen as a political game or matter of national security, but a looming global threat that worsens every year.”⁵⁴

Bem's work, characterized as androgenous psychology, needs to be re-oriented: That is, to ensure that environmental initiatives and programs are robust and successful over the long term, it is imperative to identify and *incorporate feminine perspectives into existing male-dominated hierarchical organizations*. Another one of my students, Erin Byers, makes the important point that “the notion of ‘both/and’ are needed, and women will bring differing perspectives from men who traditionally hold positions of power.”

Gender schema theory may be applied as a set of interdependent parallels: Ideally, a community (and its leaders) addressing climate change challenges in a holistic way would embody what have been considered as masculine and feminine traits – understanding that men and women can have both traits. Gender schema theory indicates that organizations and communities may benefit from those who are task oriented (M, a masculine trait) and relationship oriented (F, a feminine trait); engage in directive decision making (M) and engage in participative decision making (F); and make quick and efficient decisions (M) and make mindful, measured decisions (F), to name a few. The existence of more male and more female tendencies in these directions with any individual – male or female – may be located somewhere along a spectrum, in most cases exhibiting a certain degree of each characteristic rather than 0 or 100%. Women may cluster more toward one side of the spectrum and men more toward the other side. *The advantage of a female-centered approach is to create and manage collaborative teams that integrate these traits: Moving the needle closer to a feminine perspective opens a range of possibilities for developing realistic problem-solving strategies.*⁵⁵

Complexities of Implementation

As indicated in the oral histories and gender schema theory, it is possible to combine feminine and masculine perspectives to change the way hierarchical organizations respond to climate change. However, implementing structural changes that would lead to women's empowerment in the Global South is complex. I recalled this challenge in reviewing my conversation with Biplab Paul when I conducted field research in Gujarat, India, in 2019. Trained as an engineer and a recipient

of an Ashoka fellowship, Paul was recognized as one of the world's leading transformative social entrepreneurs. His wife, Trupti Jain, also an engineer, had received a Fulbright fellowship to study in the United States. Together, they won many international awards for empowering rural women by placing them in charge of an irrigation system that they named *Bhungroo* (which means “straw” in Gujarati).

Paul and Jain decided to work in the Indian states of Andhra Pradesh, Uttar Pradesh, Maharashtra, Bihar, Karnataka, Gujarat, and Jharkhand – precisely because poor farmers were underrepresented and, in some cases, ignored by local governments. See the map in Fig. 1 to locate these states in India. They initially believed that women in these areas had the most to gain from the *Bhungroo* mission – to empower women – and the introduction of the means to accomplish this through technology. Their project centered on the distribution and management of a water conservation technology that filters, injects, and stores excess farm water or stormwater underground for usage in dry periods.

As they developed plans for introducing the irrigation technology to raise women's social status, they knew that they would confront entrenched social and political norms that excluded women. While their goal was to set up irrigation systems that poor farmers could maintain simply and independently – and sought to identify women who could manage the technology and serve as expert communicators in their communities – they were also struck by the needs of the future generation. Paul stated:

Those people they don't have anything in their hand they always get kicked in their ass by the family they don't earn anything, and they are the faster to go astray and engage in nefarious activities. Those boys and girls who could not pass 10th level exams are sitting idle in the village. They don't have any work and are redundant in agriculture ... I need them to be socially accepted ... our government is not doing anything. Specifically, our objective is to find [and train] youth male and female school dropouts.⁵⁶

Within Andhra Pradesh, Uttar Pradesh, Maharashtra, Bihar, Karnataka, Gujarat, and Jharkhand, Paul and Jain never used the terms “women's empowerment” or “climate change” and instead focused on understanding how people within the regions described their challenges; and used the socio-cultural landscape to decide how to gain support.

In Andhra Pradesh, they realized that they had to work with those who had connections in the government system. While the region has a large female labor force (and few women in elective offices), with an economy based on agriculture, the region has several radically different agroecological zones. Thus, they chose to work at a micro-level in individual villages to cultivate women's roles within existing male-dominated structures. Uttar Pradesh, the second state mentioned above, is part of a coalition of the poorest Indian states (BIMARU); and Paul and Jain knew that they would have to spend most of their time and upfront costs “sensitizing” male farmers to *Bhungroo's* benefits of cooperating with women. This state



Fig. 1. Location Map of *Bhungroo* Sites in India. “Map-of-India-States” by Monus0727 is licensed under CC-BY-SA-4.0.

has a large migratory population and requires a cadre of committed individuals – both men and women – to “handle all of this territory.” They sought to implement *Bhungroo* in Uttar Pradesh because farmers do not receive government support; and they understood that the learning curve would be steep and take many years to be successful.

The third state of Maharashtra also has a large migratory population and has one of the highest suicide rates among men. Noting that the patriarchy hurts everyone, Jain and Paul recognized that migrant men feel that they have failed their families and tend to be more depressed than women who stay at home to take care of their children and farm animals. Still, Paul observed:

Women continue to be at a low level because they have not been empowered the way women in other Indian states have. I can't push my agenda on them: [Trupti and I] must work directly with all the farmers.⁵⁷

In contrast, Bihar is one of the poorest states in India with the lowest rate of female literacy and labor force participation. The region is exploited by political leaders because of its vast natural resources; and tribal indigenous communities are not mainstreamed. However, Paul sees Bihar as a state that provides the greatest educational opportunities for women and youth. He stated:

We must work on multiple aspects of designing a solution to fit every farmer's needs. Over the past 15 years, with educational institutions as partners, Bihar has become woman oriented. We can design learning modules here for all other states. Still, we are in the process of figuring out which partner might be the most effective.⁵⁸

As a result of continual climate crises, Karnataka is among one of the worst drought-affected states and the government has been proactive in providing support. In contrast to Maharashtra, farmer suicides are not as prevalent. Paul assesses the situation as follows: "The government is trying to be 'pro poor.' Our political leadership at the local level is sensitive to the farmers' challenges."⁵⁹ In promoting empathic understanding, Paul and Jain have observed a diverse mix in women's roles and social status in rural communities. Perhaps one reason is that the female literacy rate is the highest of any of the states. Paul observes:

We found different layers of women [as leaders and followers] so you cannot generalize. Also, [in contrast to Andhra Pradesh], Karnataka doesn't have a strong agricultural sector, and the government is trying to build it up and provide irrigation facilities. As a result, social security services and social cohesiveness might be higher at the village level.⁶⁰

In Gujarat, they identify and work extensively with local partners and village networks. Paul explains:

Our work does not depend on the government at all. While there is a problem with money siphoning, self-help groups [SHG] are quite good – and we work directly with partners [external to the state in three, four or five districts]. This takes time. For example, in two districts in Gujarat, we might serve 300 or 500 thousand people. In the archaeological institute in Gujarat, there were 94 villages in which some members and climate leaders are women – we are expanding across the knowledge model because we want to reach into the lowest levels [without imposing copyright or legal fees, which are expensive].⁶¹

Finally, Jain and Paul work to cultivate women as climate leaders in Jharkhand, which has an extremely low gross domestic product income and female literacy rates and requires a lot of upfront energy to introduce and facilitate change. In addition, while most farmers in Jharkhand are Hindu, Jain and Paul have worked with separate communities of Muslim and Hindu farmers in Bangladesh, for example. In both cases, they focus on confronting (or at least working around) political leaders who ignore the dire situations of poor farmers and uniformly oppose uplifting women. Still, Jain and Paul recognize that Jharkhand's high migratory population results in farmers/laborers sending remittance incomes back to their home villages, which means that they do not contribute to the local economy. Furthermore, Jharkhand has more than 35 different geological conditions, which makes customizing and installing irrigation technology extremely challenging.⁶²

In sum, while geographical regions vary in terms of the hurdles that need to be overcome before women can be uplifted, Jain and Paul recognize that change in all seven states will be complex and slow. In this respect, it is not surprising that they identified Bihar and Gujarat, which are among the Indian states with the worst economic conditions, as having the most promise in confronting existing socio-political structures. In fact, these two states have great potential to garner support outside of India.

The United Nations' Gender Just Climate Solutions award was valuable because it enabled Jain and Paul to expand their transnational networks and gain visibility. In essence, to give women dignity and sustain a sense of purpose *within* their families and communities, Jain and Paul recognized that they need *outside* help to design flexible programs at the grass-roots level. Fortunately, they received monetary awards from the Buckminster Fuller Foundation and the United States Agency for International Development, among others. In sum, the above micro-sketches of the different conditions among these seven states suggest the diversity of challenges in other parts of the world, including countries in the Global North. For example, as climate-related disasters increase in the United States, Paul's and Jain's expertise using a woman-centered approach to identify and confront socio-political structures will be valuable in Native American communities, particularly in the increasingly arid West and Southwest. In fact, this very point is the focus of this book, which stresses *the value of mutual learning and cooperation as a global community*.

Conclusion

Oral histories, gender schema theory, and international awards that promote projects like *Bhungroo* reveal key components of a female-centered approach in terms of (1) how women operate within structured organizations; (2) the way they employ communication skills; (3) how they understand gender roles; and (4) why they embrace intergenerational relationships.

Oral histories indicated that women and men who work across cultures to identify a diverse array of social issues and potential partners have a better chance of responding and adapting to other cultural customs and traditions and learning the languages of the people they aim to serve. They learned the "rules" of existing

social hierarchies and proceeded to design work-around, or coping, strategies. In gender schema theory, the feminine spectrum includes a heightened awareness of how socialization affects women's lives. This may involve making connections between and among violent extremism, education, post conflict reconstruction, the rule of law, and domestic violence.⁶³ A female-centered approach aims to integrate cultural sensitivity and learning about customs and traditions in the developing world.⁶⁴ And, as Erin Byers, points out, a feminist approach should demand more from existing systems.

Finally, as Paul recognized in his work, a female-centered approach must emphasize the importance of nurturing future generations. In fact, oral histories have stressed the importance of older generations creating opportunities for girls.⁶⁵ Thus, a female-centered approach is universally applicable in that it centers on listening to and learning from "the other" and, as one Asian American storyteller noted in her oral history, "to NOT see yourself through a Western perspective."⁶⁶