

Country Name	<b>The Project for Capacity Development of Agriculture Extension Services in Khyber Pakhtunkhwa Province</b>
Islamic Republic of Pakistan	

**I. Project Outline**

Background	<p>In Khyber Pakhtunkhwa Province (hereinafter referred to as “KP”), located in the mountainous area of north-western Pakistan, more than 75% of the population was engaged in agriculture in some way, but agriculture did not effectively contribute to creation of income. It was urgently needed to improve agricultural production techniques, etc., so as to improve people’s livelihoods in the area. Department of Agriculture Extension (DoAE) in KP conducted 2-year training courses for extension workers at Agriculture Training Institute (ATI) in KP and the graduated extension workers (Field Assistants: FAs) implemented extension service activities under supervision of Agricultural Officers (AOs) assigned at district level. However, systematic in-service training for agriculture extension workers was not implemented, which made it difficult for extension activities to be effective enough to disseminate the latest agriculture techniques and information to farmers. (Figures at the time of Ex-ante Evaluation.)</p>										
Objectives of the Project	<p>The project aimed to improve agricultural knowledge and extension skills of extension service staff in KP in Pakistan through (i) development of demand-based training curricula for capacity development of agriculture extension staff, i.e. AOs and FAs, (ii) acquirement of necessary skills by AOs to guide, supervise and monitor extension activities of FAs through training, and (iii) acquirement of necessary skills by FAs to conduct extension service activities through training, and (iv) strengthening of field implementation of the extension activities and monitoring, thereby extending appropriate knowledge and skills to improve agricultural productivity to farmers.</p> <ol style="list-style-type: none"> <li>Overall Goal: Appropriate knowledge and skills to improve agricultural productivity are extended to farmers.</li> <li>Project Purpose: Agricultural knowledge and extension skills of extension service staff in KP are improved.</li> </ol>										
Activities of the Project	<ol style="list-style-type: none"> <li>Project site: Whole area of KP.</li> <li>Main activities: Development of demand-based training curricula and training materials, training for the selected AOs and Subject Matter Specialists (SMSs) at National Agriculture Research Center (NARC) in Islamabad and monitoring of the field works (FWs) of the FAs under the training by the trained AOs in KP, training for the selected FAs at NARC and facilitation of the FWs of the FAs under the training in KP, facilitation of the field implementation of extension activities of the trained FAs in KP and monitoring of the field implementation in coordination with the trained AOs in KP.</li> <li>Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Pakistan Side</td> </tr> <tr> <td>1) Experts: 4 persons</td> <td>1) Staff allocated</td> </tr> <tr> <td>2) Equipment: Equipment to organize training at NARC, equipment to organize extension service at Model Farm Service Centres in KP, etc.</td> <td>2) Building and facilities: Project Office at NARC, training facilities at NARC and in KP, etc.</td> </tr> <tr> <td>3) Local cost</td> <td>3) Local cost</td> </tr> </table> </li> </ol>			Japanese Side	Pakistan Side	1) Experts: 4 persons	1) Staff allocated	2) Equipment: Equipment to organize training at NARC, equipment to organize extension service at Model Farm Service Centres in KP, etc.	2) Building and facilities: Project Office at NARC, training facilities at NARC and in KP, etc.	3) Local cost	3) Local cost
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Project Period	(ex-ante) January 2015-June 2017 (actual) January 2015-June 2017	Project Cost	(ex-ante) 199 million yen (actual) 246 million yen								
Implementing Agency	National Agriculture Research Center (NARC), Department of Agriculture Extension (DoAE) in KP										
Cooperation Agency in Japan	Appropriate Agriculture International Co., LTD.										

**II. Result of the Evaluation**

## &lt;Constraints on Evaluation&gt;

- Due to the COVID-19 pandemic, field visits and face to face interview surveys could not be conducted. Information was collected through questionnaire and online interview surveys.

## &lt; Special Perspectives Considered in the Ex-Post Evaluation &gt;

- During the project implementation, the data for the Project Purpose Indicator 2 (“At least 400 dissemination activities are conducted to deliver agricultural knowledge and/or production techniques to farmers by the trained FAs”) was collected through field work reports by the FAs and by the Monitoring and Evaluation officers employed by the project. As it was difficult to collect the data comparable to the one obtained during the project implementation in the internal ex-post evaluation, qualitative information on continuation of dissemination activities by the trained FAs was collected. In addition, the information collected for the Overall Goal Indicator was used as indirect information because the Overall Goal indicator was expected to be achieved through continuation of the dissemination activities by the trained FAs (please see the point below).
- The target year for the Overall Goal was set to be the end of Pakistan Fiscal Year (PFY) 2019/20 (i.e., June 2020) as the Overall Goal was defined as the goal to be evaluated at 3 years after the completion in the logical framework of the project. The Overall Goal indicator (“At least 15,000 farmers are extended with new knowledge and skills on agricultural production”) was interpreted to be “At least 15,000 farmers are extended with new knowledge and skills on agricultural production by the FAs trained by the project after the project completion” because the target figure was calculated “based on the assumption that each of the trained FAs would conduct extension activities with at least 20 farmers each year ... (i.e. 250 FAs X 20 farmers X 3 years)” according to the note in the logical framework.

**1 Relevance**

## &lt;Consistency with the Development Policy of Pakistan at the Time of Ex-Ante Evaluation &gt;

At the time of ex-ante evaluation, the project was consistent with the Pakistan Vision 2025 (2014), the national development plan for

Pakistan, which set forth bridging the vast yield and productivity gap between the national average and progressive farmers through multiple channels, including the provincial agriculture extension services, to educate and incentivize farmers to make efficient use of inputs, adopt leading farming techniques, optimize crop selection and maximize their yield.

<Consistency with the Development Needs of Pakistan at the Time of Ex-Ante Evaluation >

At the time of ex-ante evaluation, the project was consistent with the needs of Pakistan for capacity development for agriculture extension services in KP as described in the “Background”.

<Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation>

At the time of ex-ante evaluation, the project was consistent with the Country Assistant Policy for the Islamic Republic of Pakistan (2012), which included assistance for “poverty reduction and improvement in productivity of the agricultural sector which accounts for a large portion of the working population” under one of the 3 priority areas of “Achievement of balanced regional socio-economic development”.

<Evaluation Result>

In light of the above, the relevance of the project is high.

## 2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the Time of Project Completion>

The Project Purpose was achieved at the time of project completion. As many as 357 extension service staff (target: 350) was trained and certified (Indicator 1) and 761 dissemination activities (target: at least 400) were conducted by the trained FAs (497 activities through the FWs of the training and 264 activities after the training through implementation of action plans for extension services developed by the trained FAs)<sup>1</sup>, through which agricultural knowledge and/or production techniques were delivered to 5,822 farmers in KP (Indicator 2).

<Continuation Status of Project Effects at the Time of Ex-post Evaluation>

The project effects were continued at the time of ex-post evaluation. According to DoAE, in general, the extension service staff trained and certified by the project maintained their skills and knowledge through applying them in their continuous agriculture extension service delivery to farmers, group training to farmers in the field by FAs etc., which was supported by positive feedbacks from farmers on their service deliveries, positive responses from farmers’ organizations and management committees of Model Farm Service Centers, and good results of performance evaluation conducted by each district. The trained FAs continuously implemented extension activities to deliver agricultural knowledge and/or production techniques to farmers, using the acquired skills and knowledge, not only by conventional field activities but also by tele-farming advisory services initiated after the project completion<sup>2</sup>. (Also see <Status of Achievement for Overall Goal at the Time of Ex-post Evaluation> below.)

<Status of Achievement for Overall Goal at the Time of Ex-post Evaluation>

The Overall Goal was achieved at the time of ex-post evaluation. By the target year (PFY2019/20), as many as 47,876 farmers were extended with new knowledge and skills on agricultural production through the field activities of the trained FAs after the project completion. The actual result by the target year largely exceeded the target figure of the indicator (i.e., at least 15,000 farmers extended) mainly because DoAE advised all district offices to outreach the extension services to the maximum number of farmers and the district offices made their extension plans accordingly. After the target year, the same trend continued for the same reason: additional 41,644 farmers were extended through the field activities of the trained FAs in PFY2020/21 (Indicator).

<Other Impacts at the time of Ex-post Evaluation>

Using the training curricula and materials developed under the project, Agriculture Service Academy (ASA) (formerly ATI)/DoAE started in-service training for the extension service staff in PFY2018/19. As of PFY2020/21, a total of 55 FAs were newly trained and certified. In addition, a total of 40 AOs were given on-field training by ASA. The newly trained FAs extended the skills and knowledge acquired through the training to farmers, but the number of farmers extended was not available. According to DoAE, most of the extension staff responding farmers’ queries via the above-mentioned tele-farming advisory services were those trained under the project. Computer training provided under the project helped the staff to use information and communication technology (ICT). Meanwhile, negative impacts were not observed.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

### Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results	Source
(Project Purpose) Agricultural knowledge and extension skills of extension service staff in KP are improved.	Indicator 1: A total of 350 extension service staff are trained and certified.  Indicator 2: At least 400 dissemination activities are conducted to deliver agricultural knowledge and/or production	Status of the Achievement (Status of the Continuation): achieved (continued) (Project Completion) -A total of 357 extension service staff (107 AOs/SMSs and 250 FAs) were trained and certified. (Ex-post Evaluation) -In general, the extension service staffs (AOs, SMSs and FAs) trained and certified by the project maintained the skills and knowledge through their dissemination activities, group training to farmers in the field, etc (also see the results of Indicator for Overall Goal below).	Project Completion Report (PCR); questionnaire and interview surveys to DoAE.
		Status of the Achievement (Status of the Continuation): achieved (continued) (Project Completion) -As many as 761 dissemination activities were conducted by the trained FAs through which agricultural knowledge and/or production techniques were delivered to 5,822 farmers in KP. (Ex-post Evaluation)	Ditto.

<sup>1</sup> All FAs who participated in the training prepared 3 Action Plans of extension activities per each for the coming 12-months.

<sup>2</sup> In Oct 2017, DoAE initiated the tele-farming advisory services in KP and in 2020 United State Agency for International Development provided hardware support (Server, UPS) to strengthen the tele-farming program “Pakistan Agriculture Technology Transfer” (2017-2021), whereby farmers could get advice on agriculture technologies through short messages and robocalls. DoAE further strengthened the Tele-Farming Call Center in June 2021.

	techniques to farmers by the trained FAs.	-The trained FAs continuously implemented extension activities to deliver agricultural knowledge and/or production techniques to farmers, using the acquired skills and knowledge, through field activities as well as tele-farming advisory services initiated after the project completion (also see the results of Indicator for Overall Goal below).					
(Overall Goal)	Indicator: At least 15,000 farmers are extended with new knowledge and skills on agricultural production by the FAs trained by the project *.	(Ex-post Evaluation) achieved <No of farmers extended by the FAs trained under the project after the project completion >				Questionnaire and interview surveys to DoAE.	
Appropriate knowledge and skills to improve agricultural productivity are extended to farmers.	*See <Special Perspectives Considered in the Evaluation >.	Division	No. FAs trained by the project	(Ref) No. farmers extended by the trained FAs before the project completion	No. farmers extended* by the trained FAs after the project completion		
				By the target year (PFY2017/18-PFY2019/20)	After the target year (PFY2020/21)		
		Hazara	39	N/A	7,527		6,552
		Malakand	55	N/A	10,615		9,240
		Peshawar	44	N/A	8,492		7,392
		Mardan	44	N/A	8,492		7,392
		Kohat	14	N/A	2,702		2,352
		Bannu	16	N/A	3,088		2,688
		DI Khan	38	N/A	6,948		6,048
		<b>Total</b>	<b>250</b>	<b>5,822**</b>	<b>47,864</b>	<b>41,664</b>	
		*No. farmers extended through field activities. ** 4,022 farmers reached through FWs of the training and 1,800 farmers reached after the training.					

### 3 Efficiency

Although the project period was within the plan (ratio against the plan: 100%), the project cost exceeded the plan (ratio against the plan: 124%). The Outputs of the project were produced as planned. Therefore, the efficiency of the project is fair.

### 4 Sustainability

#### <Policy Aspect>

The Pakistan Vision 2025 mentioned in “Relevance” was still effective. In addition, KP Agriculture Policy (2015-2025) set forth building on local skills and tradition by strengthening and empowering the various stakeholders, including farmers.

#### <Institutional/Organizational Aspect>

Organizational structure for agriculture extension was further strengthened in KP with introduction of tele-farming advisory services, including establishment of the Tele-farming Call Center in 2021, which helped to bring about 400,000 farmers linked to DoAE. DoAE stated that necessary staff was secured because the number of staff at DoAE headquarters and district offices was increased on a regular basis, including those involved in the tele-farming advisory services. As of June 2021, there were 761 extension service staff (111 SMSs/AOs and 650 FAs) in total. Furthermore, KP government was planning to recruit 750 more extension service staff (200 AOs and 550 FAs) in the future based on its 10-year Agriculture Transformation Plan launched in PFY2020/2021.

#### <Technical Aspect>

As shown in <Effectiveness/Impact>, the extension service staff of DoAE trained under the project sustained the necessary skills and knowledge to improve agricultural productivity of farmers. The training curricula and materials developed under the project were utilized for the in-service group training started by ASA Participation of FAs and AOs in the group training conducted by ASA after the project completion is encouraging for the sustainability of training/capacity building in the future. The handbooks and brochures for agriculture technologies developed under the project were utilized by the FAs during their field visits.

#### <Financial Aspect>

According to DoAE, the necessary budget for the extension service activities was secured from the federal, provincial and district governments, including Public Sector Development Program /Annual Development Program of the KP government.

#### <Evaluation Result>

In light of the above, no problem has been observed in terms of the policy, institutional/organizational, technical, and financial aspects of the implementing agency. Therefore, the sustainability of the project effects is high.

### 5 Summary of the Evaluation

The project achieved the Project Purpose of improving agricultural knowledge and extension skills of extension service staff in KP. The effects of the project continued and the Overall Goal of extending appropriate knowledge and skills to improve agricultural productivity to farmers was achieved. As for the sustainability, no problems were observed in terms of the policy, institutional/organizational, technical, and financial aspects. Regarding the efficiency, the project cost exceeded the plan. Considering all of the above points, this project is evaluated to be highly satisfactory.

### III. Recommendations & Lessons Learned

#### Recommendations for Implementing Agency:

1. Since the training was implemented in NARC which is a national agricultural research center, it took less time for latest research results and data to reach the farmers via AOs. Therefore, it is recommended for NARC to set up a collaboration system which helps to continue to cooperate with AOs in order to convey useful research results to farmers in a timely manner and so that NARC can acquire the needs in the field.

#### Lessons Learned for JICA:

1. In the project, the modules and the information which are not suitable with the ground situation in the field have modified repeatedly so that the implementation of the project to meet the demands. As these considerations and trial and errors are beneficial for the training

participants and it is considered to have good effects on the impact of trainings, it is worth emphasizing that modifications and amendment of the training plan is better be considered to meet the actual needs.

2. The reason why the actual result by the target year largely exceeded the target figure of the indicator mainly because DoAE advised all district offices to outreach the extension services to the maximum number of farmers, and then the district offices made their extension plans and implemented accordingly. This result shows the fact that synergy of the recipient's policy and the project will be seen due if the recipient's policy and the implementation policy match at an appropriate timing.

3. Many of AOs who received trainings under the project are giving advices to farmers under the tele-farming advisory service which started in 2017 by DoAE in KP after the completion of the project. Given this example, it can be said that the training participants will be more likely to sustainably utilize the expertise acquired through the project if the project is implemented with a look into the future of the recipient's policies.