



Gender and Rural Advisory Services Assessment in Pakistan

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List of Acronyms

CEDAW:	Convention on Elimination of All Discrimination Against Women
CSO:	Civil Society Organization
FGD:	Focus group discussion
GBV:	Gender based violence
GRAST:	Gender and Rural Advisory Services Assessment Tool
ICT:	Information Communication Technology
RAS:	Rural Advisory Services
WDD:	Women Development Department

Executive summary

Introduction

Women farmers in developing countries, including Pakistan, face challenges in accessing agriculture extension advisory services, with most of those services geared towards the needs of male farmers. Alongside other challenges faced by women farmers, this contributes to the gender gap in agriculture productivity in developing countries, whereby women-managed farms are 20–30% less productive than farms managed by men. It has been estimated that closing this gap would help to boost agriculture production by 2.5–4%, improve food security and improve the welfare of rural households (FAO, 2011).

In the context of the launch of CABI's new PlantwisePlus programme in Pakistan, which aims to enhance the knowledge and uptake of climate-smart plant health practices through responsive digital advisory tools, this report presents the results of an assessment of the current state of gender-sensitive extension services in Pakistan, and provides recommendations for making improvements.

Methodology

The assessment used the Gender and Rural Advisory Services Assessment Tool (GRAST) developed by the FAO for assessing the gender sensitivity of rural advisory systems. This involved looking at three areas: the national enabling environment (policies, institutional structures, and resources); the organizational level (gender sensitivity of the organizational culture of extension service providers); and the individual level (skills, attitudes and motivations of extension managers and extension agents; and client's perception of advisory services).

A mix of data collection methods was used. To investigate the national enabling environment a desk review was conducted that looked at national policies and strategies on gender, agriculture and food security, and Convention on Elimination of All Discrimination Against Women (CEDAW) reports. Key informant interviews were also conducted with the National Agriculture Research Council, FAO's Pakistan office Gender Coordinator, the National Plant Protection Director General, Women Development Department (WDD) directors, Agriculture Extension Department Heads and Plant Protection/ Pest Warning and Pesticide Quality Control Departments in Punjab and Sindh Provinces. To investigate farmer's perceptions of agriculture advisory services, 12 focus group discussions (FGDs) were held with men and women farmers' groups in three districts (two in Punjab Province and one in Sindh Province), covering about 120 farmers. To investigate the organizational level (extension services/providers), key informant interviews were conducted with district agriculture extension office deputy directors, agriculture extension officers (three officers per district) and extension field assistants (two field assistants per district). In addition, data was collected from two private sector companies in Punjab (Fatima Fertilizer Company Limited and Auriga Seed Corporation) to understand their extension advisory approach.

The data collected were analysed using qualitative methods, and the GRAST indicators were used to measure how gender-sensitive the delivery of extension services is in Pakistan.

Findings

Findings on the national enabling environment

The policy framework in Pakistan is weak to support gender sensitive extension service delivery. There is no gender policy or strategy specific to the agriculture and rural development sector either at national or provincial levels. There are statements made about extending extension services to women farmers in Agriculture and Food Security and Gender polices of Punjab and Sindh provinces. However, it is not clear how the policy statements are being translated into agriculture sector implementation plans.

There is no clear accountability and coordination mechanism within the agriculture sector to ensure the mainstreaming of gender. While there are women Development Departments (WDD) at province level with a mandate to support sector ministries to mainstream gender, they have a broad multi-sectoral focus and don't have the organizational structure or resources needed to provide the required support to agriculture extension departments.

Findings on the individual level (women farmers)

The main barrier to women's access to agriculture advisory services is the view held by most agriculture extension managers and field staff that women are farm helpers and not farmers in their own right. Therefore, extension delivery approaches are not intentionally designed to reach women farmers.

Gender based social norms influence the attitude of agriculture extension staff and women farmers. It is not customary for women to be trained on agriculture. Most women do not believe it is important for them attend agriculture extension trainings.

Unpaid care work restricts women's time to participate in agriculture extension trainings. Extension staff do not consult women directly to organize extension trainings at a time suitable for women farmers.

Women's mobility is restricted by socio-cultural norms. Training of women farmers is usually confined to a closed space limiting their opportunity to participate in field demonstrations and learning by doing.

Digital communication methods are extensively used for agriculture advisory services in Pakistan. Information is communicated to farmers through social media, agriculture advisory mobile Apps and voice and text messages. Most rural women farmers are unable to access this information, because of low mobile ownership among rural women due to socio-cultural restrictions.

The agriculture training topics selected to train women farmers are very limited and do not reflect their wider role in crop production. Women's trainings in the study areas tend to focus on cotton picking and vegetable gardening, mostly.

New technologies and machineries are replacing women's labor, especially in sowing, transplanting and harvesting activities. While men farm workers are trained on how to operate these machineries, women are not, leading to a likely scenario where women farm workers without upgrading their skills, will be pushed out of the job market.

Findings on the organizational level (extension services/providers)

The Pakistan government, in an effort to improve representation of women in public services has instituted a quota system, whereby government offices are required to ensure at least 15 percent of the staff they recruit are women. Following this, there is an increase in recruitment of women agriculture officers and field assistants in Punjab and Sindh provinces. Currently, Punjab has a relatively better representation of women agriculture officers, 25%, while in Sindh, 9% of agriculture officers and 5% of field assistants are women. Rawalpindi, located closer to the capital of Pakistan has the highest representation of women agriculture officers, 60%.

Women agriculture officers and field assistants face several challenges to perform their roles. They are not able to use motorcycles provided by the extension departments for field work, because, culturally, it is not common or acceptable for women to use motorcycles. Women face security threats when traveling to the field. In some rural communities, women agriculture officers face resistance from male farmers, because women are not culturally expected to teach men. Relocation is very difficult for women extension staff, if they are assigned to work outside of their home districts, because women are not culturally expected to leave home and live alone. Absence of public child care facilities is a challenge for women extension agents with young children to balance family and work responsibilities.

Agriculture extension offices, to varying degrees of success, have tried to alleviate these challenges. In Punjab, extension departments have provided vehicles to some women agriculture officers to travel to their operational areas. Supervisors support women extension staff to be reassigned to their home districts, when possible. Women agriculture officers travel to their operational areas in pairs or with male field assistants, in areas where there are security concerns, or where they face resistance from male farmers.

The institutionalization of mainstreaming gender in agriculture extension departments leaves a lot to be desired. There are no capacity building trainings for extension staff on gender. Job description and performance evaluations of extension staff do not consider gender related objectives. There is no indication that gender sensitive indicators are used in the monitoring and evaluation activities of agriculture extension departments. There is no consistent practice of collecting sex disaggregated data in monitoring and reporting.

Recommendations

Recommendations for the national enabling environment

Develop a gender policy or mainstreaming strategy for provincial Agriculture Extension Departments, with clear goals and objectives, implementation plan and budget.

Set up women/gender focal desks within Agriculture Extension Departments to support mainstreaming of gender and build the capacity of the desks through trainings.

Organize regular coordination platforms between WDDs and Agriculture Extension Departments at province level, through which WDDs can support the gender desks in their gender mainstreaming work.

Build provincial WDDs capacity to support gender responsive budgeting by sector ministries working with provincial planning departments.

Recommendations for the individual level (women farmers)

Design social and behavioral change communication interventions to encourage women to participate in agriculture extension activities and to communicate the benefits of their participation to the whole community

Select women Extension Contact farmers to work with agriculture field assistants and officers; and through women Extension Contact farmers, consult women farmers about agriculture extension training time and venue

Adopt participatory approaches to train women farmers, such as, farmers' field school (or women open school), practical demonstrations and discussion and learning with other farmers.

Design strategies to enable women to access digital advisory services, for example, women lead farmers who have mobile phones, accessing information and sharing with other women farmers during women farmers' group meetings

Design interventions to shift social norms within the community to improve women's access and use of mobile phones for agriculture advisory services

Organize women in farmers' groups around production and marketing of specific crops and support them to access inputs and loans and engage in joint marketing. In addition, train organized women's groups to build their capacity and skills.

Train women farmers on use of new agricultural equipment and machineries, which have replaced women's manual labor. Furthermore, support women farm workers to organize and become service providers using some of these new machineries, e.g. rice transplanter.

Recommendations for the organizational level (advisory services/providers)

Sensitize agriculture extension department managers and field staff about the importance of reaching women in agriculture extension advisory services and organize capacity building trainings on gender sensitive agriculture advisory service provision

Include gender related objectives in Agriculture Officers' and Field Assistants' job description and performance evaluation

Set sex disaggregated targets for farmers to be reached by extension advisory services

Develop qualitative gender indicators in the extension departments' monitoring and evaluation framework and collect sex disaggregated data in all monitoring and evaluation and reporting activities

Develop a guideline for agriculture officers and field assistants on how to reach women farmers and carry out gender analysis that is relevant to their work

Facilitate experience sharing between extension staff on good practices to reach women farmers.

At provincial and district levels, conduct gender analysis to identify women and men farmers' needs and priorities for advisory services and use the information as an input to design extension programs and plans

Expand the focus of agriculture extension trainings provided to women farmers to reflect their wider roles in crop production and collect feedback on the advisory services they received

Collect sex disaggregated data on technology adoption and collect information on barriers for women to adopt new agricultural technologies.

Work to address some of the barrier's women extension staff face. For example, while vehicle provision is a good start, lack of resources might mean not all women agriculture officers can be supplied. Explore other low-cost options and share experiences on how to address this transportation problem. In places where there is a need, such as Rawalpindi, set up child care facilities in agriculture offices for field extension staff.

1. Introduction

CABI's work within the Plantwise program in Pakistan and other countries has shown women farmers have limited access to extension advisory services. The challenges observed in the Plantwise Program are globally shared challenges in developing countries. Women not only have limited access to rural advisory services, but most of these services are also geared towards the needs of male farmers, with limited relevance to the needs of women farmers. This gender gap, along with women's limited access to agricultural inputs, contributes to the gender gap in agriculture productivity in developing countries, where women managed farms are 20-30 percent less productive than farms managed by men. Closing this gap would help to boost agriculture production by 2.5-4%, improving food security and welfare of rural households (FAO, 2011).

CABI's new program PlantwisePlus, aims to enhance the knowledge and uptake of climate-smart plant health practices through responsive digital advisory tools. This involves equipping agricultural advisory service providers with decision making tools to provide advice to farmers. As extension agents make use of new digital solutions and provide advice, we need to make sure both men and women farmers are able to access their advisory services and benefit from it. This study aims to help the program look at the agricultural extension advisory system in Pakistan in a holistic manner and provide inputs that will inform the design and delivery of the work in a way that benefits both men and women farmers.

1.2. Study Objective

The objective of this study is to understand what works in designing and delivering gender sensitive extension advisory services, in Pakistan, and to shed light on areas where improvement is required in existing services, in order to increase their gender sensitivity.

1.3. Research Questions

The following are key research questions that the study addressed:

- How are rural extension advisory programs designed and delivered to enable rural women to effectively participate and benefit?
- How are constraints, such as, time and mobility, literacy and lack of education that prevent women from accessing rural extension services addressed?
- What opportunities are there for women farmers to raise their interests and voice their needs in extension service delivery?
- What institutional mechanisms are in place to effectively implement gender sensitive rural extension services and to hold extension staff accountable?
- How does the organizational culture of extension service providing organizations support women to work as extension agents and managers?

2. Context, data and methods

Women play a significant role in agriculture production in Pakistan, even though, their role and level of engagement varies across provinces and economic class. About 43% of women in Pakistan are employed in the agriculture sector. About 60% of rural women working in

agriculture, work as unpaid workers on family farms and enterprises¹. Women in poor landless families are more involved in agriculture, working as farm laborers, compared to women in middle income or richer households (Interview with National Agriculture Research Council, 2022).

Women in Pakistan have limited access to productive and financial resources, such as, land and non-land assets and financial services. Ninety five percent of women do not own a bank account. Eight nine percent of married women do not own a house and 96% of married women do not own land. Out of the total number of people with access to microfinance, women make up only 29%. Out of total people currently accessing loans for agriculture, women are only 4%².

Pakistan's constitution and the civil law give women the same property rights as men. However, customary laws that are discriminatory against women are validated by courts to decide on issues of land and inheritance. Under the customary laws, land title is given in the name of the male head of the household or eldest male family member of the extended family. In the event of divorce, women cannot claim a share in property or access common land or continue to work on it ³.

In the past 10 years, the Pakistan government has made some efforts to improve women's land and property rights. The Punjab provincial government in 2012 passed a land revenue amendment act that sought to strengthen women's land inheritance rights. Currently, the Punjab province has started issuing joint land titles to spouses. As part of the Punjab Women Development Package and Punjab women's empowerment initiative, the government is also distributing livestock, such as, cattle and poultry to rural women⁴.

CABI's previous work in Pakistan showed that despite women's significant role in agriculture production in Pakistan, they didn't access agricultural information from formal sources. Women were not able to interact with male agriculture extension agents, due to socio-cultural norms. Women's participation in plant clinics run by CABI's Plantwise program was low. Only 1% of clinic queries came from women farmers, due to limited availability of women plant doctors, lack of transportation and distance to travel to plant clinics (Mary Surridge and Rufsana Begum; 2016 & American Institute for Research, 2019)⁵.

2.1. Description of the study sites

The study was conducted in three districts of two provinces in Pakistan: Punjab and Sindh province. In Punjab, Multan district from southern part of Punjab and Rawalpindi district from central part were selected. In Sindh, Hyderabad district, was selected for the study. The districts were selected to represent different socio-cultural contexts and agro-ecology zones.

¹ Ministry of Planning Development and Special Initiatives, Government of Pakistan, March 2022. National Gender policy framework

² Center of Gender and Policy Studies. Women's Economic Participation and Empowerment in Pakistan: Status Report 2016. UN Women Pakistan.

³ OECD (2019), SIGI 2019 Global Report: Transforming Challenges into Opportunities, Social Institutions and Gender Index, OECD Publishing, Paris, <https://doi.org/10.1787/bc56d212-en>

⁴ OECD (2019), SIGI 2019 Global Report: Transforming Challenges into Opportunities, Social Institutions and Gender Index, OECD Publishing, Paris, <https://doi.org/10.1787/bc56d212-en>.

⁵ American Institutes for Research (2019). Evaluation of Plantwise-Pakistan. Washington, DC.

From the three districts, six villages, two per district, were selected for the study. During selection of study villages in each district, effort was made to include one village located closer to the district town and market centers and another village remotely located, away from urban centers.

2.2. Conceptual framework

The study used the Gender and Rural Advisory Services Assessment Tool (GRAST) that was developed by the FAO. The tool uses a holistic approach to assess gender sensitivity of rural advisory systems and identify strengths and areas of improvement in design and delivery of Rural Advisory Services (RAS).

The GRAST involves three levels of analysis, which are deemed necessary to achieve systemic and meaningful change. These include:

- **National enabling environment:** the inclusion of gender equality as a policy goal in national development, agriculture sector and extension policies; and commitment to implement the policies by setting up the necessary institutional structures and resources for implementation
- **Organizational level:** development of plans to deliver gender sensitive advisory services and gender sensitivity within the organizational culture of extension service delivering organizations
- **Individual level:** skills, behaviors, attitudes, motivations and values of extension managers and extension agents to provide gender sensitive advisory services; and clients perception of advisory services and needs for improvement

2.3. Sampling method and study tools

The study used desk review and qualitative data collection methods, such as, key informant interviews and focus group discussions.

The desk review included review of national gender, agriculture and food security policies and strategies and CEDAW reports.

Key informant interviews were conducted at the national level with the National Agriculture Research Council, FAO's gender coordinator and the National Plant Protection Department Director. At Province level, in Punjab and Sindh, interviews were conducted with Women Development, Agriculture Extension and Plant Protection/ Pest Warning and Pesticide Quality Control department directors. In Sindh province, additionally, key informant interviews were conducted with the head of the Commission on the Status of Women and the Information Communication Technology (ICT) department head within the Agriculture Extension department. In Punjab, interviews were conducted with two private sector companies: Fatima Fertilizer Company Ltd and Auriga Seed Corporation.

At district level, key informant interviews were conducted with district level Deputy Directors of Agriculture Extension offices, three women agriculture officers and two men field assistants, per district. In total 25 key informant interviews were conducted for the study. Focus group discussions with men and women farmers were conducted in two villages, in each of the study districts. In total 12 focus group discussions were conducted and about 120 men and women farmers participated in the discussions. Effort was made to include both women heads of households and women in male headed households in the selection of participants for women focus group discussions.

Qualitative method of data analysis was used to analyze the data. The indicators developed by FAO in the GRAST tool as measurements of gender sensitive delivery of RAS were used to aid in analyzing the data and interpreting the results.

3. Results and discussion

3.1. The National enabling policy environment

3.1.1. Ratification and implementation of the Convention on Elimination of all Discrimination Against Women (CEDAW)

Pakistan has ratified the CEDAW in 1996 and has been submitting periodic reports on implementation of the convention to the CEDAW commission. In 2017, Pakistan has submitted the 5th periodic report. In the report, the government stated that the responsibility of implementing international obligations like the CEDAW has been devolved to provincial governments, following the 2010 Pakistan's constitutional amendment. It also noted CEDAW committees are set up to ensure implementation of the convention, at provincial level, depending on priorities of the provinces and within their respective policy and legislative frameworks. An inter provincial ministerial group comprised of Women Development Departments, Ministry of Human Rights and other stakeholders was set up to help provinces harmonize their gender equality policies and legislations and to share good practices⁶. Article 14 of the CEDAW convention focuses on rural women and calls states ensure that rural women participate in and benefit from rural development. In particular to agriculture, the article calls states to ensure rural women have access to training, education and extension services; be able to organize in self-help groups and cooperatives to access economic opportunities; and obtain agricultural credit, market facility, appropriate technology and equal treatment in land tenure.

In its 5th periodic report, the government of Pakistan described progress made on article 14 of the convention. The report stated that over 6.5 million women in Pakistan are engaged in agriculture, in production of livestock, fisheries, food processing and farm management as land managers and land laborers. Women's contribution to farm production is estimated to be between 55% - 66% of total labor, with higher percentage in some areas. The report mentioned the existence of various small-scale projects working to improve the life of rural women, such as, women only trade platforms, support to backyard cultivation, credit distribution, livestock farmers field schools etc⁷.

A shadow report submitted by civil society organizations, in 2020, highlighted the gaps in implementation of article 14 of the CEDAW. The shadow report mentioned that women farmers are considered as informal family helpers, which are unpaid and uncouned in the labor force. It asked for these women farmers to be counted in the formal labor force data and their contribution to be recognized in national accounts and for an end to forced, unpaid exploitive labor. It also asked for women farmers to be members of unions, cooperatives, associations; to access agriculture extension training by women trainers, to access affordable credit and arable land and title deeds in their own names. The shadow report also asked for the establishment of gender responsive budgeting mechanism in the public sector.

⁶ Fifth periodic report submitted by Pakistan under article 18 of the convention, due in 2017

⁷ Fifth periodic report submitted by Pakistan under article 18 of the convention, due in 2017

It further requested for bank loans for rural women and rural support programs to focus on women⁸.

The CEDAW committee in its concluding observation to the fifth periodic report raised concerns that the devolution of power on policy making on advancement of women to provinces might challenge the implementation of the CEDAW in a coherent and consistent manner throughout the country. It recommended that the federal government provide guidance to provincial governments by setting standards. The committee appreciated the adoption and enforcement of women's property rights act of 2019, but raised concerns about the persistence of discriminatory customs and practices that prevent women from inheriting or acquiring land and other property. It asked the state to implement the act and increase women's access to land through inheritance, purchase and distribution of state land and to protect women's land ownership and eliminate discriminatory practices and customs that prevent rural women from acquiring and inheriting property, or from using land and participating in development projects⁹.

3.1.2. National policy for gender equality and women's empowerment in agriculture and rural development

In Pakistan, there is no gender policy developed specifically for the agriculture and rural development sector. However, there are a number of policies and laws that touch upon issues of gender equality relevant to the agriculture and rural development sector.

A national gender policy framework was developed in 2022 by the Ministry of Planning Development and Special Initiatives. The policy has six objectives: (1) Governance: establishing gender transformative governance structures, strengthening government capacity to mainstream gender in its policies and programs and ensuring the institutionalization of gender equality principles in the government priorities and action plans; (2) Equality and quality in education: creating an enabling environment for women and girls to learn and become equipped with employable and high income generating skills; (3) Employment and economic empowerment: promoting equitable access to work opportunities with conducive work places, enabling enterprising environment and necessary business skills; (4) Agency, political participation and meaningful engagement; (5) Health and well-being, integrating gender sensitive health elements in cross-cutting services, including health; (6) Safety and security, ending GBV and mainstreaming gender protection across systems.

Although, none of the objectives of the National Gender Policy Framework focus on the agriculture sector or have explicit focus on rural women, the agriculture sector is mentioned in one of the policy actions. Under objective three, promoting women in the agriculture sector for value-added production is identified as a strategic priority.¹⁰

Punjab Province has developed a Women Development Policy in 2018. Under one of its policy objectives related to Poverty Reduction and Women's Empowerment, the document

⁸ Pakistan Civil Society's Alternative Report on CEDAW, 2020, authors: Tahira Abdullah, Naheed Aziz, Maliha Zia, Naeem Mirza

⁹ CEDAW Committee Concluding Observation on the fifth periodic report of Pakistan, 10 March 2020

¹⁰ Ministry of Planning Development and Special Initiatives, Government of Pakistan, March 2022. National Gender policy framework

stated a policy strategy to support women agriculture workers, through women focused extension service covering crop and livestock agriculture. The implementation mandate for the objective falls under the Agriculture and Livestock Department of the province¹¹. Similarly, Sindh province has developed a Gender Equality and Women's Empowerment Policy in 2019. Under two of the policy objectives, issues pertinent to rural women and agriculture production are mentioned. Under Objective B, related to feminized poverty and social protection, a policy strategy is set to double the agricultural productivity and incomes of small-scale food producers, in particular women, by 2030. The target is also included in the Sindh Province Agriculture policy of 2018. Under Objective G, related to economy and productive work, a policy strategy is stated to boost women's financial inclusion by improving preferential and targeted access to instruments, such as, interest-free loans, agriculture subsidies and extension services. The mandate for implementation of the policy intentions fall upon agriculture and livestock departments of the province¹².

In addition to the gender policies mentioned above, some recent legislation have significant impact on rural women. The federal government has passed a bill on 'Enforcement of Women's Property Rights Act' in 2020, which allowed women deprived of their property rights to file a complaint to ombudsman and get restoration of their rights¹³. The Sindh province has passed the 'Sindh Women Agriculture Workers' act in 2020. The law outlines women agriculture workers' right to decent working conditions. These include: equal pay for equal work; sick leave and maternity leave; protection form harassment in the work place; written contract agreement; the right to form a union or association; the right to access government agriculture services and subsidies; the right to not work for more than eight hours per day etc.¹⁴.

3.1.3. Gender equality and women's empowerment in national food, agriculture and extension policies

Pakistan's National food Security Policy developed in 2018, has included some statements related to gender equality and women's empowerment. It mentions the need for empowering women and vulnerable groups, such as, share cropper, tenants, landless and marginalized communities to improve food security. It also stated the need for creating off-farm employment opportunities targeting rural women and to improve access to food for rural poor¹⁵.

The Sindh Agriculture Policy developed in 2018, recognized women's role in agriculture, which is increasing rapidly due to migration of young men to urban areas. As policy actions to poverty reduction, food and nutrition security, the policy committed to support small scale food producers, particularly women and indigenous communities, to double their agriculture

¹¹ Women Development Department, February 2022. Punjab Women Development Policy.

¹² Sindh Women Development Department, 2019. Gender Equality and women's Empowerment Policy.

¹³ Senate Secretariat; Acts, Ordinance, President's orders and regulations; An act to protect and secrete the rights of ownership of women in property; Islamabad, 28th February 2020; The Gazete of Pakistan

¹⁴ Provincial Assembly of Sindh, January 30,2020, Karachi, The Sindh Women Agriculture Workers' Act, Act No. V of 2020, The Sindh Government Gazette

¹⁵ Government of Pakistan Ministry of National Food Security & Research, 2018, National Food Security Policy, Islamabad.

production and income; to enhance the productive assets of rural poor, including women, and to improve the skills of rural women and youth in economic enterprises, such as, kitchen gardening¹⁶.

Provision of extension services is the responsibility of provincial governments. There is a policy intent to improve access to extension advisory services for women farmers, and effort has been made to increase the number of women extension staff in some provinces, such as, Punjab. However, there is a data gap on the number women farmers accessing extension advice. And there are very limited number of women extension staff in provinces, such as, Sindh, KPK and Baluchistan (Discussion with National Agriculture Research Council).

3.1.4. Gender responsive budget allocation

Some policy initiatives were taken to institute a gender responsive budgeting system. The Prime Minister's policy statement, Ehsaas programme (2021) stated under its 115-policy action (12) a new mandatory section in the PC1 Performa (Planning Commission approval document) to screen every PC 1 for its impact on poverty and gender equality. Discussion with the Women Development Department in Punjab also revealed that an initiative to introduce gender responsive budgeting had started and guidelines were developed that required sector ministries to allocate budget for gender equality and women's empowerment. The initial focus sectors were education, health and agriculture (Interview with Punjab WDD). However, it appears that the initiative has not yet been implemented. None of the agriculture department heads in Punjab and Sindh could confirm the existence of a gender responsive budgeting system, currently.

Although a gender responsive budgeting system is not yet in place, there are various provincial government and development partners' financed programs working on women's empowerment in agriculture. For example, a horticulture project implemented by the National Agriculture Research council trains women farmers on kitchen gardening. Training is given to women on food processing for local market in Gilgil Baltistan Province (Interview with Gender coordinator, National Agriculture Research council). FAO is implementing the Indus Basin Climate Resilient integrated water management project in Pakistan, with a component on building capacity on gender sensitive advisory services. Under the program, government agriculture extension staff in Sindh and Punjab are trained on running women's open schools (equivalent to farmers field school) and climate resilient agriculture practices, as well as, gender sensitive extension service delivery (Interview with FAO Gender Coordinator, 2022).

3.1.5. Oversight and accountability mechanisms

In Paksitan, gender units are not set up in agriculture departments and there are no gender focal persons in the departments. However, there are Women Development Departments and provisional Commissions on the Status of Women set up to oversee gender mainstreaming by various sector departments and to develop and implement programs that contribute to gender equality and women's empowerment.

Commissions on the Status of Women are set up at national and provincial levels to play a watchdog role overseeing the implementation of CEDAW. The Commissions review existing

¹⁶ Planning and Development Department, Government of Sindh, Sindh Agriculture Policy (2018-2030).

legal-frameworks and identify gaps in light of CEDAW provisions and make recommendations for legal reforms. They also monitor the implementation of policies and laws related to gender equality (WDD Director, Punjab). For example, the Commission on the Status of Women in Sindh has set up five committees on women's education, economic empowerment, health, political participation and GBV to review progress in implementation of CEDAW provisions in coordination with sector departments. The commission is currently working on women's agriculture labor law in Sindh province (Sindh Commission on the Status of women, Commissioner).

Women Development Departments (WDD) are also set up at provincial levels in Punjab and Sindh with a mandate to work for the welfare and socio-economic empowerment of women in their provinces. While the Commissions on the Status of Women are provisional structures, the WDDs are permanent sector departments within provincial cabinets. The WDD's implement programs focused on women's empowerment and support other sector departments to mainstream gender in their work. They build the capacity of other sector departments on gender mainstreaming by organizing trainings, introducing basic gender concepts, gender sensitive planning and budgeting and showing the relevance of gender to the different departments' work. The programs they implement focus on Gender Based Violence (GBV), equal employment opportunities, sensitization of women about their rights, political empowerment or developing leadership of women councilors in the province, economic empowerment and establishing day care centers for women civil servants (WDD Directors in Sindh & Punjab).

Despite their broad mandate, the WDDs are underfunded and understaffed. For example, in Punjab, the department doesn't have offices at the district level, while in Sindh, the district level staff are very small in number (WDD Directors, Punjab & Sindh). In Sindh, the WDD's budget was 0.08% of the total provincial government budget, for the financial year 2018-19. In South-Asian countries, the average budget allocation to similar Women Development Departments is between 1-2% of the National budget. The allocation to the WDD in Sindh lies well below this average range¹⁷. The civil society shadow report submitted for the 5th CEDAW periodic report has also mentioned that the Commissions on the Status of Women and WDDs have limited financial and human resource capacity to oversee the formulation and implementation of gender equality policies and programs¹⁸.

Currently the WDDs do not have any established coordination systems with other sector departments or across the different provinces. The CEDWA committee, in its concluding observation on the 5th period report of the Government of Pakistan, remarked that in addition to allocation of adequate resources, there is a need for institutionalizing inter-provincial coordination mechanism among WDDs in Pakistan¹⁹.

¹⁷ Gender and women's Empowerment study carried jointly UNWomen/ women development department of Sindh; 2019.

¹⁸ Pakistan Civil Society's Alternative Report on CEDAW, 2020, authors: Tahira Abdullah, Naheed Aziz, Maliha Zia, Naeem Mirza

¹⁹ CEDAW Committee Concluding Observation on the fifth periodic report of Pakistan, 10 March 2020

3.2. Challenges for accessing and benefiting from RAS: the user's perspective

3.2.1. Recognizing women as legitimate RAS clients

Both men and women participate in crop production in the study sites, although their role varies in different crops and across the study areas. Women are more involved in production of crops, such as, maize and vegetables, and they also play important roles in cotton and rice production. Women are mostly involved in manual production activities in sowing, weeding and harvesting, while men are involved in production activities using machineries. Women's role in production is high in Multan and Hyderabad, compared to Rawalpindi, where machineries are increasingly replacing manual production activities implemented by women. Women's role in production is recognized by male farmers in Multan and Hyderabad, while male FGD participants in Rawalpindi, mentioned women are only involved in unpaid care and domestic work and not in crop production activities.

Table 1- gender roles in crop production in the study villages

District	Main crops grown in the study sites	Women's role	Men's role
Multan	maize, rice, wheat, cotton, <i>Mango</i> , <i>vegetables</i>	Maize -sowing, granular pesticide application, fertilizer application, weeding, harvesting, drying of cobs – post harvest management Rice – weeding in rice nursery; transplanting from nursery to field; manual harvesting Wheat – harvesting Cotton – granular pesticide application, picking, cleaning, uprooting All activities in kitchen gardening	In all crops- land preparation, sowing, irrigation, fertilizer application, spraying pesticides and herbicides, harvesting using machinery or hand tools and marketing
Rawalpindi	wheat, maize, peanut, millet, sorghum, peas, lentil, Okra, cauliflower, cabbage, potato, citrus fruit	Manual sowing, weeding and harvesting; Post-harvest management - winnowing All activities in kitchen gardening	Land preparation, seed grading, sowing, weed control, irrigation, fertilizer and pesticide application, harvesting using machines and hand tools and marketing
Hyderabad	cotton, flowers (roses), maize, wheat, vegetables (lady finger, chillies, onion), fruits (banana), sugarcane,	Grading seeds Cotton – sowing, weeding, picking and cleaning Vegetables – planting, weeding, harvesting Wheat – sowing, weeding, harvesting, post-harvest processing	Land preparation, irrigation, fertilizer and pesticide application, harvesting using machines and manual tools, marketing

Maize – sowing, weeding,
harvesting, drying of cobs – post
harvest management

In the study communities in Punjab and Sindh, agriculture field assistants and officers provide a range of advisory services to farmers. They disseminate information on good agronomic practices and production technologies to farmers and register farmers to access government subsidies, such as, seeds, fertilizers and agricultural machineries.

Agricultural trainings organized by the extension department are mainly communicated through 'Extension Contact Farmers' or 'Progressive Farmers'. Progressive farmers are selected based on criteria, such as, willingness to adopt new technologies and practices, ability to communicate information with other farmers and the respect they command within the community. Almost all the contact farmers in the study communities are men. Trainings organized for women farmers are communicated through the men contact farmers, who share the information with other male farmers, asking them to send their wives or women in their households for agricultural trainings. In addition, announcements in mosques are made to share information about upcoming agriculture extension trainings to farmers. Field assistants keep a list of farmers in their operational area and communicate information about extension meetings through WhatsApp. Their list does not contain women farmers, as women farmers are not willing to provide their names and contacts to extension staff, including to women extension staff.

The proportion of women farmers reached by extension advisory services is very low. In Multan district of Punjab, one of the interviewed women agriculture officer's said only 2 to 3% of the farmers she works with are women, while another said only 1% of the farmers she reaches are women farmers. In Rawalpindi district of Punjab, a female agriculture officer said she reaches 40-50 farmers in a week, out of those, only 10 to 12 are women. Another agriculture officer working in a different part of the district said, in her operational area there are no women farmers reached.

Focus group discussions with farmers in six villages revealed that, while men have received regular agriculture extension advice and training, none of the women participants, except in two villages in Multan and Hyderabad, have participated in agriculture extension trainings and meetings. Male farmers in all the six villages said agriculture extension events are organized by the government extension department once a week, or more than once a week, depending on the cropping season. Agriculture officers and field assistants organize meetings and trainings during critical times, such as, peak time for pests and diseases, before and after harvesting and during critical times for irrigation or fertilizer application. Women farmers in one village in Multan said they have received extension advice, for the past year and half, after a woman agriculture officer was assigned to the area. The officer visits them at least once in two months to organize meetings and trainings or to conduct a farm visit. In the second village where women participated in agricultural trainings in Hyderabad, it was provided by CABI, and not by the public agriculture extension department. In all the other study villages in Punjab and Sindh, women farmers were not invited to agriculture trainings or were not allowed to attend trainings.

Within the agriculture extension departments, there is a pervasive view that women are not principal farmers and clients of advisory services. Male heads of households are considered as the main farmers, while women are seen as having only a supportive role. Therefore, the advisory services are geared towards male farmers' needs. Extension departments do not set sex disaggregated targets of farmers to be reached. The extension department head in Multan recognized the limitations in reaching out to women farmers and mentioned the need for a mindset change.

The extension advice provided to women farmers in the study communities is usually very specific and limited to few agricultural activities, such as, clean cotton picking and kitchen gardening, even though women are engaged in a wide range of crop production activities as described above. Sometimes, even training on kitchen gardening is provided to men, with the expectation that they will pass the information to women in their household, instead of directly training women, according to a woman agriculture officer in Rawalpindi. When women farmers face pest problems in their kitchen garden, they bring the problem to the attention of male members of their household, who then contact plant doctors for advice according to FGD participants in Rawalpindi.

There are several challenges for women to participate in agricultural extension trainings. It is not customary for women to attend agricultural trainings due to social norms. The community, including women themselves, do not believe, it is important for them to attend such trainings or meetings. Additional challenges, such as, time constraint and low levels of literacy and education are discussed below.

3.2.2. Time and mobility constraints

Time constraint is raised by agricultural officers and women farmers as one of the main barriers preventing them from attending agricultural trainings and meetings. Women are responsible for all unpaid care and domestic work activities, in addition to working in the field. Women are busy during the time agricultural trainings are conducted, according to a woman agriculture officer and women FGD participants in Rawalpindi district.

Time and venue for agricultural trainings are mostly decided by agriculture field assistants in consultation with Progressive Farmers or Extension Contact Farmers. Male farmers are then communicated about the trainings through extension contact farmers, or announcements are made in mosques. Farmers field schools in which male farmers participate have usually fixed date and time, while other meetings are organized on ad hoc basis. Women farmers, on the other hand, are informed about trainings organized for women by male members of their household who are contacted by the Extension Contact Farmer. Agriculture officers mentioned that care is taken to ensure the time selected for training women farmers takes account of their unpaid care work responsibility. Women farmers who participated in focus group discussions said they are not directly consulted about time and date of trainings.

Training venue for women farmers is usually in the house of a host farmer, often a Progressive Farmer or Extension Contact Farmer. Trainings for women usually take place in a closed space and do not include field demonstrations in Rawalpindi and Multan. In Sindh, women's trainings included field demonstrations on a farm closer to the village. In one village in Rawalpindi, the agriculture officer organizes trainings in a women's school in the *Tahsil*²⁰, in a vocational training center. Men farmers are trained using the farmers field school

²⁰ Tahsil is an administrative sub-division of a District

approach within their village. In some cases, farmers trainings are also organized in towns away from the village, where farmers need to stay overnight. Only men farmers are able to participate in those trainings, as women farmers are not allowed to travel.

Fatima Fertilizer company and Auriga seed corporation interviewed for this study mentioned that while they take account of farmers agricultural season schedules and holidays and consult with farmers about convenient time and location to organize extension trainings, they do not consider women's availability or unpaid care work responsibilities. Women farmers do not usually come to the farmers meetings organized by the private companies.

3.2.3. Education and literacy limitations

Women have lower levels of literacy and education compared to men in Pakistan. Only 46.5% of women are literate compared to 71% of men.²¹ Although, women's literacy rate is better among the youth, women still lag behind men, as only 64% of young women are literate compared to 91% of young men.²²

In the study communities, literacy levels were higher among men farmers compared to women farmers. Women's literacy level was relatively better in Rawalpindi compared to Multan and Hyderabad districts. Among the women FGD participants in two villages in Multan, only 14% and 18% were literate. In Hyderabad, 20% of the women FGD participants were literate in one village, while in the second village none were literate. In Rawalpindi, all the women FGD participants were literate in one village, while half were literate in a second village.

Agriculture extension departments take account of farmers' literacy limitations and use a wide range of communication methods to provide advisory services. Oral presentations and field demonstrations are used in combination with dissemination of written materials, such as, brochures and leaflets. In addition, video screening, TV advertisement and digital media are used. Local languages, such as, Punjabi in Rawalpindi, Sindhi in Sindh and Urdu are used by agriculture officers and field assistants. Printed materials are prepared in Urdu. The communication methods used to deliver RAS for men and women farmers are different due to literacy limitations and the fact that women's training is usually confined to a closed space (inhouse) in Multan and Rawalpindi. For example, in Multan, agriculture officers are not able to screen videos for women farmers trained inside a home, as this is usually used in the field. They don't use brochures or leaflets to train women farmers, because most are not literate. Field demonstrations are also not used according to women FGD participants in Multan. In Rawalpindi, the agriculture officer provides brochures and leaflets to male farmers and asks them to share with the women in their household.

Private sector organizations, such as, Fatima Fertilizer Company use various digital communication methods like, Tiktok, Youtube, radio programs and TV channels to provide advisory service to farmers. They also screen videos during farmers' meetings. Most of their communication is accessed by men, but not women farmers. Women do not come to farmers meetings organized by the companies for smallholder farmers, due to social norms

²¹Global gender gap report, 2021, World Economic forum, Geneva;

<http://reports.weforum.org/globalgender-gap-report-2021/dataexplorer/>; ISBN-13: 978-2-940631-07-0

²² Ministry of Planning Development and Special Initiatives, Government of Pakistan, March 2022. National Gender policy framework.

and the burden of unpaid care work. Women also do not have android phones to access the digital communication.

Men farmers' most preferred agriculture advisory service communication method in all the study areas is in-person or face-to-face discussion with agriculture officers and field assistants, followed by video and audio communications. Printed materials are preferred by progressive farmers according to one agriculture officer respondent in Rawalpindi. Fatima Fertilizer Company, based on their monitoring and feedback mechanism, claim TikTok is most popular among young farmers, while YouTube is used by older farmers and radio and TV are used by senior people. Most of their subscribers are men, with women accounting for only 1% of their subscribers. Women FGD participants, in Multan, lacking access to a diverse range of information sources, mentioned, in person-communication and discussion with agriculture officers is the most preferred method of communication.

3.2.4. Voice and representation

Gender sensitive RAS includes supporting women farmers to represent their interests and voice their needs for advisory services, individually or collectively. Gender sensitive RAS service providers support women to actively participate in farmers organizations, working to remove barriers for their participation and representation in leadership of farmers' organizations or support them to organize in women's groups to receive advisory services. In the study areas, extension agents deliver advisory services to farmers through group trainings and one to one communication by visiting individual farmers. Men and women farmers are trained in separate groups. One agriculture officer in Rawalpindi mentioned that, although the group training method is good for learning for women farmers, some women are not allowed to attend group trainings and it is important for the officer to visit farmers at home.

In Punjab and Sindh, there are farmers associations, which represent farmers' interests and engage the provincial government on various farmers concerns, such as, agricultural inputs, transportation and marketing policies. Most of the members of the associations are male progressive farmers, although a handful of women land lords are also represented among the members. Leadership positions in these associations are mainly controlled by men. At district level, there are farmers producers' organizations, such as, Mango producers in Multan and vegetable producers' group in Rawalpindi. Women are not members of these organizations. Male farmers in all the study communities stated that it is not possible for women to participate in these groups, as mixed sex farmers groups are not allowed. Women can participate and take leadership roles only if there are women-only farmers groups, according to male FGD participants in all villages.

Agriculture extension departments do not organize women in farmers' groups as they view this to be something outside of their remit, according to one agriculture officer in Multan. An agriculture officer in Rawalpindi mentioned that although it would be useful to organize women in farmers groups, she fears that social norms will restrict women and they will not be allowed to organize in farmers organizations. However, in one of the study villages, in Hyderabad, a women's livestock producers' group is set-up through the support of a World Bank project, where women receive loans and training on livestock production and livestock health, indicating the possibility of organizing women in farmers groups in some areas.

Women farmers are generally reluctant to approach extension staff and raise their needs for advisory support, even when there are women agriculture officers. Women usually raise their concerns through male members in their household, instead of directly approaching extension agents. This is due to social norms and the fact that women farmers don't have permission to use cellphones to contact extension agents, according to agriculture officers in Hyderabad. Men farmers are more vocal in raising their concerns with extension staff.

3.3. Challenges for gender sensitive service provision from the providers perspective

3.3.1. Human resources and staffing

In order to provide gender sensitive RAS, service providing organizations need to have gender parity in their staff. They need to provide equal career development opportunities for women staff and remove barriers that limit women from working as field extension staff or managers. They need to improve the organization's culture by instituting and implementing anti-discrimination and sexual harassment policies.

3.3.1.1. Gender parity among extension staff

The government in Pakistan has instituted a 15% quota for women in public offices, since 2018, intending to improve gender parity. In line with this policy, there has been an effort to improve the recruitment of women agriculture officers and field assistants working in agriculture extension departments. Women's representation among agriculture staff, although still very low, is in an upward trend in Punjab and Sindh. Agriculture officers and field assistants make up the core of the field agriculture extension staff. Currently in Punjab province, women make up 25% of agriculture officers, while in Sindh, they make up 9% of agriculture officers and 5% of field assistants. In Multan district, 11% of the agriculture officers working in the field are women. In Rawalpindi, where there is a higher representation of women extension staff, 60% of the agriculture officers are women. In both Multan and Rawalpindi, there are no women field assistants.

Private companies interviewed for this study, Fatima Fertilizer Company and Auriga Seed Corporation, said that all their field extension staff are men, while women are employed in the help centers as tele marketers.

Women's representation in managerial positions in extension departments is very low. There is one-woman extension department head in Rawalpindi district and two women deputy directors in Hyderabad. There are no women in management positions in Multan district agriculture office.

3.3.1.2. Challenges for women to work as field extension staff

There are several challenges faced by women working as agriculture extension staff in the study areas. Transportation is one of the main challenges. Agriculture extension staff are provided with motorbikes to conduct their field operations. While men extension agents can use motorbikes, it's not culturally accepted for women to ride motorbikes. Few women in towns like Islamabad, Lahore and Rawalpindi ride motorbikes, while this is not common in rural areas. Therefore, most women agriculture officers use private cars or public transport, such as, buses and rickshaws to travel to their operational areas. The agriculture extension department in Punjab has started providing vehicles to agriculture officers, which is expected to alleviate the transportation problem. However, there is shortage of budget to provide

vehicles adequately. In Sindh, the extension department is considering introducing scooters for women extension staff.

Field assistants in both Punjab and Sindh are required to know how to ride motorbikes in order to be recruited by extension departments, which is a major barrier for women to become field assistants. Similarly, private companies like Auriga Seed Corporation require extension staff to use motorbikes, and as a result, they do not have women field extension staff.

Security concern is mentioned by private companies and women agriculture officers as one of the challenges for women field extension staff. A respondent from Fatima Fertilizers company mentioned that one of the reasons why they do not get women applicants for field extension staff positions is because there are security problems for women to work in the field. A woman agriculture officer from Multan said, “women can’t travel alone to the field, because of security reasons. They need male field assistants or drivers to go with them”. Similarly, women agriculture officers in Rawalpindi said that they are concerned about security, while working in the field, and travel together to manage security problems. Women’s limited mobility and difficulty to relocate to new areas prevent them from working as agriculture extension staff. A respondent from Auriga Seed Corporation mentioned that women don’t usually apply for agriculture extension positions at the company, because if they are assigned to work in new districts, it is not easy for women to relocate. Families will object to women moving to new areas and it is difficult for women to live alone. A woman agriculture officer in Multan also mentioned that it is challenging for women who have families to relocate for work, out of their home districts.

The necessary support mechanisms are not always available for women extension staff to balance work and family responsibilities. According to the agriculture extension division head in Multan, women extension staff leave their job when they get married, because they are primarily expected to be care givers in the house. A woman agriculture officer in Multan mentioned that women with young children find it difficult to work in the field and look after their children at the same time. Agriculture officers in Rawalpindi mentioned that women returning to work after their three-months maternity leave have to struggle. There are no day care centers in the agriculture office, unlike some government offices, and they do not feel comfortable to leave young children with a hired help. One agriculture officer said, “I thought of resigning many times, because I didn’t want to leave my children with a help”. Another officer said, she had to go to the field with her children, despite the harsh weather condition in the field.

It is sometimes difficult for women agriculture officers to provide advisory services to male farmers, because of social norms. An extension manager in Punjab mentioned that it is difficult for women to visit field areas alone and face male farmers, due to cultural reasons. One agriculture officer mentioned that, in some remotely located areas, she doesn’t feel comfortable to go and provide training to men farmers, because it is not common for women to give lectures in the village, in front of men. Another officer said, “male farmers do not listen to us, because they do not believe women can be knowledgeable about farming”. She sometimes faces resistance and has to take a male field assistant to talk to the farmers.

3.3.1.3. The office environment

One of the ways of creating a safe work environment is introducing anti-discrimination and anti-sexual harassment policies that protect staff from discrimination and abuse. In Pakistan,

the government has introduced a national anti-discrimination and sexual harassment policy for public sector offices. In Punjab and Sindh province agriculture extension offices, staff sensitization sessions have been carried out to communicate the policy. Most extension staff interviewed at province and district levels are aware of the policy.

Having sex segregated bathrooms in the workplace is important for gender equality. In Hyderabad district agriculture extension office, lack of sex segregated washrooms and separate offices for men and women staff is mentioned as a challenge by the deputy head of the office.

3.3.2. RAS delivery approaches

RAS organizations, which follow inclusive approaches to service delivery, carry out an analysis to understand how men and women access information and ensure RAS delivery approaches are accessible to women, as well as, men farmers. They also use participatory approaches and use feedback from farmers to design appropriate delivery approaches. If ICTs are used to disseminate RAS information, they understand and resolve gender related barriers to access and use ICTs.

3.3.2.1. Communication methods used to provide advisory service

In the three study districts, agriculture extension departments follow similar RAS delivery approaches. Farmers' field school approach is used to train men farmers, while oral presentation, without field demonstration, is used to train women farmers, most of the time. However, in some cases in Rawalpindi, agriculture officers used field demonstrations in women's backyard or in nearby fields. In Sindh, women open schools – a similar approach to farmers field school, but targeting women farmers – were run through an externally funded project.

In addition to in-person communication by extension staff, electronic and print media and digital tools were used to reach farmers. Videos are screened during farmers meetings or field assistants show videos on tablets during meetings. Social media platforms, such as, WhatsApp groups and facebook are used to share some information. In some cases, mobile text and voice messages are also used to share information on weather and pest-risk alerts. Printed materials, such as, brochures and leaflets are disseminated to farmers. Radio and TV programs on agriculture are developed and aired. Private sector organizations, such as, Fatima Fertilizer company and Auriga Seed Corporation, provided RAS advice through a telephone help line.

The language used for communication in the print and electronic media is the national language, Urdu, in Punjab, and the widely spoken local language, Sindhi, in Sindh. Despite the various RAS delivery approaches used, the in-person communication method, demonstration plots, farmer to farmer exchange and farmers field schools and group meetings are the most preferred RAS delivery methods by farmers in all study villages.

Men farmers don't have any preference between women and men extension staff in all villages, except in one village in Hyderabad, where male FGD participants commented that it would be best, if women extension staff work with women farmers only. Women farmers, on the other hand, can only be reached by women extension staff, as cultural norms restrict male agriculture officers and field assistants from interacting with women farmers.

3.3.2.2. Access and use of various communication channels by farmers

Utilization of digital communication of RAS through WhatsApp group, Facebook and YouTube varies by age and sex of farmers. Younger farmers and men farmers are more likely to utilize the digital information compared to older farmers and women farmers. Women in Pakistan have low mobile ownership compared to men. The 2019 Global Report on Social Institutions and Gender Index showed 36% of women own mobile phones compared to 80% of men²³. Pakistan's living standards measurement survey of 2019, found that 65% of men own mobile phones, compared to 26% of women²⁴.

Women farmers in Multan and Sindh do not access advisory service provided through social media due to low use or ownership of mobile phones, especially android phones. In Rawalpindi, however, all women FGD participants had mobile phones and some women farmers used the information shared on Facebook. But even here, women were not able to share their contacts to agriculture extension staff to receive information communicated through WhatsApp group or text messages, due to social norms.

Men farmers faced challenges, such as, high cost of internet and connection problems to access digital RAS information. Older male farmers, mostly, listened to agriculture programs on radio and TV.

Printed materials are least used communication methods in all the study districts, due to low literacy level in rural areas, in Multan and Hyderabad. And even in Rawalpindi, where literacy rate is better, printed materialized are not utilized by farmers.

3.3.3. RAS content and relevance to farmers

Gender sensitive RAS delivery involves delivering information and content that is relevant and useful to women farmers, as determined by women clients. It requires designing RAS based on needs and interests of men and women farmers and understanding the various roles they play in agriculture, as well as their different access to resources and control over assets. It also requires collecting feedback from clients on the advisory service they are receiving and using the feedback to inform future decisions and planning.

In the study areas, the content of rural advisory services is designed by provincial and district level agriculture extension staff, with inputs from agriculture research departments. Advisory services are developed based on the kind of crops grown in the study districts. Field assistants and agriculture officers develop their advisory plans based on information they have gathered from farmers (men farmers mainly) about their needs, through field visits according to extension staff in Multan. Male farmers, in all the study communities, mentioned that it is usually 'Lead Farmers' or 'Extension Contact Farmers' who are consulted on selection of topics for farmers' trainings.

RAS services provided to men and women are different. Men are trained on pest and disease management, production practices and technologies and post-harvest management on various crops. Women are mostly trained on kitchen gardening, in addition to cotton

²³ OECD (2019), *SIGI 2019 Global Report: Transforming Challenges into Opportunities*, Social Institutions and Gender Index, OECD Publishing, Paris, <https://doi.org/10.1787/bc56d212-en>.

²⁴ Ministry of Planning Development and Special Initiatives, Government of Pakistan, March 2022. National Gender policy framework.

picking mentioned earlier in the report. In Sindh, through a world bank supported six years agriculture development program, women received training on nutrition and vegetable production and got inputs, such as, vegetable seeds, fodder for livestock and agricultural equipment's and tools.

Farmers' feedback on the advisory services is collected by field assistants who follow up with farmers on implementation of promoted new practices and technologies. Men farmers, directly approach agriculture officers, if they are not satisfied with the advisory support provided by field assistants (Rawalpindi and Multan Agriculture officers). Feedback is usually collected from men farmers only, because women farmers are reluctant to approach extension staff. In Sindh, farmers use social network platforms, such as, Facebook set up by the agriculture department, to provide feedback on advisory services. The ICT department within the Agriculture Extension directorate has also a helpline that farmers can call to get support from the department or provide feedback.

3.3.4. Technology promotion

Gender sensitive RAS includes considering relevance and accessibility of technologies promoted for women farmers, as well as, male farmers. It requires understanding different technology needs of men and women farmers, gender division of labor and its implication on technology adoption, participating women in technology selection processes and prioritizing their needs. Once a technology is promoted, RAS organizations should collect sex disaggregated data on technology adoption rates and collect feedback from women on reasons for adoption and non-adoption.

In all the study districts, in the past five years, agricultural technologies and practices that help to reduce labor and time and support farmers to adopt to climate change were promoted by agriculture extension staff. The technologies promoted were selected by the provincial agriculture extension departments based on the kind of crops grown in the districts and perceived needs of farmers.

Some of the technologies promoted to reduce labor and time of agricultural activities include: rice transplanter, manual planter, seed grader, cotton picking machine, combine harvester and Laser Land Leveler. Extension departments trained mostly men farm workers on using the machineries, such as, rice transplanter and cotton-picking machine, in Multan. Government also provided some subsidies to service providers who provide rice transplanting service to farmers.

The machineries replaced women's labor, as women laborers were mostly involved in planting and harvesting activities. The trainings on how to operate them was not provided to women. The agriculture extension department head in Sindh remarked that "as the new technologies are replacing women's labor, women farm workers are becoming jobless. Women farmers need to be trained on the use of these technologies".

Other technologies and agricultural practices promoted were intended to build climate change adaptation capacity of farmers. These include: soil and water conservation practices, drip irrigation, introduction of rust and drought resistant wheat seed varieties in Rawalpindi, offseason cropping through tunnel farming in Sindh and organic farming. Some of these technology communications, especially on organic farming and tunnel farming, targeted women farmers.

Farmers accessed the machineries by renting them from progressive farmers. The capital requirement, the cost of renting machines and availability of machines, such as, Laser Land Leveler, reduced the pace of uptake by farmers. Extension staff collected data on adoption rate, but the data was not disaggregated by sex. Some extension staff argued that women farmers are limited in number and lack resources needed to uptake capital intensive technologies.

3.3.5. Institutional practices to mainstream gender

For gender sensitive RAS provision, mainstreaming of gender needs to be institutionalized within service providing organizations. This is done by including gender related objectives in staff job descriptions, building the capacity of staff on gender, designing a monitoring and evaluation system that captures gender sensitive service provision and documenting best practices and lessons on gender.

In Punjab and Sindh, gender related objectives are not included in extension staff's job description and performance evaluations. There are no gender related questions asked during recruitment of staff. Almost all the agriculture officers and field assistants interviewed have not received any gender related training. Two extension managers mentioned that they have received gender trainings organized by NGOs. According to extension department heads in Sindh and Multan, gender trainings are sometimes organized through externally funded programs, such as, the Asian Development Bank.

There is limited experience of capturing gender sensitive information in monitoring and evaluation in both Punjab and Sindh. The government's reporting system doesn't require sex disaggregated data collection, while extension departments collect sex disaggregated data for donor funded programs, such as, World Bank supported programs in Sindh. In Punjab, sex disaggregated data is collected only on reports related to participation in trainings.

4. Conclusion

4.1. Enabling Environment

The assessment measured the enabling environment by looking at the existence of national gender policies in agriculture and rural development, the inclusion of gender equality as a policy objective in these sectors, the institutionalization of gender responsive budgeting and the presence of coordination structures and accountability mechanisms for gender mainstreaming in the agriculture sector.

In Pakistan, there is no gender policy specific to the agriculture sector at national or provincial levels. However, there are national and provincial multi-sectoral gender policies that mention policy intentions to improve women farmers access to agriculture extension services and agriculture subsidies and to provide support to women in agriculture value addition. The mandate for implementation of these policy intentions lies with agriculture departments. There is no clarity on how the policy intentions stated in the national and provincial gender policies will be translated into sector plans and budgets, since the mandate for implementation lies with departments outside of the Women Development Departments. The lack of regular coordination structures between the Women Development Departments and Agriculture Departments is likely to add to the difficulty of translating the policy intentions into implementation plans.

Gender equality is not explicitly stated as a policy objective in Food Security policies. However, the National Food Security Policy mentioned empowering women farmers is necessary to improve food security. In Sindh, the provincial food security policy mentioned intentions to support women farmers to double their agriculture production and to improve their skills, in specific areas, such as, vegetable production. Women farmers roles are recognized in agriculture, food security and extension policies. However, the policy intentions need to be turned into implementation action plans and women farmers' needs and priorities need to be clearly identified, followed by targets set to reach women farmers.

Coordination mechanisms and accountability systems for gender mainstreaming is one of the weakest areas in the enabling environment. Although there have been some initiatives to introduce gender responsive budgeting, it has not yet been institutionalized. There are no gender units or gender desks in agriculture departments with responsibility for coordinating efforts to mainstream gender in the agriculture sector. There are provincial Women Development Directorates with broad mandates to build capacity of other sector ministries to mainstream gender and to implement women's empowerment programs. Since the departments are understaffed and under budgeted, they have difficulty to ensure mainstreaming of gender in all sector ministries. The absence of regular coordination mechanisms between the WDDs and other sector departments adds to the difficulty.

4.2. Recognition of women as legitimate RAS clients

Recognition of women as legitimate RAS clients is assessed by looking at the RAS organizations definitions of farmers and the criteria used for selection of farmers for advisory services.

In Pakistan, agriculture and food security policies recognize women's role as farmers. However, this is not reflected by all agriculture extension staff at management and field levels in Punjab and Sindh. Most extension department heads and field staff did not consider women as farmers in their own right, who should receive RAS services. Their view was often that women are farm helpers working on family farms or hired as laborers. Extension Contact Farmers, through which the agriculture officers and field assistants communicate with farmers and disseminate technology, are all men. Social norms also affected women's participation in extension activities, as it was not customary or not considered important for women to participate in agricultural trainings and meetings by community members and women themselves.

There needs to be a change in mindset of agriculture extension department staff, from department heads down to agriculture officers and field assistants, about women's role in farming, in order to ensure services are geared towards women farmers' needs. In addition, shift in social norms is also needed to create an enabling environment for women to participate in agriculture extension trainings and meetings.

4.3. Accounting for women's time and mobility constraints

RAS organizations deliver gender sensitive services, when they design their programs taking account of women's time limitation and mobility restrictions. Women in the study communities are highly affected by limited availability of time and restrictions on their mobility, because of socio-cultural norms and unpaid care work responsibilities. Women are not consulted about training time, and although some agriculture officers tried to select time that is suitable for women, that was not always the case. Selection of time suitable for

women to attend trainings, while delivering extension trainings was not communicated as a requirement by extension managers.

Training venue for women farmers is usually in someone's home or in a closed space near their village. Women often do not get opportunity to participate in field demonstrations. In few occasions, when trainings were organized away from home, no effort was made to support women to participate, as social norms do not allow it.

4.4. Literacy and educational limitations

Gender sensitive RAS delivery requires understanding education and literacy levels of women and tailoring training appropriately. In the study communities, women have low literacy levels, except in one district. Agriculture extension staff used appropriate methods, oral presentation and local language to reach women farmers. However, trainings given to women mostly tend to be confined to in-house training, with little use of visuals like video screenings and field demonstrations. Women miss the opportunity of learning by doing. It would be useful to improve training delivery methods to women farmers, adding field demonstrations and videos as much as possible.

4.5. Women's voice and representation

Gender sensitive RAS delivery involves supporting women farmers to be represented in farmers' organizations and make their voices heard. In the study communities, most women farmers are not organized in farmers groups, although few rich land owners are members of farmers associations. Most women farmers do not voice their needs for agriculture advisory support; and instead they approach field extension staff through male household members. Agriculture extension staff assumed organizing women farmers groups is not part of their role or assumed that it would be restricted by social norms. However, there are women farmers groups organized through donor supported programs in Hyderabad. Being organized in farmers groups can be an empowering experience for women to collectively access extension services, jointly market their produce and share experiences.

4.6. Inclusive and effective RAS delivery approaches

Gender sensitive RAS delivery requires using inclusive approaches, understanding information flows for women, using participatory methods and addressing gender related constraints women farmers face to access information through ICTs. In the study sites, diverse RAS delivery approaches were used: in person communication, digital tools like mobile messages, voice messages, social media – Facebook and WhatsApp, radio and TV. Women farmers did not access most of these digitally communicated information, due to low mobile ownership and social norms around women's ownership of mobiles. Effort needs to be made to address some of these barriers, which are mostly socio-cultural, to improve women's access to agriculture information.

Participatory approaches are used to train men farmers, such as, the farmers field school approach, but there was limited use of participatory approaches in training women farmers. Only in few cases, women open schools and demonstration plots were used in Rawalpindi and Sindh.

4.7. Relevance and usefulness of the RAS content

The relevance and usefulness of information provided to women, as determined by women clients, is one measure of gender sensitive RAS provision. In the study areas, RAS content is developed by agriculture staff at province and district levels based on the type of crops grown and also needs collected from male farmers. Male farmers provided feedback on the advisory services they have received directly to field assistants or through social media. Women were not consulted on their advisory needs or didn't provide feedback on advisory services they have received. The advisory service women farmers received was very limited to specific agricultural activities, such as, kitchen gardening, cotton picking, etc., despite their wide role in crop production activities.

In gender sensitive RAS delivery, technologies promoted by RAS organizations are expected to be relevant and accessible to women farmers. Technologies promoted by extension departments in the study areas were selected by provincial agriculture departments based on perceived farmers' needs. Most technologies promoted reduced time and labor and replaced activities previously done manually by women. However, only men workers were trained in operating these machines. Women workers did not get the opportunity to upgrade their skills.

4.7. Gender sensitive organizational culture

Organizational culture of RAS providing institutions and their ability to enable women to become RAS agents and managers contribute to the delivery of gender sensitive services. In Pakistan, there is a national policy aimed at improving the representation of women in public services, including in agriculture extension departments by assigning 15 percent quota for women staff recruitment. In Punjab and Sindh provinces, there is a growing trend of recruiting women agriculture officers and field assistants. However, women's representation among field agriculture extension staff is still very low in Multan and Sindh, while it is relatively better in Rawalpindi. Women's representation among agriculture extension management staff is very low.

Provincial governments are trying to address some of the challenges that women extension staff face to work in the field, such as, transportation problem, by providing vehicles. Security challenges and social norms and resistance from male farmers were addressed by working with male field assistants. Relocation is a challenge for women extension staff, but supervisors try to support them by moving them to areas where their families live. Some problems still need to be addressed, though. For example, public child care facilities are needed in Rawalpindi to support women extension staff.

Institutional mechanisms, such as, capacity building of extension staff on gender, incorporation of gender indicators in organizations' monitoring and evaluation framework and collecting sex disaggregated data, incorporation of gender in extension staff's performance evaluation are measures that can help to ensure gender sensitive delivery of RAS.

In the study districts, there is no institutionalization of gender integration in RAS organizations. Extension staff's job description does not include gender related objectives. There is no continuous training and capacity building of staff on gender. Gender related data is not consistently captured in monitoring and evaluation reports.

5. Recommendations

The National enabling environment

- Develop a gender policy or mainstreaming strategy for provincial Agriculture Extension Departments with clear goals and objectives, implementation plan and budget.
- Set up women/gender focal desks within Agriculture Extension Departments to support mainstreaming of gender and build the capacity of the desks through trainings.
- Organize regular coordination platforms between WDDs and Agriculture Extension Departments at province level, through which WDDs can support the gender desks in their gender mainstreaming work.
- Build provincial WDDs capacity to support gender responsive budgeting by sector ministries working with provincial planning departments.

Community / Farmers level

- Design social and behavioral change communication interventions to encourage women to participate in agriculture extension activities and to communicate the benefits of their participation to the whole community
- Select women Extension Contact farmers to work with agriculture field assistants and officers; and thorough women Extension Contact farmers, consult women farmers about agriculture extension training time and venue
- Adopt participatory approaches to train of women farmers, such as farmers field school (or women open school), practical demonstrations and discussion and learning with other farmers.
- Design strategies to enable women to access digital advisory services, for example, women lead farmers who have mobile phones, accessing information and sharing with other women farmers during women farmers' group meetings
- Design interventions to shift social norms within the community to improve women's access and use of mobile phones for agriculture advisory services
- Organize women in farmers' groups around production and marketing of specific crops and support them to access inputs and loans and engage in joint marketing. In addition, train organized women's groups to build their capacity and skills.
- Train women farmers on use of new agricultural equipment and machineries, which have replaced women's labor (activities that were previously done manually by women). Support women farm workers to organize and become service providers using some of these new machineries, e.g. rice transplanter

The organizational level (advisory services/providers)

- Sensitize agriculture extension department managers and field staff about the importance of reaching women in agriculture extension advisory services and organize capacity building trainings on gender sensitive agriculture advisory service provision
- Include gender related objectives in Agriculture Officers' and Field Assistants' job description and performance evaluation
- Set sex disaggregated targets of farmers to be reached by extension advisory services

- Develop qualitative gender indicators in the extension departments' monitoring and evaluation framework and collect sex disaggregated data in all monitoring and evaluation and reporting activities
- Develop a guideline for agriculture officers and field assistants on how to reach women farmers and carry out gender analysis that is relevant to their work
- Facilitate experience sharing between extension staff on good practices to reach women farmers.
- At provincial and district levels, conduct gender analysis to identify women and men farmers' needs and priorities for advisory services and use the information as an input to design extension programs and plans
- Expand the focus of trainings provided to women farmers to reflect their wider roles in crop production and collect feedback on the advisory services they have received
- Collect sex disaggregated data on technology adoption and collect information on barriers for women to adopt new agricultural technologies.
- Work to address some of the barriers women extension staff face. For example, while vehicle provision is a good start, lack of resources might mean not all women agriculture officers can be supplied. Explore other low-cost options and share experiences on how to address the transportation problem. Depending on the local context, in places where there is a need, such as in Rawalpindi, set up child care facilities in district agriculture offices for field extension staff.

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