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## Women as Agents of Change for Greening Agriculture and Reducing Gender Inequality

by Meeran Jamal<sup>1</sup>

The policy brief highlights the essentiality of women in agriculture and their potential role in shifting to sustainable agriculture, increasing food security and increasing agricultural productivity when they have access and ability to adopt innovative agriculture techniques such as climate-smart agriculture practices (CSA). This policy brief identifies key actions that can remove barriers for women in agriculture, including collection of gender disaggregated data for gender-sensitive planning, research analysis, advocacy for equitable access to productive assets, capacity building and awareness raising, and cross-sector collaborations to enable gender-equitable access to infrastructure, financial capital, productive assets and other services.

### Introduction

Despite a national commitment to reducing gender inequality, Pakistan is sliding down on global gender-equality indices. The country's gender gap widened by 0.7 percent in 2021, and, at 145 out of 146 countries, it holds an abysmally low rank on the Global Gender Gap Index 2022.<sup>2</sup> Gender-related indicators have shown sluggish growth, but the gender gap still prevails. Although women's empowerment is deemed integral to the country's overall social and economic development, in Pakistan, women are largely left behind in the development process.

According to Pakistan's voluntary national review of the Sustainable Development Goals in 2019,

addressing women's economic empowerment and the gender disparity overall in Pakistan can add US\$91.5 billion to the country's economy. One area where women can play a substantial role in terms of socio-economic benefits is the agriculture sector. The agriculture sector in Pakistan contributes 19.2 percent to the national GDP, employs approximately 37.4 percent of the population<sup>3</sup> and provides livelihoods to 62 percent of the population.<sup>4</sup>

A recently published report by the National Commission on the Status of Women and UNDP Pakistan entitled 'Climate Equity: Women as Agents of Change 2022'<sup>5</sup> demonstrates how climate

change impacts are minimized when burdens to gender equality are reduced and women can exert their power as agents of change. Given that women are central to agriculture, the policy brief emphasizes that women can play a substantial role in greening agriculture, reducing climate change impact, decreasing food insecurity and increasing agricultural productivity when gender barriers have been removed and they have access to climate-smart agriculture practices (CSA).

Given women's indigenous agricultural knowledge, using the National Commission on the Status of Women's report as a base, this policy brief explores key challenges women face in acting as positive agents of change for greening agriculture

in Pakistan. Through secondary research findings, it suggests that equipping women with skills, capacity, knowledge and opportunities to access and utilize CSA will enhance agricultural productivity and increase food security. To begin with, it is important to comprehend the centrality of women to agriculture in Pakistan and why they can be instrumental in implementing CSA practices in the country. The first two sections discuss this concisely. The subsequent section involves conducting secondary research to find precedence in literature to support this idea. The final section of the policy paper provides recommendations that can potentially mitigate gender barriers and simultaneously enhance climate-resilient agriculture productivity.

## Women's centrality to agricultural productivity

Women farmers indeed have the potential to be central to the agriculture economy as they already play a substantial role in ensuring food production and security. According to 2011 research by the United Nations' Food and Agriculture Organization, in developing countries, women-managed farms had 20 to 30 percent less agricultural productivity than farms managed by men. It was estimated that closing this gap would not only boost production by 2.5 to 4 percent but also improve food security and enhance the welfare of rural households.<sup>6</sup>

In Pakistan, out of 15.34 million total employed women, 12.9 million live in rural areas and 10.4 million are employed in the agriculture sector alone, accounting for about 68 percent of the total women employed<sup>7</sup>—let alone that almost half of the agricultural workforce of Pakistan comprises of female workers.

They spend, if not more than men, at least a comparable amount of their time supporting agriculture activities, in addition to their unpaid care work and domestic work responsibilities. For instance, on average, a woman as an agriculture

worker spends 32.5 hours weekly as compared to 47.1 hours spent by a man.<sup>8</sup> Women are involved in different crop farming activities and, as a result, accumulate indigenous knowledge regarding agriculture practices, such as hoeing, threshing, sowing, seed storage, weeding, tending to livestock and milking, processing milk, treating sick livestock, feeding, collecting fodder, processing wool and hair, breeding, poultry care, cleaning shelters, weaning, cotton picking and converting manure to fuel. In addition, women play a substantial role in the production of cotton, one of the highest-earning sources of foreign exchange in Pakistan, because most cotton pickers are women.

Anticipating the potential advantages of involving women in climate-smart agriculture (CSA), this policy paper proposes the development of their skills, capacity, knowledge and access to CSA practices. The questions arise: Do CSA practices enhance climate-resilient and sustainable agriculture productivity? Why should women specifically be targeted for this effort? The subsequent sections provide an explanation for this approach.

## Women as agents of change for greening agriculture

Given the need for greening agriculture in Pakistan and the centrality of women in agriculture, this policy brief intends to explore, through a desk review of the international and national literature, the proposition that reducing gender barriers in accessing and utilizing CSA practices can enable women to serve as agents of change

for transitioning to green agricultural practices, increasing productivity and reducing gender inequality. The hypotheses being explored are listed below.

1. CSA practices enhance climate-resilient and sustainable agriculture productivity.

2. Women face barriers in accessing and utilizing CSA practices.
3. Enhancing women's skills, knowledge and abilities by removing gender barriers leads to better agricultural productivity, increased empowerment of women and greater economic value, ultimately leading to a reduction in gender inequality.

### CSA practices can enhance agriculture productivity and climate-resilience

The agriculture sector in Pakistan comes with its own set of difficulties. In terms of food security, about 48 percent of households are moderately food secure, and one third are severely food insecure.<sup>9</sup> The country ranked 75 out of 113 nations in the Global Food Security Index 2021 and 92 out of 116 nations in the Global Hunger Index 2021. It recorded a 12 percent decrease in the score from 2000 onwards; thereby, the country is categorized at a serious level of hunger, reflecting the need to enhance agricultural productivity.<sup>10</sup>

However, the viability of agriculture is severely influenced by climate change. For instance, studies suggest that some crops in Pakistan can be highly sensitive to changes in temperature and water supply;<sup>11</sup> for instance, a temperature rise in the region ranging from 0.5°C to 2°C can result in an 8 percent to 10 percent loss in yield for different crops.<sup>12</sup> Sugarcane and rice, among the primary crops of Pakistan, are the worst affected under a high emissions scenario; they experience around 20 percent and 25 percent yield reductions, respectively.<sup>13</sup> A weakened agriculture sector contributes to the higher vulnerability of people dependent on agriculture for their food and livelihoods.<sup>14</sup> This relationship and the fact that Pakistan is among the countries most vulnerable to climate stress indicates that a keener focus on the greening of agriculture in Pakistan is required.

This policy brief focuses on one mechanism for greening agriculture, the utilization of climate-smart agriculture (CSA) practices. CSA is an integrated approach used for transforming agri-food systems towards green and climate-resilient practices. This approach also includes enhancing profitability in the sector for greater economic gains, reducing negative externalities (e.g., carbon emissions) and boosting positive ones (e.g., carbon sink or biodiversity) and efficient utilization of resources to rebuild natural capital assets.<sup>15</sup>

There is ample evidence in the national and international literature to support the claim that CSA can enhance agriculture productivity and climate resilience. For instance, a project in China that invested in CSA practices, such as efficient use of water, on 44,000 hectares of farm area, improving irrigation infrastructure and water delivery activities, was able to improve soil conditions and boost the production of rice and maize by 12 percent and 9 percent, respectively. The study reported higher incomes and increased climate resilience for more than 29,000 farmers' cooperatives.<sup>16</sup> Another study revealed that by utilizing CSA technology, greenhouse gas emissions were reduced by between 7 and 23 percent of global warming potential and 42 to 129 percent of economic benefits were achieved.<sup>17</sup>

The national literature also shows precedence for CSA practices resulting in higher agricultural productivity and enhancing climate resilience in Pakistan. For example, a study on cotton production in the Lower Bari Doab Canal irrigation system of Punjab investigated the financial returns and impact of CSA practices (utilizing sustainable water use management). The results revealed that adopters of CSA had 13 percent higher yields than under conventional agriculture practices, saved 58 percent more water and were environmentally friendly and climate resilient.<sup>18</sup>

An empirical study, 'Heterogeneous effects of the adoption of climate-smart agriculture on household welfare in Pakistan', revealed that the implementation of CSA practices considerably reduced household food insecurity, enhanced household diversity and reduced headcount and severity of poverty.<sup>19</sup> Another empirical study testing the adaptation implications of CSA in rural Pakistan produced similar results. Adaptation of CSA practices, such as changing input mix, diversifying seed variety and taking soil and water conservation measures, resulted in positive and significant improvement in net farm returns and reduced farmers' exposure to downside risks and crop failure.<sup>20</sup>

Furthermore, research conducted in Punjab confirmed that farmers who fully adopted CSA practices for cotton, wheat and rice crops gained 32 percent and 44 percent kg/ha higher yield and 45 percent and 48 percent higher US dollars per ha than farmers who didn't.<sup>21</sup> While the literature supports the hypothesis, it also paves the way for future in-depth research to explore the best CSA practices in the context of the country and its agroclimatic conditions.

The literature review, thus, does reveal precedent for CSA practices enhancing climate-resilient and sustainable and profitable agriculture productivity.

### Gender barriers in accessing and adapting innovative agriculture practices

An international qualitative and quantitative study was conducted in three areas of Ethiopia to examine the effects of gendered constraints on adopting climate-smart agriculture amongst women. The findings revealed that women, being small landowners, couldn't uptake CSA practices due to limited access to credit and extensions, lack of access or user rights to land, restricted affiliation with cooperatives and water associations, lack of skills, training, and information, and restricted mobility.<sup>22</sup> Pakistan is no different in this matter.

Many climate-smart agriculture practices already exist in various parts of Pakistan to tackle various environmental challenges while simultaneously enhancing agricultural productivity. Some of these are used in Punjab, Sindh and Khyber Pakhtunkhwa region. Although adopting CSA practices is likely to have a similar impact on enhanced agriculture productivity, regardless of the gender of the farmer, success in the uptake of these technologies is often countered by gendered constraints.<sup>23</sup> However, despite their value addition, women farmers in Pakistan remain at a disadvantage as compared to male farmers in the adoption of innovative agriculture practices.

For instance, Pakistan offers agriculture extension services (AES), an essential mechanism that helps farmers enhance their knowledge and capabilities by training them on how to adopt and disseminate agricultural innovations such as CSA practices. This is normally achieved through field demonstrations, face-to-face advisory services and the use of electronic, print and other media forms. However, women farmers face challenges in accessing these offerings, which deprives, restrains or restricts them from accessing or utilizing the CSA approaches and, in turn, limits the potential uptake and impact of CSA for positive food productivity and climate action in the country.

Furthermore, a study was conducted in 2022 on women farmers working in Punjab to assess their decisional empowerment, their innovativeness and their role in adopting CSA practices at the farm level. Data gathered from 384 farms having higher involvement of women revealed that most women farmers lacked decisional power related to

productive assets such as attaining credit, selling, renting and purchasing farmland and utilizing farm machinery.<sup>24</sup> Other similar constraints are discussed below:

### Lack of adequate focus in policy documents on gender-responsive and gender-led measures in Pakistan

There is little national or provincial gender policy specific to the agriculture and rural development sector. The provincial governments are predominantly responsible for the provision of AES. While there is a policy intent and some efforts have been made to improve access to AES for women farmers such as in Punjab, there is no data available to verify the number of women farmers who are accessing extension advice.<sup>25</sup> In addition, Punjab and Sindh's agriculture and food security and gender policies mention extending AES, particularly to women, but it is unclear how these policy statements are being translated into implementation plans in the agriculture sector.<sup>26</sup>

### Gender-blind agriculture extension services

In Pakistan, these services are predominantly available to male farmers. According to a research project on rural farmers in the country, female farmers faced difficulties in accessing AES. According to popular opinion, AES was largely gender-insensitive because the existing AES service providers considered women to be farm helpers rather than farmers in their own right. Gender-insensitive extension services reflect this opinion, implying that authorities neither design gender-inclusive AES services nor have gender-sensitive staff to deliver the extension services.<sup>2</sup>

Most provinces have a dearth of women extension staff. Currently, in Punjab, 25 percent of officers are women; in Sindh, 9 percent of agriculture officers and 5 percent of field assistants are. Rawalpindi, a semi-urban city, has the highest representation of women agriculture officers, at 60 percent.<sup>27</sup> Despite these slightly improved numbers, there are miles to go before gender parity in AES and gender-sensitive AES planning can be expected.

Additionally, there is an absence of accountability and coordination mechanisms within the agriculture sector in Pakistan to ensure gender mainstreaming. While there are women's development departments at the provincial level, they lack the resources and capacities to support the agriculture extension departments (AEDs) in mainstreaming gender in the planning and implementation of AES.<sup>28</sup>

### Poor literacy rates of women farmers

Existing poor literacy and language limitations among female farmers create hurdles for them in accessing and learning about innovative agriculture practices. Women have lower levels of literacy and education compared to men in Pakistan. Most female farmers are based in rural areas, where only 40.84 percent of women are literate compared to 67.15 percent of men.<sup>29</sup> This barrier, however, can be resolved by using a wide range of communication methods to provide advisory services suitable to female farmers' needs.

### Social and cultural barriers

Social and cultural challenges such as mandatory pardah (veil) for women create an obstacle in the path of availing AES as well. The existing limited AES that are extended to women are confined to closed spaces, which prevents them from participating in field demonstrations and learning by doing in most provinces, with a few exceptions, such as in Sindh.<sup>30</sup> Additionally, it is customary that women not attend this training. The women themselves find it non-essential. Similarly, women's social standing in a household and their limited decision-making power to manage agricultural-related techniques on family land in Pakistan also restrict women from expansion or adapting innovative agriculture such as CSA practices.<sup>31,32</sup>

### Lack of land ownership and control

Women farmers in Pakistan often face challenges related to land ownership and control, including smaller land holdings, insecure land tenure and limited access to land. Only 1.2 percent of women own land in Pakistan, let alone farmland.<sup>33</sup> This exclusion is a consequence of conflicting legal, religious and customary laws, deeply ingrained patriarchal attitudes, not addressing women's property rights and limiting women's ability to claim and control land.<sup>34</sup> Despite some legal and policy initiatives to ensure women's rights, including inheritance,<sup>35</sup> their implementation and enforcement remains a challenge owing to a patriarchal mindset and male-oriented power dynamics in the country. While the state has taken scattered measures, such as providing cultivable land, to empower women, the effectiveness of these measures remains limited. Without having ownership or control over land, women farmers can do little to adapt innovative agriculture practices such as CSA to enhance their produce.<sup>36,37</sup>

### Inequitable access to information, technology and tools in Pakistan

Mobile phones are often utilized by farmers for accessing banking facilities and agriculture extension services, such as for advice, identifying seeds, diseases and pests, checking rainfall measurements and so forth. However, due to limited access to or ownership of mobile phones, women farmers often remain deprived of this information. Only 17 percent of women in rural areas have ownership of a mobile phone as compared to 61 percent of men, and only 7 percent of rural women use the Internet as compared to 16 percent of men.<sup>38</sup> These figures are probably even lower among female farmers due to poor digital literacy and know-how of mobile and Internet usage.<sup>39,40</sup> According to research conducted by Fatima Fertilizer Company, TikTok was found to be the most popular medium among young farmers, YouTube among older farmers, and radio and TV among senior farmers. Most of the subscribers were men, with women accounting for only 1 percent of users.<sup>41</sup>

In addition, women often lack connections outside their villages and hardly ever become members of any cooperatives, which restricts their access to the potential exchange of information on the usage of correct herbicides and pesticides, water management, technologies and so on.

### Inequitable access to finance

Women farmers often suffer from inequitable access to financial capital to make investments, hire labour, purchase fertilizers, etc.<sup>42,43</sup> The disparity in access to credit, fertilizers, water and market linkages persists in Pakistan and in parts of Sub-Saharan Africa.<sup>44</sup> Furthermore, even if women farmers are motivated to use CSA practices, they might not have the decision-making power to do so. A gender-disaggregated analysis reveals that while adult women's formal financial account ownership increased from 4.84 percent in 2014 to 13.48 percent in 2021, for men it increased from 20.97 percent in 2014 to 28.8 percent in 2021.<sup>45</sup> This implies that almost 87 percent of adult women in Pakistan still do not have a formal financial account. With the current trend of financial inclusion of women, it may take almost until 2034 for all women above 15 years old to have formal financial accounts.<sup>46</sup> The existing increase in the financial account is attributable to mobile money accounts. Despite that, only four out of 100 women succeed in securing loans for agriculture.<sup>47,48,49,50</sup>

### **Time constraints and the additional workload of caregiving limit women's availability to learn about new agricultural practices**

One of the major issues restricting women's time to participate in any kind of skills training by agriculture extension services is unpaid care work. Most women in Pakistan are responsible for taking care of children, elderly, household chores and the like. Unfortunately, extension staff often overlook this issue and do not consult women directly when scheduling training.<sup>51,52</sup> In one study, agriculture officers and women farmers reported that despite women's indigenous knowledge of agriculture productivity, female farmers weren't able to benefit from any existing agriculture-related training due to time constraints. Additional caregiving duties and domestic work keep women farmers occupied during the time agricultural trainings are offered, preventing them from enhancing their agriculture-related skills and knowledge. There are no day-care centres in the agriculture offices or training areas.<sup>53</sup>

### **Inequitable access to high-quality input markets and linkages to output markets**

Women farmers in Pakistan face significant challenges in accessing markets due to social and cultural norms, limited knowledge about market opportunities and prices, inadequate infrastructure restricting mobility and limited access to credit and financial services. A research study found that women in a dairy cooperative in Punjab, with direct access to high-quality markets, were able to earn 25 percent more than women who sold their milk to middlemen.<sup>54</sup> Without market knowledge, women are often compelled to sell their products to middlemen at a rate lower than competitive market prices. This translates into lower profits, limiting women farmers' ability to reinvest in their farms for expansion or to utilize innovative agriculture practices to improve their produce.<sup>55</sup>

Such limitations in knowledge and in accessing agricultural advisory services prevent women farmers from learning about agricultural innovations such as climate-smart agriculture practices. This policy brief, thus, makes the case that to utilize these female farm workers as agents of change, it is essential to invest in their capacities and reduce gender barriers for a transition to sustainable and climate-smart agriculture practices. It is very much an opportunity in this respect,<sup>56</sup> as such investment is likely to not only enhance agricultural productivity and increase food security but also to enhance women's agency and, in turn, further reduce gender inequality. Thus, it will fill two needs

with one deed. The question arises whether there is precedence in the literature that reducing these barriers will enable women to adopt CSA practices and enhance agriculture productivity. The following section discusses that topic.

### **Reducing gender barriers in agriculture enhances production and women's agency**

The third claim of this policy paper found support primarily in the international literature. For instance, research conducted on agricultural productivity in three countries, Malawi, Uganda and Tanzania, estimated that by eliminating the gender gap in agricultural productivity, crop production may increase by 7.3 percent, 2.8 percent, and 2.1 percent, respectively. This may generate an annual increase in GDP by \$100 million in Malawi, \$67 million in Uganda and \$105 million in Tanzania. In fact, eliminating the gender gap may lift up to 238,000 people in Malawi, 119,000 in Uganda and 80,000 in Tanzania out of poverty in a year.<sup>57</sup> Similarly, a study conducted in Nigeria found that closing gender productivity gaps results in gains in the country's yields by 2.8 percent.<sup>58</sup>

The literature finds that enhancing women's skills and providing them with training can lead to an increase in women's agency and a reduction in gender inequality. For instance, Vietnamese women farmers, after receiving training and education on crop production and management, not only improved their farm productivity, diversified products and increased incomes but also were able to enhance their role in household decision-making on selection, management and processing of crops. A survey conducted among these women found that 75 percent felt an improvement in their social position in the household and community, and 84 percent felt more respected by their husbands and family.<sup>59</sup> Having more decisional power, thus, implies a reduction in gender inequality over time as well.

In Pakistan, UNDP's project on establishing climate-resilient tunnel farms for women delivered similar results. One of the beneficiaries, Rozina Babar, reported, "It makes us feel empowered that we are able to contribute economically for our households. It also improves our social status and interactions with other people in the society."<sup>60</sup>

While there is a dearth of national literature available for supporting the above claim, especially with regards to enhancing women's agency, inference from the international literature can fill the gap to some extent. However, it also establishes the need to conduct similar research in Pakistan's context

to explore different ways in which the reduction of gender barriers in agriculture can increase the agency of women along with agricultural productivity.

Overall, the literature does suggest that addressing gender barriers will reduce gender-equality gaps and, thus, enable women to adopt CSA practices

and play a positive role in advancing those practices for a transition to green and sustainable agriculture and increased food security. What can be done to reduce these gender barriers for women farmers? The next section discusses this and the way forward in light of the literature review.

## Reducing the gender gap for greening agriculture: The way forward

Around the world, significant efforts are under way to develop, pilot and scale up CSA practices and technologies to make climate change adaptation easier for women farmers. Pakistan needs to follow the trend, given the potential of women farmers in the country. Reducing gender barriers will enable more women to play a positive role in greening agriculture, increasing agriculture productivity, enhancing women's agency and, in return, further reducing gender inequality. As per the research, this can be achieved through:

*Gender analysis and collection of gender-disaggregated data:* Collecting gender-disaggregated data and conducting gender analysis can uncover realities, such as who holds decision-making power, how much intrahousehold bargaining there might be in identifying specific vulnerabilities and what is resource allocation like within the community. This will help in establishing a baseline of gender-disaggregated data as well.<sup>61</sup> This analysis will obviously be time-consuming and costly; however, it will help in avoiding promoting CSA practices that may be safe environmentally but are maladaptive or regressive socio-economically.<sup>62</sup> It will help in redesigning gender-sensitive agriculture extension programming that addresses specific needs and barriers faced by women farmers. For instance, according to the CSA profile of Khyber Pakhtunkhwa, it is essential to make gender analysis of CSA practices a mandatory action across different farming and cultural systems to understand the level of gender inequality and facilitate the adoption of CSA practices by women farmers.<sup>63</sup>

*Strengthening government capacities for inclusive agriculture extension services:* There is a need to establish institutional change to develop capacity and build commitment to gender equality and women's empowerment across agriculture-related government departments.<sup>64</sup> As a first step, this commitment can be built by hiring more women agricultural advisory officers who are trained professionals equipped with skills to deliver

inclusive agriculture extension services. This can be followed by setting up gender focal desks within agriculture extension departments (AEDs); establishing coordination mechanisms between AEDs and women development departments for greater accountability; sensitizing and training AED officials on the importance of inclusion of women in AES through capacity-building training; setting up child-care facilities in agriculture offices for trainees and field extension staff; translating and delivering the training in local languages to address the poor literacy barrier; and establishing a practice of consulting women farmers when scheduling AES activities to ensure that interventions do not create a privilege system and barriers for women.<sup>65</sup>

*Gender-proofing policies and eliminating legal discrimination:* It is essential to evaluate and reform policies and laws that unfairly discriminate against women's land rights, including ownership, control over land, inheritance law, property law and land tenure systems, to ensure equitable access to land and other productive assets. For instance, there is a need for the development of gender-mainstreaming policy for provincial AEDs to make them more gender-aware and gender-responsive. There is a need to develop gender action plans for agriculture-based policies, as such plans are almost non-existent right now.

*Increased advocacy and outreach:* Any policy reforms must be accompanied by advocacy and outreach elements to ensure the implementation of those policies, enhanced accountability and awareness amongst the main beneficiaries and implementors.<sup>66</sup> Similarly, advocating to institutionalize the collection of gender-disaggregated data is essential for making informed decisions when planning CSA activities as well as for monitoring and evaluation. Besides that, raising awareness to educate women can lead to their enhanced agency in their households and communities, as mentioned earlier.

*Gender transformative approaches for the provision of information and capacity building:* It is vital for women farmers to either become part of an existing farmers' network or create one for female farmers for a better exchange of information and knowledge. Furthermore, for enhancing skill development, it is essential to provide women farmers with skills-based capacity-building training on the merits and demerits of CSA and the usage of technology.<sup>67</sup>

Furthermore, creating awareness campaigns to break down socio-cultural barriers is also deemed critical for reducing gender inequality and greening agriculture. This could include campaigns that challenge rural masculinities and power dynamics and promote the ideas of co-responsibility for care work and creating care-economy support mechanisms for women farmers to enable them to take time out to learn about new agricultural practices.<sup>68</sup>

*Gender-equitable access to infrastructure, financial capital and other services:* There is a need to develop financial instruments that respond to the needs of women.<sup>69</sup> This can be achieved by developing women-only credit schemes that provide credit only for the use of agricultural technologies. Developing cross-sector collaborations with microfinance to deliver women-only asset-creation

loan schemes is yet another solution.<sup>70</sup> Lack of access and poor linkages to markets can be improved by creating and strengthening women farmer groups and networks to encourage them to collectively reach the market, purchase inputs for CSA, sell in higher quantities, make higher profits and make long-term investments in land.<sup>71</sup> Additionally, rural cooperatives and water user associations should directly involve women, even in a male-headed household, as input buyers.

Addressing these barriers is critical for reducing gender inequality and empowering women as agents of change for a shift towards greening agriculture. Therefore, by providing support to rural women, we can amplify the protection, adaptation and mitigation measures for reducing the impact of climate change while also strengthening women's agency and promoting gender equality. This will require investment in generating evidence-based research, advocating for policy reforms and equitable access to productive assets, promoting gender equality, strengthening capacities of both government and women farmers, fostering cross-sector collaborations and raising adequate financing for gender-responsive and gender-driven AES and climate-smart agriculture practices.

### Key Insights for the Operationalization of UNDP's Gender Equality Strategy 2022–2025

#### Reducing gender inequality and greening agriculture

These recommendations can be summed up in four main categories that fall within the ambit of international development partners' mandates as well. All these, along with the details mentioned above, can be plugged into the operationalization of UNDP's Gender Equality Strategy 2022–2025 under the theme of gender-responsive green transition.

#### 1. Conducting evidence-based research:

- Gender analysis including collection of gender-disaggregated data before adopting any innovative measures for reducing the impact of climate change
- Gender-proofing climate-change- and agriculture-related policies
- Gender review of laws and policies on ownership of productive assets

#### 2. Advocacy and outreach for equitable access to productive assets

- Advocating for a rights-based approach for any innovative measures for reducing the impact of climate change
- Advocating to institutionalize the collection of gender-disaggregated data into climate-change- and agriculture-related policies



- Advocating for gender-responsive policy reforms on ownership of productive assets.

### 3. Capacity building and awareness raising

- Providing knowledge on CSA approaches and skills training on the usage of CSA technologies
- Engaging women as protagonists in the CSA movement
- Creating awareness on gender transformative approaches to address, in particular, social and cultural barriers
- Strengthening capacities of government counterparts to plan and deliver gender-sensitive and gender-aware agriculture extension services

### 4. Cross-sector collaborations

- Fostering strategic partnerships to enable gender-equitable access to infrastructure, financial capital, productive assets and other services by developing dedicated financial products, asset loan schemes, insurance products and women farmer groups and network

## Endnotes

- 1 Meeran Jamal is a gender and social protection analyst at UNDP Pakistan; email: meeran.jamal@unpd.org. Acknowledgements: The authors would like to thank UNDP colleagues Tanya Pedersen, Ashwin Digambar Bhouraskar, Yusuke Taishi, Khin Hnin Myint, Ammara Durrani, Ciara Daniels, Aroa Santiago, Temilola Adeoye, Nicole Igloi and Jinglan Zhou along with Salman Zaidi, executive director, Jinnah Institute Islamabad, and Dr Farzana Bari, senior gender advisor, UNDP Pakistan, for their support, peer-review and helpful comments on this brief.
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