

# Climate Change Impacts on Better Cotton Female Farmers and Workers

**District  
Rahim Yar Khan-Punjab**



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## 1-Executive Summary:

Even if we find effective answers, the climate issue is degrading our livelihoods and lifespans at a rate that outpaces our ability to counteract its worst impacts. We were aware of the emergency after the harm had been irreversible and lives had been lost that may have been saved. The climate catastrophe continues to impact the poorest elements of our society, who have inadequate coping mechanisms and little resources that will not endure another catastrophic disaster. Women are the most disadvantaged unit.

The consequences of climate change are being felt in many regions of Pakistan, notably in rural areas, where the vulnerability of impoverished populations is rising and women, in particular, are dealing with the impact of a fast-changing climate. Access to food, water, and dwindling natural resources has resulted in a decline in quality of life and the loss of livelihoods.

REEDS, with the help of Better Cotton-PK, did a research study on " Climate Change Impacts on Better Cotton Females Farmers and Workers in District Rahimyar Khan- Punjab" in October 2022, with the goal of understanding the difficulties and possibilities faced by women cotton growers and workers as a result of climate change. Furthermore, it was kept in mind to research gender dimensions of social vulnerability to climate change among rural communities, as well as to measure women's adaptation potential at the community level and social capital accessible to them.

The qualitative data and information about women's climate change vulnerabilities and adaptation practices were gathered through eight focus group discussions (FGDs) with 64 farmers (24 female, 40 male), 56 workers (38 female, 18 male), and 25 in-depth Key Informative Interviews (KIIs) with ten BC farmers, ten BC farm workers (5 male, 5 female), and 05 key informative interviews with key representatives of education, health, livestock, social welfare, and agriculture.

During the study it is increasingly evident and found throughout the discussions in rural areas of district Rahimyar Khan- Punjab Pakistan, women are more vulnerable to the effects of climate change than men are, particularly because women constitute the majority of the poor and are dependent for their livelihoods on natural resources that are threatened by climate change impacts such as droughts, heavy rains, floods, and other extreme weather events, unexpected rain falls, increase in pest attacks.

Furthermore, women face significant social, economic, and political barriers that negatively affect coping capacities. Women responsible for securing water, food, and fuel for cooking and heating face the greatest challenges. When coupled with unequal access to resources, barriers to decision-making processes and limited mobility, women in rural areas are placed in a position wherein they are disproportionately affected by climate change.

Representatives of key stakeholders shared there is a disconnect between national, provisional planning and local action plans, between decision makers and rural communities, and mechanisms are not in place for rural women to contribute towards and meaningfully influence strategies and action plans. National climate policies and implementation framework not truly represent the women's vulnerability due to climate change as this is critically important for assessing the conditions they face and their relative resilience. Climate-specific data that review human vulnerability and resilience in with climate degradation at district and local levels are not available. Assistant Director Social Welfare Department highlighted that women are more vulnerable in

disasters due to climate change i.e. heavy rains, floods, droughts etc. as they are less likely to receive early warning signals through telecommunication than men; in many instances women and girls are not taught survival skills like swimming, to rescue themselves or minors; and cultural barriers prevent women from leaving their homes unattended without permission of their male family members. As seen in multiple disasters, women attempt to save the lives of their children or the elderly and protect key assets at the risk of their own lives.

A representative of the health department shared that departmental capacity is not up to the mark to facilitate rural women especially as they never think about this issue/topic, he further added, gendered differential occurring due to climate stress is still unknown to many practitioners, especially those unfamiliar with the human fallout of climate change it is therefore of critical importance for gender-sensitive strategies to be identified and developed to respond to the environmental and humanitarian crises caused by climate change with special focus on women.

Veterinary Doctor Livestock Department shared that no-doubt Rural women play a significant role in livestock management activities and this sector is also considered the black gold of Pakistan which is performing a vital role in rural livelihoods as a key source of employment for women at the household level, but unluckily they always overlooked during capacity building activities.

Although lots of challenges faced during the study like socio culture barriers information sharing and recording remain big challenges even Govt presentative not allowed, cotton harvesting season to gather workers in the FGD or even household level, participants understanding to distinguish between the impact of climate change, and the impact of socio-economic issues or market forces, less understanding among the farmers and farm workers about the complex relationship between climate change and gender. But finally, this report efforts to retrieve critical knowledge gaps that will help Better Cotton and REEDS to grasp the extent of vulnerability, women are challenged with during climate stress. Basically, climate change was perceived as changes in weather, and manifested in the form of changes in rainfall patterns, seasons, winds, and quality of ground water. In most cases this meant that women have to manage the scarce water resource, and walk long distances in extreme temperatures to bring water for their household needs.

Keeping in view the discussions during FGDs and KIIs it has been suggested that, it is necessary to enhance women farmers and worker's access, control and ownership of resources (such as land, livestock, property and income opportunities), and access to the development of resources such as credit, information, and training, knowledge of DRR/climate change-induced risks in health, education and livelihoods and solutions be increased.

District-level strategic plans for mitigation and adaptation to climate change should be developed. While at the local level, significant efforts should made to strengthen existing practical knowledge and share good adaptive practices among rural communities. Ensure that appropriate measures to address health-related climate change issues are incorporated into district and local health plans inform, sensitize, educate and train health personnel and females about climate change-related health issues.

In-addition, strengthen women's existing theoretical knowledge and understanding of climate change and adaptation can be utilized by Empowering Women as Climate Change Agents, the existing Self-Help Group Approach strategy should be strengthened along with role of Village Learning groups and Cooperatives, climate-smart agricultural initiatives ensuring that technologies and extension services cater to women's needs as well as they should be consulted

accordingly. Thematic specific women-focused training and information, education and communication materials dissemination with the involvement of the key stakeholders results in achieving our targets in future.

## **2-Background:**

Gender equality has been recognized as a foundational issue in development for at least 4 decades, and growing evidence demonstrates that more equal gender relations within households and communities lead to better agricultural and development outcomes, including increases in farm productivity and improvements in family nutrition<sup>1</sup>. Climate change has multiple potential implications for women in rural areas. Natural disasters and climate change can negatively affect the health, livelihoods and education of rural women more than men.

Whilst there is a wealth of research in existence that looks at gender and on climate change in the cotton sector, limited attention has been given to looking at the twin challenges together.

Unless initiatives to address climate change pay active attention to gender, they are unlikely to be effective, let alone equitable or transformative. Women farmers produce between 13% and 25% less than their male counterparts<sup>2</sup>. Yet studies have demonstrated that if women had equal access to productive resources as men do, they could increase yields on their farms by 20-30%. It is crucial, therefore, to integrate gendered differences and specificities into interventions aimed at promoting green economic development and climate-smart agriculture activities.

This study provided an updated overview of how women farmers in the cotton sector in Pakistan are being impacted by climate change and how they perceive their vulnerability and responsibility/burden. This research will specifically shed light on gendered differences regarding vulnerability (and perceptions of vulnerability) to climate change and roles in climate-resilient activities on and off the farm.

## **3-Objective of the study:**

The objective of the Baseline study is to understand the challenges and opportunities facing women cotton farmers and workers in Rahimyar Khan - Punjab, Pakistan, as a result of climate change

## **4-Methodology of the baseline study:**

### **4.1-Development of the data collection tools:**

At the outset, the REEDS research team under Research and Education Development Department initially had a series of meetings and discussions with the REEDS BC Project team and experts on climate change and gender regarding the data collections tools. Finally, the tools concluded after the long discussion to collect qualitative data and information regarding climate change vulnerabilities of women and their adaptation practices through Focus Group Discussions (FGDs) and in-depth Key Informative Interviews (KIIs) from Better Cotton farmers and key Stakeholders.

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<sup>1</sup> Farnworth, Kristjanson, and Rijke 2013; Farnworth and Colverson 2015

<sup>2</sup> World Bank and ONE. 2014. Levelling the Field: Improving Opportunities for Women Farmers in Africa. Washington, DC.

#### 4.2-Type of Data Collection Tools:

Sr.#	Type of tool	No.	Data gathered
1	Focus Group Discussions (FGDs)	08	To secure data on issues and challenges being faced, impacts of the issues, self-initiatives, recommendations <i>The FGD participants</i> include vulnerable female farmers and farm workers groups and mixed groups of both male and female members. A range of 10-15 individuals participated in each FGD. The participants were selected by the field facilitators based on a certain level of gender age, knowledge of cotton farming, livelihood and relevant issues. The groups focused Better Cotton farmers and workers (males & females), local government representatives and Govt department representatives.
2	Key Informant Interviews (KIIs)	25	<i>Secure</i> quantitative data and information on different issues and variables related to climate change impacts on farmers and workers and their existing livelihoods and adaptation practices. It covered the areas of the socio-economic status of the respondents, their water, sanitation and health practices, knowledge of climate change, capacity building, women's vulnerability and their voice and leadership, decision making food security and livelihoods, electrification facilities and services for women etc. The KIIs include <ul style="list-style-type: none"> <li>• Better Cotton male and female farmers</li> <li>• Key representative of the district departments</li> </ul>

#### 4.3-Details of Focus Group Discussions:

Sr.#	Village Name	Tehsil	Tool used	Gender	
				Male	Female
1	Moza Channa	RYK	FDG	0	13
2	116/P	RYK	FDG	15	0
3	Dagaa	SDQ	FDG	15	10
4	142/NP	SDQ	FDG	0	12
5	172/7R	LQT	FDG	0	14
6	239/1L	LQT	FDG	0	13
7	Kotli Murad	KPR	FDG	13	0
8	Ameer Pur	KPR	FDG	15	0
<b>Total</b>				<b>58</b>	<b>62</b>

#### **4.4-Details of the Key Informant Interviews (KIIs):**

<b>Key Informant Interview (KIIs)</b>					
<b>Sr.#</b>	<b>Tool</b>	<b>Total KIIs</b>	<b>Departments</b>	<b>Workers</b>	<b>Farmers</b>
1	KIIs	25	1.District Education Department 2. District Health Department 3.Livestock & Dairy Development Department 4.Social Welfare Department 5.Agriculture Extension Department	10 ( 5 males & 5 Females )	10 ( 5 Males & 5 Females)

#### **5-Recruitment and Orientation of the team:**

6 team members with different expertise including 4 Enumerators to collect the field data/information conducted the assignment, however, 2 smaller teams consisting of 3 members were deployed to conduct the study in each of the baseline study modes. It was ensured that at least one member of the field team was female.

The team lead along with research head conducted orientation session of the entire team, the team leader and experts of the research study explained about the evaluation objectives, methodology and the tools to be used for the data collection i.e. surveys, interviews and FGDs. The FGD and Interview questionnaires, were discussed in detail during the orientation. The field investigators were encouraged to take proactive roles and ask questions for a clear understanding of their tasks. The experts explained all the issues, and all questions that were raised by the field staff during the session were answered.

The supervisors were also trained and orientated separately to ensure the quality of data collection. The purpose of this exercise was to bring all the stakeholders on the same page.

#### **6-FINDINGS OF THE STUDY**

This research has specifically shed light on gendered differences regarding vulnerability (and perceptions of vulnerability) to climate change and roles in climate-resilient activities on and off the farm.

##### **6.1-Gender Differentiated Vulnerabilities of Climate Change**

In this section, gender-specific vulnerabilities in connection to climate change are discussed. The discussion begins with the governing factors of vulnerabilities, then emphasizes gender-specific vulnerabilities in respect to income and asses, time management, health, leadership/voices, food security and education/knowledge.

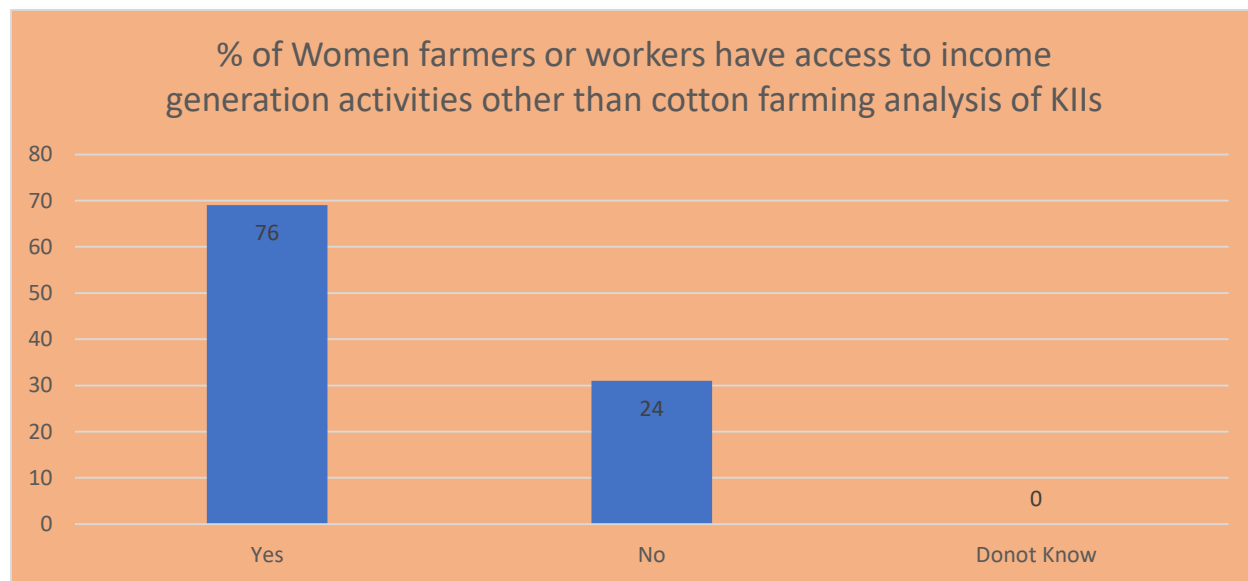
It is increasingly evident that women are at the Centre of the climate change challenge. Women are disproportionately affected by climate change impacts, such as droughts, floods, and other

extreme weather events, but they also have a critical role in combating climate change. Women are also more vulnerable to the effects of climate change than men because the socially constructed roles and responsibilities they have within communities and the differentiated power relations make them more disadvantaged.

### 6.1.1-Income and Assets

Women's contribution in cotton cultivation during the study is of great importance. Their participation in all the activities from sowing to harvesting is very important. Agriculture without women is beyond imagination in the study area.

The vulnerability of women dependent in cotton sector is affected by their relative insecurity of access and rights over resources and sources of wealth such as agricultural land. Mostly females Land has powerful social, cultural, economic, and leading status-defining meanings but women have little control over land ownership like many other resources such as livestock, labor, and development resources including credit, agricultural inputs, technologies, trainings, and information. Among them land is the most important asset that households depend upon for agriculture and also for their livelihoods. In fact, women have limited access to land ownership that increases their severity of vulnerability in a given climatic hazard. Females and workers have livestock act as a security in times of crises and also as powerful symbols of wealth and property. Women's ownership of livestock is shaped and constrained by economic opportunities, opportunity costs of women's labor as well as cultural norms, gender biases and power relations. This is accelerated by women's low access to economic resources including income and property rights.



#### 6.1.1.1-Recommendation:

Strengthen women's adaptation, it is necessary to enhance women's access, control and ownership of resources (such as land, livestock, property and income opportunities), and access to development of resources such as credit, information, and training.



### **6.1.2-Knowledge & Understanding**

Mostly respondents reported having participated in Better Cotton Program training or being involved in climate change-related management activities. But Females workers' knowledge regarding climate change and its effects was noted as limited. During FGDs and KIIs interviews, it was clear that male participants have a better understanding than women of climate change and related issues in the study areas. This may be because of better access to education, resources marketing, level of exposure and different roles of men and women in the household and farm activities and social networking.

One woman interviewed in the study area noted that the knowledge of female beneficiaries on the topic of climate change was limited and that providing awareness-raising was essential to empower rural women towards effective and sustainable protection and conservation of natural resources.

It was observed that farmers noticed changes in warming, rainfall or rainfall variability and weather or seasonal variability over the preceding years. Most participants can relate the change in weather like summer, winter, increasing heat, warm winds and cool air moreover, the rain and fog season begins in the winter and labour comes to a halt with climate change. They can relate the change summer and winter bring in the atmosphere late-onset the rainy season and a shortened rainy season were the most reported experiences of climate change by both male and female respondents.

One of the FGD female participants said “now the winter months last till mid-February, and as a result, spring arrives later, and in the intense heat, it is very difficult to work, especially since each year the temperature continues to rise. Mostly we have no electricity, and there is a severe water shortage. We feel sick, drowsy, and uncomfortable, but we have to carry on with our daily domestic work, despite the severe heat or winter.”

The farming communities believe that the impacts of climatic adversities have affected men and women as well as farmers and workers differently. It may be mainly because of the level of exposure and different roles of men and women in the household and farm activities. This is made clearer by separate statements made by affected men and women that climate change had resulted in experiencing lower crop yields outbreaks of pest attacks, while excessive rainfall and prolonged dry weather dries up the grass, creating a shortage of fodder for livestock. Some notable challenges faced by the workers are hot weather, heatstroke, livestock diseases, financial crises, and difficulty working and management of the farm and household. Usually, it is the women who have to deal with the large task of maintenance of housing structures, home gardening and rearing the poultry and livestock in the households in the study area. So, the adverse effects of climatic hazards are deeply felt by the women of the farm and households, low moisture content of the soil, reduces fertility, loss of crops yields, labour unavailability, pest attack on cotton crop at farm while the damage to livestock is what really affects their alternate income sources at the household level. Heavy effect on livestock health and reduce milk production, loss of livestock, water-borne diseases, and lack of fodder discussed by women. Women in the study area are particularly vulnerable to climate change because they are highly dependent on local natural resources for their livelihood.

To mitigate this women worker, use, used PPEs and hanging work timings on the morning on the farm early morning. They joined SHG for saving and doing embroidery for living better, to start

vegetable growing at the household level and save money. Get facilitated by government health centers and for their animal health visit government veterinary hospitals. While male and females' farmers described a variety of initiatives with which they were familiar, including suitable agriculture practices, overgrazing prevention techniques, regenerative agriculture techniques, home gardening, poultry-rearing techniques and other small-scale innovations related to conservation practices and management of natural resources. follows different measures to maintain the moisture content of the soil by using different farm practices like mulching, intercropping, and cultivation of leguminous crops to improve the soil status thus that will help in maintaining the soil moisture against dry weather and drought-like collection of rainwater. Females' farmers shared that now they are discussing the climate issues more frequently in their daily talks and this was most probably due to the continuous awareness-raising through the project. To cope with the challenges faced to livestock management farmers increase the area for fodder, sell livestock, fodder from nearby villagers, boil the water, and buy fodder from nearby villagers. Females suggested conducting training on this issue and on the problem of overgrazing with women involved in rearing livestock and procuring small animals' money from the local private sector to enable these women to start up their income resources and launch climate-smart initiatives incorporating these techniques. According to her, such adaptation programs have been launched in their area so far but are insufficient for all females in this sector of work. The livelihood of a woman worker is affected by climate change as wages are directly proportional to crop production and there are least alternative ways of earning.

Moreover, the key strategies the respondents adopted in coping with climate change are buying food, adopting sustainable land management practices, growing early maturing crops, planting trees and eating less food. They get loans from the SHG, use savings, involving income-generating activities to keep the household running smoothly, as well as needlework items for extra earning. All-female respondents reported being actively engaged in the climate change response by providing training or managing projects targeting cotton farming beneficiaries of the Better Cotton project. They highlighted that raising rural women's awareness on conservation techniques and climate change processes were among the most effective ways to strengthen climate-change adaptation processes in Rahimyar Khan. But still, need to be done

#### **6.1.2.1-Recommendation:**

1. Work towards getting weather alerts, forecasts and climate projections to reach the 'last mile' so that community especially females remain aware and prepared.
2. Women's knowledge of DRR/climate change issues should be increased through specific women-focused training and information, education and communication materials
3. Income generation training for women in poverty and climate-vulnerable areas is an effective strategy to build women's economic resilience, as well as provide a space for increased education and psychosocial support around disaster preparedness, management and recovery
4. A study should be made into the study areas to gauge what the best livelihoods for income would be and then Capacity building training for women and financial assistance in income generation should be enhanced in all these areas to address climate threats within these training sessions other elements of resilience to disasters should be incorporated, leading to women's and household/community increased adaptation capacities to climate change.
5. Support worker families to help them build adaptive capacities to climate change-induced risks in health, education and livelihoods.

6. Make climate conversations more common among individuals community Schools and academia with young girls

### **6.1.3-Time Management**

Time is a scarce and important economic resource that has multiple demands attached to it. People spend most of their hours a day working to earn a living. After having spent a full day on productive labour, women in particular rather than men have reproductive work and social and community responsibilities at home, leaving them with very little free time for leisure or self-care.

As in the majority of the study area in Rahimyar Khan, females' farmers and workers represent the main workforce. They work very hard from early morning to late evening, on average engaged in income-generating activities put in 105 hours per week in household chores and farm.

Their work includes cooking food, looking after kids' animals and the sick, collecting fodder, taking care of elders collecting water fuel, and working in the fields.

Women farmers and workers also face the double-time burden that all over the discussion contend with. To manage the time, they get up early to prepare food for the household and get the children ready. After farming and laboring all day, they are responsible for water and firewood, and for preparing the daily meals. When ecosystems change and these resources are depleted by a changing climate, women must walk even farther and spend even more time retrieving them including fodder and seeking labour work for themselves. The time spent in searching for fodder and income labour undermines other productive, educational, and reproductive tasks, and especially takes away time to care for themselves.

Men have a lesser chance of sharing any household work, as they are mobile for work outside homes and communities.

“During harvest time I feel the only responsible person for harvesting at the farm to collect cotton through the workers throughout the almost two months, each day I get tension if the yield and prices of the cotton production decrease or cheaper. While at home for these two months my husband gets relaxed, while I still do the household chores like cooking for the family, taking care of the children, washing our clothes, cleaning the house and I still have to harvest the farm produce. Since transportation is so difficult for us, we have to walk long miles by keeping cotton bags on our heads to save the cotton from farm to home.” Female farmer shared in FGD

The heavy rainfall resulting from climate change also increases women's workloads, as they will have to devote more time to collecting water, and to cleaning and maintaining their houses.

Women have the care work responsibly in their families along with the agriculture production activities at the farm. Though crop processing after harvesting and preservation were done by women, nowadays, the woman has to take part in field preparation and cultivation too.

“I have to spend time with our family, children's livestock and sick elder people because as a female I am the caretaker of all. It's a pity to the children, elders and animals if nobody takes care of them. They depend on me and easily get sick. I have to balance my time with farming work and rearing of our several children and livestock” shared by FGD member

Time management by women is a serious concern. After addressing all the household work, time for planning on adaptive farming is not sufficient. Moreover, decision making requires convincing the family members and also being fair to the social norms. On the other hand, woman farmers

manage time by adopting sustainable practices by changing traditional practices dividing domestic work among family members accordingly and trying to complete all necessary work on time by prioritizing the work. Females had been helping their husbands at farms but do more work in farming than their husbands do. They played a major role in cotton activities both directly and indirectly, along with their household responsibilities and socio-cultural obligations.

#### **6.1.3.1-Recommendation:**

- 1- Conduct an in-depth and evidence-based analysis of women's and men's roles in cotton sectors impacted by, and their strategies for coping with, climate change.
- 2- Promoting sustainable and well-designed gender action plans fostering rural women's capacities to act and make significant achievements in adapting to climate change to Improve understanding of women's and men's knowledge, roles and abilities will provide a solid basis and developed to address and combat climate change impacts.
- 3- Time Management Training and steps to reduce the vulnerability of women to climate change impacts, particularly in relation to their critical roles in rural areas in providing water, food and fuel

#### **6.1.4-Health & Nutrition**

The findings from FGDs and interviews with knowledgeable people in the study areas indicate Heat-related morbidity: The elderly, children, the chronically ill, socially isolated, and certain occupational groups (e.g. workers at farms) are at increased risk of heat-related negative health outcomes reaching temperatures unseen for decades, heatwaves are becoming more intense as well as more common which results in health issues

Woman farmer claims to face skin burn diseases, gastrointestinal infection, typhoid, cholera, body pain, cough and breathing problem. While a woman worker faces heatstroke, jaundice, headache, nausea and fever. Rural females prepare food by burning solid fuels (coal, firewood, agricultural waste, animal dung) females rely on these solid fuels for cooking; spending more time in smoke females experience respiratory infections that are attributable to climate change. In heavy rains, Vector-borne diseases pose significant health impacts to changing climatic conditions (temperature, precipitation, humidity). According to of Health Department, more than half of the females and their girls suffer from vitamin A and vitamin D deficiencies.

“Dengue Fever is a tropical disease. We never had Dengue Fever, but in the last 7–8 years, at the start of the summer season, Dengue Fever has increased in our area”. Participants of the FGD

During times of food shortages and weather changes in weather reducing the number of meals per day and reducing portion sizes, eating less desirable or less expensive food, borrowing food or relying on help from friends or relatives. During periods of food shortages, they reduce their consumption so that children and male household members have more. Malnutrition risks due to their heavy manual workloads, high birth rates, and restrictions on their movement and consequently access to healthcare. It was found that mental health and stress were the mainly observed health challenges faced by farmworkers whose husbands migrated for farm work and labour and they have to rely on in-laws and relatives with insufficient resources and negative behaviours). There remains much scope for work to explore the mental health implications of climate change particularly in vulnerable groups such as the workers. Females already face many socio-cultural and economic barriers to accessing healthcare services women seek medical helpless because they have less permission and time with extra responsibility. It was noted that the self-sacrifice of women in not attending health clinics, leads to poorer health and wellbeing in the long

term for females. It was found by the participants that health facilities are not sufficient in their area.

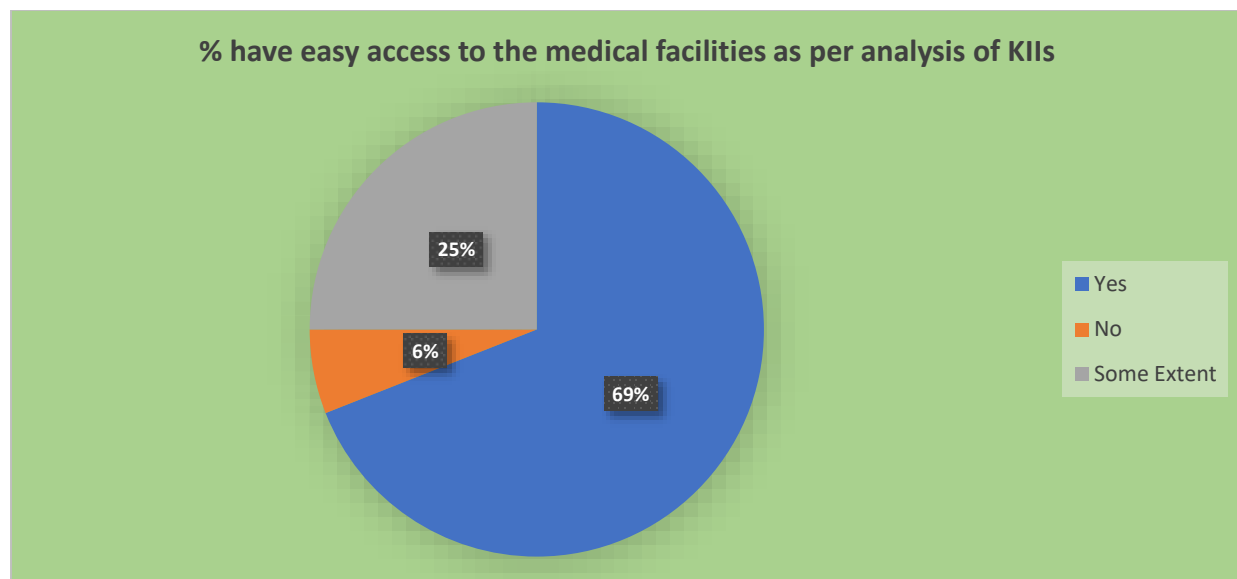
The study areas community usually take medical facilities from the Govt community health Centre and private clinics. However, these community clinics do not have sufficient staff, medicine or services medicine due to financials/Budgetary issues. In addition, the on-duty doctors/medical assistants do not give services on a regular basis in some cases health facilities are far away. Maternal health services were also found to be insufficient. As a result, community females rent a car to reach the medical facility and sometimes deaths occur during long distances travel before seeking services for maternal cases.

“The best part of the meal goes to the husband and then the children. Mothers eat last. This is true and token of love of rural women.” Health Representative shared

“Women in rural areas do not have access to maternal and mental healthcare and need to be accompanied by a male figure from their household. He may not be available because he is out when she needs to visit a health facility. For women in rural areas, the need to be accompanied makes it very difficult for them to access healthcare.” Shared in Male FGD

Women farmers and workers take care of ill members and provide medicine, ask for help from other household members in daily work, they assist family members in bringing the patient to the doctor and obtaining leave from work.

A woman worker tries to avoid extreme hot weather and same as in winter also try to cover themselves through PPEs at work and their children with suitable clothing. Women farmers planted have trees adopted nutritional foods and adopt healthy practices when needed. They used to boil unprotected drinks, and take care of their home and children’s hygiene. In hot weather, they take breaks from work.



#### **6.1.4.1-Recommendation:**

1. Ensure that appropriate measures to address health-related climate change issues are incorporated into national and local health plans Inform, sensitize, educate and train health personnel and females about climate change-related health issues

2. Upgrade and extend disease outbreak preventive and curative monitoring and forecasting systems to counteract possible climate change-health impacts and support prior planning for effective interventions that focus particularly on women's needs
3. Reduction in the burning of wood/fuel can help in reducing the emission of GHGs and here women can play an important role as in the household they are the key stakeholders
4. Mental Health Awareness Programs

#### **6.1.5-Leadership/Voice**

Traditionally, women farmers simultaneously undertook multi-functional roles as household managers that is, maintaining the home and bringing up the family. Foremost of their role was being a mother and a homemaker. Females had been helping their husbands at farms as but do more work in farming than their husbands do. They played a major role in cotton activities both directly and indirectly, along with their household responsibilities and socio-cultural obligations. Women's participation in the decision-making process in study areas was found to be good on an average to their male counterparts over the last 3 years. The areas of women's decision making were found to be: household livelihood activities, food preparation maintenance household, livestock management conceiving babies, child care & education and social activities etc. While the worker's case finds the highest disproportional difference was males and females found in agricultural work and household level. They (females' workers) reported multiple productive and domestic responsibilities they face several hurdles and oppression in all fields of life like lack of access to assets, education, health services, land, credit, employment, limited freedom of mobility, lack of training services, and limited decision-making power.

Analysis of the data showed that the involvement of farm women in the decision-making process in agriculture was low. It is because the majority of farmworkers are illiterate, have little knowledge about the latest techniques of farming, face dominance by males and restricted mobility due to several cultural taboos.

While at the community level involves in the management of natural resources and crop domestication. women play a very important role as not only Learning Group members but also in leading the community in the institutions (LGs, SHGs and Cooperatives Level) created by the project and improving their household standard of living and community saving, receiving credit or Benazir income support program and Ehsass Programs. Females are promoting sustainable learning at household and community level through leadership role.

"I like joining small group learning gatherings in my village. I want to learn something like sustainable agriculture practices, lives and livelihoods opportunities, involving in afforestation, tree plantation, Kitchen Gardening, taking care children education and adequate use of nutrient through learning groups at the community level." Female participant

It can be observed that women farmers were active participants in community activities by representing their household in any gatherings. They availed any access to agricultural learning and livelihoods or livestock extension services in the community through affirmative actions. In the study, it was observed the reasons why female farmers, compared to men, tend to pay more attention and stress to give importance and seek their Cotton crop technical adviser's advice. This would be linked to suggest that female farmers are potentially better adopters than men are, as they

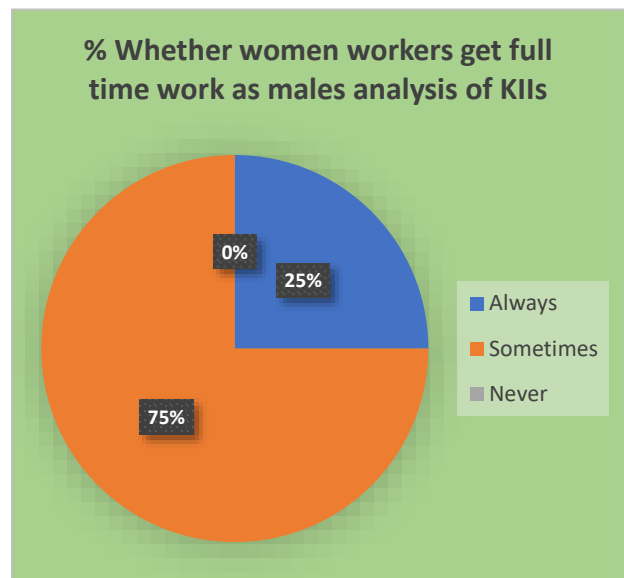
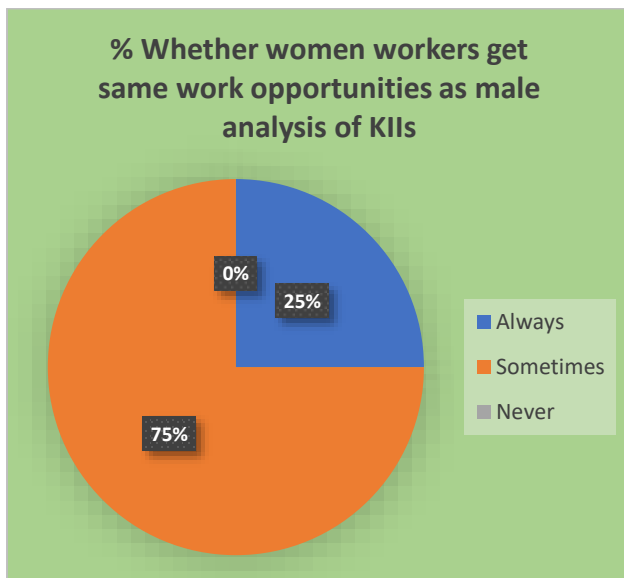
are keener to adjust their practices than men, who appear to place more value on their previous experience with cotton and other farmers' advice. The study demonstrated that rural mostly women did feel that they possessed a clear vision of how they could directly influence climate change effects through women's capacities to develop informed opinions, exchange and communicate on new ideas, information technology on climate change at household and community level. This process can be harnessed through participatory coaching and mentorship approaches fostering motivation, openness, curiosity, and desire for personal involvement.

Agricultural extension and Govt services livestock education services still do not attach much importance to aligning their policies to reaching women farmers or women on the farm. Govt stakeholders and administrators typically still assume (in the face of the empirical data) that men are the farmers and women play only a "supportive role" as farmers' wives. However, they appreciate the civil society work and coordination to align and recognized and enhanced females' major role in community Household and farm level in District Rahimyar Khan.

“We can't fight the threat of climate change in our lives with one hand tied behind our back. It's time to reset the services and facilities by investing in women at the household and community level”. Govt Representative shared in KII

The role of women as agents of change can be achieved as women feel particularly concerned when such approaches focus on climate change threats to their livelihoods and are thus prompted to find and take ownership of new solutions of adaptation to climate change at both the individual and community levels.

While it is different for female workers cases, in all productive and income-generating options men of female workers are playing a major role in decision making. On the other hand, in terms of household work women were taking the lead as most of the household work burdens are borne by them.



#### **6.1.5.1-Recommendation:**

- Strengthening of Women’s existing theoretical knowledge and understanding of climate change and adaptation can be utilized by Empowering Women as Climate Change Agents
- Strengthening the role of Learning groups and Cooperatives including Self Help Groups and operational capacities in specific fields of interest including gender and climate change and livelihoods.
- Pakistan’s climate policies and implementation framework must be reviewed to assess the human impact of interventions through the lens of gender (Govt.)
- A public awareness campaign needs to be undertaken for rural communities, especially working families that engage them in climate action and sensitizes them to the need for environmentally conscious behaviours. (Govt. Social Welfare)

#### **6.1.6-Food Security**

Pakistan’s Agriculture and Food Security Policy (2018) incorporates several genders-relevant insights, paying due attention to the challenges faced by women, as well as how climate change is impeding their productive, reproductive and community-related roles. The policy highlights the principle of equity in empowering women and vulnerable groups, including sharecroppers, tenants, the landless, and marginalized communities. In addition, it imparts a framework of sustainable agriculture that aims for universal food security in ways that the economic, social and environmental bases for future generations’ food security are not undermined. It states that the “fundamental rights of every human being can be protected if provided with food that is healthy, of sufficient quality and quantity, affordable and safe, and culturally acceptable.” <http://mnfsr.gov.pk>

In all parts of the study area, women play a major role in agricultural production, a critical component of food security – women farmers bring to bear valuable knowledge in seed selection, vegetative propagation and the reproduction of plants and animals. They put considerable input in livestock and poultry management.

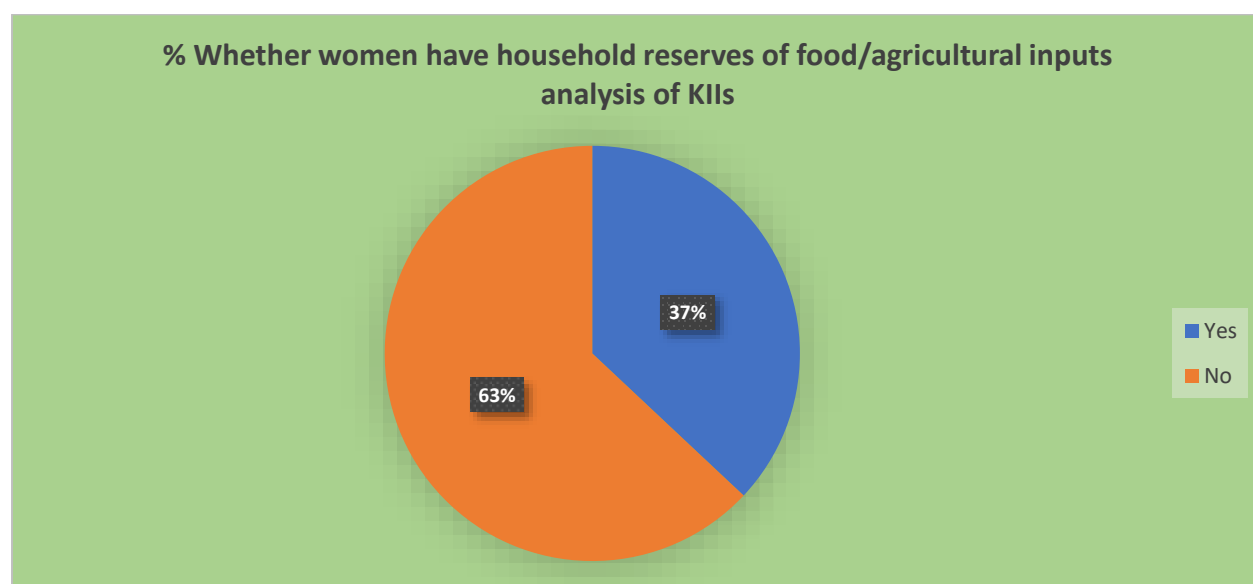
It revealed that females play a pivotal role in the three components of food security: food availability (production), food access (distribution), and food utilization. They are playing a role in a wide range of activities that support agricultural development, such as soil and water conservation, afforestation, and crop domestication. Men also play a crucial role in food production, often focused on cash crops. However, they face far fewer constraints than women. Men are more likely to have access to productive resources such as land, credit and extension services while women have not. In cases of crop failure due to harsh climatic conditions, cultural factors often make it easier for men to leave their farms in search of employment elsewhere, leaving women behind to struggle to feed their families and make ends meet. In many cases, women have diminished assets and resources to help them plan for and potentially avert the next crisis. Diverse gender-based barriers (including restrictive socio-cultural inhibitions) in accessing land, financial services, social capital, credit and technology render women vulnerable to food insecurity.

In times of food and water scarcity, women prioritize their family’s needs over their own and show signs of higher malnutrition.



This stress usually brings about a discontinuation of hygienic practices that prevent several diseases. Women in such households are more likely to consume and utilize contaminated water, especially if they have reduced mobility on account of ill health, pregnancy, or cultural barriers.

Gender equality is a fundamental right, but it also makes economic sense – improving women’s access to land, credit and other productive resources entrepreneurship trainings and activities would increase the productivity of land and help boost food security as well as overall well-being at household and community levels. The appeal of climate-smart agriculture, better integrated cropping is its best-balanced approach in seeking to improve livelihoods, increasing the productivity and resilience of females including rural women workers, while also providing mitigation benefits. A woman empowered in production, resources, leadership and time domain improves household food security.



#### **6.1.6.1-Recommendations:**

- Adopt a gender-responsive approach in climate-smart agricultural initiatives. Ensure that technologies and extension services cater to women’s needs.
- New technologies (e.g., drought-resistant crops, irrigation practices, food preservation and Agri-inputs) and existing ones will be adopted and/or adapted more effectively when they are suitable to the needs of women.
- Rural women also need to benefit from direct access to agricultural extension and climate information services.
- Gather sex-disaggregated data in agriculture and food security

#### **7-Major Issues Identified:**

1. Women’s participation in decision making related to technology adoption and land is limited.
2. Women must be consulted thoroughly while switching to new technologies.
3. During project implementations mostly implementers pay less attention to how information needs differ for men and women.

4. Climate specific data that review human vulnerability and resilience in with climate degradation at district and local levels are not available (Govt.)
5. National climate policies and implementation framework not truly represent the women's vulnerability due to climate change as this is critically important for assessing the conditions they face and their relative resilience.
6. The gendered differential occurring due to climate stress is still unknown to many practitioners, especially those unfamiliar with the human fallout of climate change. (Govt.)
7. Women are more vulnerable to suffering casualties in disasters due to climate change i.e. heavy rains, floods, droughts etc. as they are less likely to receive early warning signals through telecommunication than men; in many instances women and girls are not taught survival skills like swimming, to rescue themselves or minors; and cultural barriers prevent women from leaving their homes unattended without permission of their male family members. As seen in multiple disasters, women attempt to save the lives of their children or the elderly and protect key assets at the risk of their own lives. (Govt. Social Welfare)

### **8-Challenges faced during the study:**

1. Due to socio culture barriers information sharing and recording remain big challenge even Govt presentative were found reluctant.
2. Cotton harvesting season to gather workers in the FGD or even household level
3. Delay in finalization of FGD and KIIs tools due which assessment teams have to hardly manage the time.
4. One of the challenges for this Research was to distinguish between the impact of climate change, and the impact of socio-economic issues or market forces.
5. Less understanding among the farmers and farm workers about the complex relationship between climate change and gender.

### **9-Conclusion**

In rural areas of district Rahimyar Khan-Punjab Pakistan, women are more vulnerable to the effects of climate change than men are, particularly because women constitute the majority of the poor and are dependent for their livelihoods on natural resources that are threatened by climate change. Furthermore, women face significant social, economic, and political barriers that negatively affect coping capacities. Women charged with the responsibility to secure water, food, and fuel for cooking and heating face the greatest challenges. When coupled with unequal access to resources, barriers to decision-making processes and limited mobility, women in rural areas are placed in a position wherein they are disproportionately affected by climate change. It is therefore of critical importance for gender-sensitive strategies to be identified and developed to respond to the environmental and humanitarian crises caused by climate change.

Provisional and District level strategic plans for mitigation and adaptation to climate change should be developed. While at the local level, significant efforts should made to strengthen existing practical knowledge and share good adaptive practices among rural communities. Still, there is a disconnect between national, provisional planning and local action plans, between decision makers and rural communities, and mechanisms are not in place for rural women to contribute towards and meaningfully influence strategies and action plans.

Locally, women should not just be seen as beneficiaries in need of awareness raising. They are leaders, professional and civil society practitioners, agricultural producers, small entrepreneurs and elected representatives capable of promoting positive change and stronger resilience in their communities. By strengthening their leadership skills, rural women could help define new strategic adaptation priorities, launch effective actions and programs.

The active participation and interest of key stakeholders during KIIs is an opportunity to bridge the gap by empowering women to involve in decision-making, developing gender-inclusive policies and strategies, and fostering the inclusive participation of civil society. Furthermore, REEDS planning for climate change is about to present new opportunities for women advocates to advance women’s rights and ensure that policies of adaptation and action plans directly benefit rural communities by fostering peace and inclusive growth. Some of these key milestones comprise REEDS program review in the framework of the future project planning

Women must be supported in building up their households’ and communities’ resilience during climate stress. Only care-giving role is associated to women, but leadership role needs to be given to them as well for an inclusive Disaster Risk Management. At the same time, recognize and reverse gender discriminatory practices that are deeply embedded in local culture, especially through dismantling barriers to access, information, benefits, and overall empowerment so that the policy interventions are truly transformative.

### **Annexures:**

Key Informant Interview Farmers & Workers

## **Climate Change Effects on Better Cotton Females Farmers/Workers in Rahimyar Khan Punjab Pakistan**

<b>I</b>	<b>General Information</b>	
1	Farmer Code	
2	Name of Farmer	
3	Father/Husband Name	
4	Age	
4.a	Gender	Male – 1      Female - 2
5	Contact number	
6	Village	
7	Block	
8	District	
9	State	

<b>II</b>	<b>Income and Assets</b>	<b>Tick relevant</b>
1	Women Worker	
a	Applicable	
b	Not Applicable (skip below questions in this table)	
2.	<i>Type of Work (Multiple Choice)</i>	
A	Sowing	

<b>II Income and Assets</b>		<b>Tick relevant</b>	
1	Women Worker		
a	Applicable		
b	Not Applicable (skip below questions in this table)		
B	Weeding		
C	Applying Fertilizer/Pesticides		
D	Picking		
E	Other please specify_____.		
3	Type of residence	1.Local	2.Migrant
4	Only if Migrant Worker		
A	Migrated from which location _____		
B	Distance to that location from current residence_____		
5	On what basis wages for you work are decided?		
a.	Standard rate received for all duties		
b.	Different wage received for different duties		
c.	Don't know/Not sure		

<b>6 Women worker from Farmer' Family</b>		<b>Tick relevant</b>	
a	Applicable		
b	Not Applicable (skip below questions in this table)		
7.	Type of Work (Multiple Choice)		
A	Sowing		
B	Weeding		
C	Applying Fertilizer/Pesticides		
D	Picking		
E	Other please specify_____.		
8	Whether daily wages paid?	1.Yes	2.No
9	If 'Yes' above, Please tick the most relevant option applicable		
a.	Standard rate received for all duties		
b.	Different wage received for different duties		
c.	Don't know/Not sure		

10	What is your role in cotton cultivation? (Multiple choice)	1. Decision Maker	2. Accessing Extension Services	3. Utilizing Agriculture Training Opportunities	4. Working in the farm	5. None	6. Other_____
11	a. Do you know what is climate change? (Probe their understanding about the concept of climate change- ask for examples to validate and then record the response. If their understanding is not complete, please explain to them about the effects of climate change)	1.Great extent	2.Somewhat	3. Not at all (Skip to q. 11c)			

	b. Record their understanding	
	c. Has Climate Change impacted women's livelihoods?	1.Yes 2. No (if No skip to 12)
	d. Are there any specific tasks that have become harder for you to do due to climate change?	a. _____ b. _____ c. _____
12	What impact do you observe on your cotton crop due to climate change? (Multiple choice)	1. Reduced Yields 2. Crop Failures/ loss 3. Prevalence of pests and diseases. 4. Droughts and flooding 5. Any Other specify _____ 6. None
13	How- losses due to climate change are managed- i.e. in terms of family income? What is the survival strategy? (Multiple choice)	1. Crop insurance 2. Government support for crop loss 3. Using some reserve funds 4. Loans / borrowing from others 5. Other _____ 6. Not sure
14	How woman can get access to loan or finances – e.g. government schemes or finance, etc.? (Multiple choice)	1. LP Staff 2. Through influential people in the Village 3. Bank representative 4. Government representative 5. Any Other Specify _____ 6. Don't Know
15	Do women farmers or workers have access to income generation activities other than cotton farming?	1. Yes 2. No 3. Don't Know
	5a. If yes to 5, name any	_____
16	Is changing weather and rain fall affecting your ability to get work?	1.Yes      2.No
17	If yes above in 'Q9', please tell us the issues?	_____
18	Do you take any precautionary measures during cotton farming to overcome the impacts of Climate Change such as increase in temperature, water shortage, and less fertile soils? (Multiple choice)	1.Conservation 2.Transitioning to lower- fuel sources 3.Improving fertilizers and fertilizer application approaches 4.Any other _____ 5.None, if none why _____
19	Is the availability of fodder affected by Climate Change?	1.Yes      2.No      3.Others _____
20	How is livestock affected by Climate Change issues? (Multiple choice)	1. Heat stress 2. Diseases 3. Mortality 4. Any other _____ 5. Don't Know

21	Do you have access to Veterinary Services?	1.Yes	2.No
22	What kind of precautionary measures you have adopted in the context of livestock due to changing environment? (Multiple choice)	1. Vaccination 2. Provision of clean drinking water 3. Roof/shed for the livestock 4. Quality fodder (non-contaminated) 5. Any other _____ 6. None	

III Time management			
1	What are key responsibilities (daily routine) of female farmers /workers?		
	<b>Time</b>	<b>Activity</b> (record , sl. No of activities) multiple choice	<b>Options for activity</b>
	5.00 to 8.00 am		1.Farming related activities 2.Cooking 3.Washing cloths 4.Washing utensils 5.Animal husbandry 6.Cleaning house 7.Taking care of children 8.Taking care of elder people 9.Teaching children 10.Resting 11.Shopping 12.None 13.Other _____ 14.Other _____
	8.00 to 10.00 am		
	10.00 to 12.00 pm		
	12.00 to 2.00 pm		
	2.00 to 4.00 pm		
	4.00 to 6.00 pm		
	6.00 to 9.00 pm		
	Notes if any:		
2	How do you help yourself to manage your time between household level duties as well as farming during cotton season? (Multiple choice)	1. Prioritizing tasks 2. Doing Farm work early in the morning 3. Take Regular breaks 4. Avoid overworking on farms 5. Any other _____ 6. Don't Know	
3	What is the effect of climate change on your role in collecting wood or water from long distances? (Multiple choice)	1. Increase in physical hardship 2. Utilization of excess time 3. Longer waiting in the queue 4. Reducing time towards household care 5. Other Specify _____ 6. None/ not applicable	
4	Whether Climate Change affected your daily normal work pattern / duties?	1.Yes	2.No (Skip to q. no 6)
5	If yes above, how and what are the challenges?		
6	Do you think you can save your time by adopting the following?		
	a. Sustainable practices on fertilizer and irrigation	1.Yes	2.No
	b. Use of gas or gas cylinders for cooking	1.Yes	2.No

7	Does the spouse or other family members help women with farm work?	1. Yes		2. No (Skip to Section III: Health)
8	If yes to above, how spouse/ other family member help – list the areas?	1 _____ 2 _____ 3 _____		

IV Health				
1	What are common health issues of those engaged in cotton cultivation? (Multiple choice)	1. Skin burn/disease 2. Heatstroke 3. Lung diseases 4. Cancer 5. Any other _____ 6. Don't know		
2	What diseases are common among women farmers or workers? (Multiple choice)	1. Urinary tract infection (due to absence of toilets) 2. Body ache 3. Respiratory allergies 4. Cancer 5. Skin burn/disease 6. Any other _____ 7. None 8. Don't Know		
3	What is the effect of climate change on an individual's overall health? (Multiple choice)	1. Premature death (due to extreme weather changes) 2. Ageing 3. Respiratory disease 4. Cardiovascular disease 5. Any Other _____ 6. Don't Know		
4	Has rainfall pattern changed	1. Yes		2. No (skip to Qn. No 6)
5	If changed, how:			
6	Common diseases observed due to changing rainfall patterns? (Multiple choice)	1) Viral infections 2) Malaria/Dengue 3) Diarrhea 4) Jaundice 5) Gastro-intestinal infections (such as typhoid and cholera) 6) Any Other _____ 7) None 8) Don't Know		
7	What precautionary measures do you adopt to decrease climate change related health risks? (Multiple choice)	1. Exercise 2. Nutritious food 3. Use of PPE (Personal Protective Equipment) 4. Any Other _____ 5. Don't Know		
8	Do women receive sufficient medical facilities for maternal health?	a. Yes	b. No	c. Don't know
9	Do you have easy access to the medical facilities?			

	1. Great extent	2. Some extent	3. Not at all
10	Whether the medical facilities you visit have preventative and curative care for ailments related to climate change, such as malaria, viral infections etc.?		
	1. Yes	2. No	3. Don't know
11	Do you have any viral or bacterial infection?		
	1. Yes	2. No	3. Don't know
12	If yes above, how to get the treatment of infection? _____		
13	Please list down/specify your responsibilities when family members get ill (Multiple choice)	1. Visiting/Taking to doctor 2. Preparing home medication 3. Preparing nutrition food 4. Taking care of household work 5. Taking care of farm work 6. Any Other _____ 7. Nothing	

<b>v</b>	<b>Leadership/Voice</b>		
1	What is the general role of female farmers or workers at household?	1. Cooking 2. Animal husbandry 3. Cleaning household 4. Any other specify _____ 5. Don't Know	
2	What is the role of female farmers and workers in community? (Multiple choice)	1. Management of natural resources (soil/water) 2. Afforestation 3. Crop domestication 4. Any Other _____ 5. None 6. Don't Know	
3	Do you manage land and water resources in case of cotton cultivation?	1 Yes	2.No
4	If yes to above, what exactly you do?	1 _____ 2 _____ 3 _____	
5	Do you grow more plants?	1 Yes	2.No
6	a. Do you grow trees near your farm?	1 Yes	2.No
	b. If yes above, Why and what has been the effect of growing trees to you and your farm? _____		
7	What is the effect of tree plantation in managing climate change? (Multiple choice)	1) Increase in oxygen levels 2) Helps remove carbon dioxide from the air 3) Prevents Flooding 4) Helps in reducing temperature 5) Any Other _____ 6) None	



		7) Don't Know
8	Have you held office designation of any organization?	1. Yes      2. No
9	If yes above, what kind of duties have you performed at the village level? (Multiple choice)	1. Lead Farmer 2. Entrepreneur 3. Community Health worker 4. Village political leader 5. Elected representative of Local Self Government 6. Any Other _____ 7. None
10	Why you think your voice is considered/ not considered?	_____
11	What role can women play in helping communities overcome climate change challenges (Multiple choice)	1. Management of natural resources (soil/water) 2. Afforestation 3. Crop domestication 4. Any Other _____ 5. None 6. Don't Know
12	Whether women workers get same work opportunities as male?	1. Always 2. Sometimes 3. Never
13	Whether women workers get full time work as males?	1. Always 2. Sometimes 3. Never
14	What institutions exist to support female farmers or workers? (Multiple choice)	1. Self Help Group 2. Co-operative 3. Informal Group 4. NGO 5. Any other _____ 6. None 7. Don't Know
15	Do women have chance to participate in any available opportunities equally?	1. Always 2. Sometimes 3. Never
16	If 'Sometimes/Never' above, Why women farmers don't have equal chance to participate in any available opportunities? (Please note down their responses)	1. _____ 2. _____ 3. _____
17	Do women farmers apply better agriculture practices (Climate Smart Agriculture)?	1. Yes 2. No 3. Don't Know
18	What are the helpful methods?	_____
19	What are the barriers towards climate smart agriculture?	_____

<b>VI</b>	<b>Food Security</b>	
1	How do environmental factors affect food security? (Multiple choice)	1. Deforestation 2. Loss of crop diversity 3. Overgrazing

		4. Over Cultivation 5. Any Other _____ 6. None 7. Don't Know
2	How do you get agriculture inputs like seed, fertilizer, pesticides, etc. (Multiple choice)	1. Nearby shop 2. Agency implementing some programme for farmers 3. University 4. Government 5. Any Other _____
3	Can you easily purchase inputs?	1. Yes 2. No (Why _____)
4	Can you reserve inputs for their next crops?	1. Always 2. Sometimes 3. Never
5	Whether women have household reserves of food/agricultural inputs?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>
6	What better opportunities required for female farmers to improve livelihood i.e. Food Security and others? (Multiple choice)	1. Entrepreneurship 2. Access to finance 3. Access to trainings 4. Gender equality 5. Any Other _____ 6. Don't Know
7	What are the options for more/better inter-cropping for smallholders? (Multiple choice)	1. Food Crop 2. Cash Crop 3. Any Other _____ 4. None 5. Don't Know

<b>VII Education/Knowledge</b>		
1	What do you feel about any changes in local environment as a result of climate change? (Multiple choice)	1. Insecurity 2. Fear 3. Anxiety 4. Stress 5. Any Other _____ 6. None 7. Don't Know
2	What are some of the visible impacts of climate change you have noticed? (Multiple choice)	1. Increase in temperature 2. Decrease in temperature 3. Change in rainfall pattern 4. Any Other _____ 5. None 6. Don't Know
3	What are the possible reasons for climate change? (Multiple choice)	1. Pollution 2. Cutting of Trees 3. Greenhouse Gases 4. Industrialization 5. Urbanization 6. Excess use of available resources (such as water)

		7. Any Other _____ 8. Don't Know
4	What are barriers for female farmers about awareness of climate change and its adoptions? (Multiple choice)	1. Gender discrimination 2. Male dominate society 3. Literacy levels 4. Any Other _____ 5. Don't Know
5	Do you have access to information about climatic projection of your locality?	1. Yes 2. No
6	Do you have access to mobile, internet, weather conditions and extension services?	1. Yes 2. No
7	Do you have access to informal farmer training?	1. Yes 2. No
8	What innovations do you explore about different climate change adoptions?	_____
9	What role can women play in helping communities overcome climate change challenges	_____

## Key Informant Interview – Stakeholders Questionnaire for Institutions

General Information	
1.	Name of Institution
2.	Name of Respondent
3.	Designation of Respondent
4.	District and State

5. What are the services offered by your organization for female farmers and workers?

6. Did you notice any barriers for females in accessing these services? If so, any actions taken to mitigate the same?

7. Whether any services provided by you in any way helping Women Farmers/ Workers to cope with Climate Change? If yes, how?
  
8. What are your recommendations for improved services delivery for women farmers/ workers in communities?
  
9. What, in your view, can other relevant stakeholders (Govt agencies, buyers, co-operatives, fertiliser companies etc.) do to support women farmers to adapt to and find solutions to climate change?
  
10. In your opinion how women farmers / workers can be actively involved in climate change mitigation?

## FOCUS GROUP DISCUSSION (FGD) Guideline

- The objective of the FGD is to understand the challenges and opportunities facing BC females' farmers and Workers in Sindh & Punjab, Pakistan, as a result of climate change. The inputs from this discussion will help us to map out realistic recommendations and actions to address the twin challenges of climate change and women's economic empowerment.
- The information gathered through the FGDs will help to verify and validate the information gathered through individual interviews.
- The participants should consist a mix of 10 Better Cotton Farmers and workers. The participants in the FGD should be as representative of the local community as possible (gender, age, BC cotton farmers).
- Please explain thoroughly to the participants about the objectives and expected outcomes of the discussion and how it will be used.
- Please record the entire conversation, and take notes.

1.	Name of the facilitators (s)		
2.	State		
3.	District		
4.	Union Council		
5.	Village		
6.	Number of Participants	a. Male _____ b. Female _____ c. Total _____	
7.	Date of FGD (dd/mm/yyyy)		
8.	Type	Project Farmers	Project Workers

### Income and Assets

9. What are the roles played by women farmers and workers in cotton cultivation in our region?

Women farmers	Women workers
a. Sowing	a. Sowing
b. Weeding	b. Weeding
c. Applying Fertilizer/Pesticides	c. Applying Fertilizer/Pesticides
d. Picking	d. Picking
e. Other _____	e. Other _____
f. Other _____	f. Other _____
g. Other _____	g. Other _____

10. What is climate change according to you? (Probe their understanding). (After recording their responses, if required provide them any additional information to complement their understanding about Climate Change to gather the right responses to the remaining questions)

11. What impact do you observe on your cotton crop due to climate change? (if any losses mentioned probe their survival strategy) Probe for any specific activity that become harder to perform due to climate change?

12. What are the key challenges you due to climate change? What are the mitigation measures? (Probe about access to finance, other income generation activities etc)

Sl. No.	Challenges	Mitigation measures
a.		
b.		
c.		
d.		
e.		

13. To what extent the livelihoods of women farmers and workers are affected by Climate change? What are the coping measures? Any alternative mechanisms? (Probe one by one)

### Time Management

14. How a typical day of a female farmers / worker looks like?

Time	Activity
5.00 to 8.00 am	

8.00 to 10.00 am	
10.00 to 12.00 pm	
12.00 to 2.00 pm	
2.00 to 4.00 pm	
4.00 to 6.00 pm	
6.00 to 9.00 pm	
<b>Options for activity</b>	
1.Farming related activities	
2.Cooking	
3.Washing cloths	
4.Washing utensils	
5.Animal husbandry	
6.Cleaning house	
7.Taking care of children	
8.Taking care of elder people	
9.Teaching children	
10.Resting	
11.Shopping	
12.None	
13.Other _____	
14.Other _____	

15. How do you help yourself to manage your time between household level duties as well as farming during cotton season?

16. To what extent other members in the family assist women farmers/ workers? What type of assistance is provided to women farmers?

**Health**

17. What are common health issues/diseases of those engaged in cotton cultivation?

<b>Farmer</b>	<b>Worker</b>
a) Skin burn/disease	a) Skin burn/disease
b) Heatstroke	b) Heatstroke
c) Lung diseases	c) Lung diseases
d) Cancer	d) Cancer
e) Viral infections	e) Viral infections
f) Malaria/Dengue	f) Malaria/Dengue
g) Diarrhea	g) Diarrhea
h) Jaundice	h) Jaundice

i) Gastro-intestinal infections (such as typhoid and cholera)	i) Gastro-intestinal infections (such as typhoid and cholera)
j) Any Other 1. _____	j) Any Other 1. _____
k) Any Other 2. _____	k) Any Other 2. _____
l) Any Other 3. _____	l) Any Other 3. _____
m) None	m) None
n) Don't know	n) Don't know

18. To what extent climate change is contributing to these health issues?

19. What type of health facilities are accessed for addressing the health issues?

Farmers	
Workers	

20. "Our community has sufficient facilities for maternal health" Do you agree or disagree? Why?

21. What are your responsibilities when a family member is ill or needs care? How will you manage your other responsibilities during such an event?

22. Any precautionary measures you adopt to decrease climate change related health risks?

### Leadership/Voice

23. What are the major roles played by female farmers or workers at household and community level?

<b>Household</b>	1. Cooking 2. Animal husbandry 3. Cleaning household 4. Other _____ 5. Other _____ 6. Other _____ 7. Other _____ 8. Don't Know
<b>Community</b>	1. Management of natural resources (soil/water) 2. Afforestation 3. Crop domestication 4. Other _____



	5. Other _____
	6. Other _____
	7. Other _____
	8. None
	9. Don't Know

24. What role can women play in helping communities overcome climate change challenges?

25. Whether women have chance to participate in any available opportunities/ decision making equally? Probe for examples – How? If equal opportunities not available probe for reasons?

26. Whether women farmers adopt climate smart agriculture practices ? Any barriers for women farmers to adopt climate smart agriculture?

**Food Security**

27. What is the role of female farmers/ workers in ensuring food security of their families?

28. What are the challenges in accessing inputs for cotton farming? Whether any specific challenges faced by women farmers?

29. What better opportunities required for female farmers/workers to improve livelihood and food Security??

**Education/ Knowledge**

30. What are some of the visible impacts of climate changes?

31. What are barriers for female for gaining increased awareness about climate change and its mitigation measures?

32. What role can women play in helping communities overcome climate change challenges?