

Food and Agriculture Organization of the United Nations



# STRENGTHENING THE CAPACITY OF AGRICULTURAL EXTENSION SERVICES IN CENTRAL ASIA ON SUSTAINABLE INTENSIFICATION OF CROP PRODUCTION

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STRENGTHENING THE CAPACITY OF AGRICULTURAL EXTENSION SERVICES IN CENTRAL ASIA ON SUSTAINABLE INTENSIFICATION OF CROP PRODUCTION

#### **Implementing Partner**

Governments of Azerbaijan, Kyrgyzstan, Tajikistan and Uzbekistan.

#### **Beneficiaries**

Extension specialists of public and private agencies, agricultural specialists, researchers in national institutions and universities, and ultimately farmer organizations and farmers, with a focus on female stakeholders.

#### **Country Programming Framework**

Azerbaijan CPF 2014-2020: Priority Area 3: Capacity development, including agricultural education, research and extension. Country Outcome 1: Technical assistance provided in sustainable agriculture and food security. Output 3.1.1: Technical assistance in improvement of agricultural education and extension services.

*Kyrgyzstan CPF 2015-2017*: Priority Area 1: Sustainable Food Security and Nutrition. Outcome: Improved basis for food security policies, plans and programmes. Output 4: Linking social protection policy and programmes for food security.

*Tajikistan CPF 2015-2017*: Priority Area 3: Sustainable Agricultural Productivity and Competitiveness. Output 3.2: Selected policies, strategies and/or regulations in the areas of plant production and protection reviewed or developed with FAO's assistance and related modern and gender-responsive approaches and techniques identified and capacities of extension workers and communities for its uptake built.

*Uzbekistan CPF 2014-2017*: Priority Area A: Diversification of cropping systems and sustainable production intensification. Outcome 1: Development of sustainable high-value crop production to domestic and export markets supported.



#### BACKGROUND

Central Asia is in transition from a centrally administrated and planned economy to a private-sector driven and market economy. As a result of reforms, privatization and the transformation of farms, numerous private farms have been established, and former farm members have received their land share and established family farms. However, most rural farmers do not have an agricultural background, while extension systems do not exist or are very weak. In most Central Asian countries, non-governmental organizations (NGOs) have been set up to provide extension services that were formerly provided by research institutes. In some countries, ministries of agriculture are attempting to take the lead role in developing extension systems. In Tajikistan, each village organization has recruited an agricultural specialist to provide extension services to farmers and rural populations. NGOs actively involved in the development of agriculture in countries of the region also closely cooperate with FAO and act as implementing partners in most projects. However, the technical knowledge and capacity of the NGO specialists need to be improved if they are to provide better services to farmers to enable the latter to improve crop production and increase yields. The aim of the project was to support public and private extension service providers (SPs) to improve technical capacities and enhance knowledge of modern crop management. The project would also facilitate countries to formulate a strategy for more effective agricultural extension.

### IMPACT

The project has strengthened national extension services, enabling them to provide timely and effective support to farmers and rural communities to mitigate climate change and to adopt and promote improved crop, land and water management and pest control practices. This will lead to a sustainable increase in crop yields and productivity, resulting in improved food security and increased income for smallholder farm families.

### ACHIEVEMENT OF RESULTS

The project built on previous, ongoing and planned FAO projects and activities in the region regarding conservation agriculture (CA), crop diversification, integrated pest management (IPM), strengthening of seed security for small farmers, organic agriculture (OA) and value chains, and the empowerment of women in agriculture. Significant technical support was provided to strengthening the capacity of the national agricultural extension and rural advisory services with regard to the adoption and promotion of sustainable crop production intensification. In each country, five-day training events were held on selected topics for agricultural and extension specialists from public and non-governmental organizations that provided rural advisory services to farmers in the project countries. The project also supported the conduct of a study on the status of agricultural advisory services and the formulation of a draft national strategy on the development of the extension system in each country, apart from Azerbaijan, where the draft strategy was not formulated following the late signature of the Project Document by the Government. In this context, a country project funded by the European Union (EU) aims to support the development of agricultural extension in Azerbaijan.

#### **IMPLEMENTATION OF WORK PLAN**

The project implemented all planned activities, with the exception of the formulation of the national strategy for Azerbaijan, within the approved timeframe and with one budget revision. Envisaged risks included a lack of cooperation between public and private extension SPs, changes in national officials and staff involved in project implementation, delays in or lack of official approval by governments of the participating countries and the failure of all farmers, or of women farmers, to attend training activities. With the exception of delays at official level, these risks did not materialize.

## FOLLOW-UP FOR GOVERNMENT ATTENTION

To ensure their sustainability, the draft national strategies formulated under the project should be further reviewed and adopted by the governments of the project countries.



#### **S**USTAINABILITY

#### 1. Capacity development

The draft national strategies formulated under the project will strengthen the extension system. Their adoption and implementation by the governments of the project countries will facilitate the further development and improvement of sustainable agricultural production by strengthening the technical capacity of extension experts and farmers. To ensure sustainability, the strategies should be further reviewed and adopted by the governments of the project countries. With regard to partnerships that are likely to ensure future sustainability, cooperation with the Ministry of Agriculture of Israel was established, as well as with the Central Asia and Caucasus Forum on Agricultural Extension System (CAC-FRAS).

#### 2. Gender equality

The gender issue was taken into account by the Project Document and national gender experts were integrated into the project team. All activities, including decision-making and access to resources, targeted equal opportunities irrespective of gender in order to meet the needs and priorities of women and men beneficiaries/stakeholders, including farmers.

#### 3. Environmental sustainability

The project aimed to improve the capacity of the agricultural extension specialists with regard to the sustainable intensification of crop production based on ecosystem principles, the reduced use of chemicals and other inputs, and increased crop yield, or by producing more with less. The project outputs contribute significantly to environmental sustainability and the production of healthy food.

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# 4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

Human rights issues were not addressed specifically by the project.

#### 5. Technological sustainability

The project contributed significantly to the improvement of national capacities with regard to sustainable crop production and a strengthened agricultural extension system. The technical potential of the SPs in Kyrgyzstan and Tajikistan and of other extension specialists from all project countries was enhanced and these are now able to train other specialists and farmers. In addition, the draft national strategies define the roadmap for further development of the agricultural extension and rural advisory system.

#### 6. Economic sustainability

The project demonstrated the principles of CA, OA, IPM, seed technologies and the sustainable production of vegetables in greenhouses; this will facilitate the further development of crop production in a more sustainable way. The project outputs and lessons learned will be used for the implementation of the project funded by the EU and focused on the development of the extension system in Azerbaijan.





#### DOCUMENTS AND OUTREACH PRODUCTS

- Project booklet. FAOSEC. Ankara. 2018. 4 pp.
- Conservation Agriculture: Training Guide for Extension Agents and Farmers in Eastern Europe and Central Asia in Uzbek. S. Corsi. Tashkent. August 2018. 126 pp.
- A Preliminary Guide on the Practice of Conservation Agriculture in Azerbaijan, Kazakhstan and Uzbekistan in Uzbek. A. Nurbekov, A. Kassam, D. Sidik, Z. Ziyodullayev, I. Jumshudov, H. Muminjanov, D. Feindel and J. Turok. Tashkent. September 2018. 76 pp.
- Status Report on Agricultural Extension and Advisory Services in Azerbaijan. Fariz Alakbarov. Baku.
   December 2019. 20 pp.
- Status Report on Agricultural Extension and Advisory Services in Kyrgyzstan. AgroLead. Bishkek. December 2019
- Status Report on Agricultural Extension and Advisory Services in Tajikistan. Neksigol Mushovir. Khujand. December 2019. 15 pp.
- Status Report on Agricultural Extension and Advisory Services in Uzbekistan. Alisher Saydaliev. Tashkent. December 2019. 11 pp.
- Draft National Strategy for the Development of Agricultural Extension and Advisory Services in Kyrgyzstan. AgroLead. Bishkek. December 2019. 10 pp.
- Draft National Strategy for the Development of Agricultural Extension and Advisory Services in Tajikistan. Neksigol Mushovir. Khujand. December 2019. 10 pp.
- Draft National Strategy for the Development of Agricultural Extension and Advisory Services in Uzbekistan. Alisher Saydaliev. Tashkent.
   December 2019. 8 pp.
- Manual for agricultural extension specialists on sustainable crop production intensification (draft).
   E. Boa. Rome. December 2019. 20 pp.

# ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact		sustainable increase in crop yield and productivity leading to improved food security and increased smallholder farm families						
	farmers an	ational extension systems that will be able to provide timely   rural communities with regard to the adoption and promot nt techniques and related skills						
	Indicator	<ol> <li>Number of extension agents trained in extension communications and technical skills.</li> <li>Number of demonstrations conducted.</li> <li>Number of farmers adopting new practices.</li> <li>Number of training modules and training materials developed.</li> </ol>						
	Baseline	<ul> <li>No agricultural extension specialists specially trained in extension communications and technical skills.</li> <li>No special demonstration plots established for training agricultural extension specialists.</li> <li>Only 10-12 farmers in each project country practising such sustainable crop production techniques as CA, OA and IPM.</li> <li>No specific farmer-oriented training modules and materials developed.</li> </ul>						
	End Target	60 per country (15 women per country). Minimum 12 per country. 200 per country (at least 30% or 60 women). 12 per country.						
		production for agricultural extension and rural advisory experts were sent to the relevan public and private organizations. The information was also disseminated through social networks, e.g. Facebook. In each country 100-120 applications were collected and, base background and work experience, 20-25 were selected as seniors and 35-40 as juniors. I 264 agricultural extension specialists were trained in the framework of the project and 3 of the trainees were women:						
		Country Total M	ale Female					
		Azerbaijan 69 2	42					
			4 23					
0			4 17					
Outcome			0 17					
		TOTAL2641The trained experts will share their knowledge and expeand farmers with the aim of adopting sustainable appro						
	2. In total, 31 demonstration plots were established and managed by the project countries:							
	and	CountryCAOAIPMKyrgyzstan333	Seed technology Greenhouse 3 0					
	follow-up	Kyrgyzstan33Tajikistan32	3 0 $3$ 1					
	action to	Tajikistan         5         2         5           Uzbekistan         1         2         2	$\frac{3}{2}$ 0					
	be taken	TOTAL 7 7 8						
		Owing to delays in signing the Project Document by the possible to establish the demonstration plots in this pro	Government of Azerbaijan, it was not					

Expected Impact	To foster a sustainable increase in crop yield and productivity leading to improved food security and increased income for smallholder farm families										
	farmers an	ed national extension systems that will be able to provide timely and efficient support to women and men and rural communities with regard to the adoption and promotion of modern crop, land and water ement techniques and related skills									
Outcome	3. The project disseminated information widely and demonstrated advantages of sustainable crop production intensification by training agricultural extension specialists, establishing demonstration plots in the key technologies - CA, OA, IPM, improved seed technologies a sustainable greenhouse production of vegetables - and organizing Field Days with the participation of farmers. It promoted the sustainable agriculture production approach ar farmers. Training modules and materials and farmer-oriented guidelines and manuals or promotion of sustainable crop production were developed, published and disseminated. end of the project, 439 farmers practised modern approaches in the project countries, a follows:						ablishing nologies and th the proach among anuals on the minated. At t	5			
			Country		CA	OA	. IP	M See	ls Gree	nhouse	
			Kyrgyzstan		47/7	7/3	3,	/0 4/0	) 4	1/0	
			Tajikistan		21/10	11/	1 22,	/13 13/	5 46	6/27	
			Uzbekistan		81/5	15/		2/8 30/		3/2	
			TOTAL/FEMALE		149/22	33/				3/29	
	Comments	The trained extension specialists who work for public and private rural advisory services will follow up with farmers and communities to further scale up the technologies with the aim of									
	and		•					•	nologies wit	th the aim of	
	follow-up action to	saving	saving natural resources and inputs for increased crop production.								
	be taken	4. There were five training modules, and materials developed on selected technical areas.									
	be taken	<ol> <li>There were five training modules, and materials developed on selected technical areas – CA, OA, IPM, Seeds, Greenhouse Cultivation and Basics of Extension Services (BES). In addition, the</li> </ol>									
			Kyrgyzstan, Ta								
			als and guideli	-			•				
			Country	CA	OA	IPM	Seed	Greenhous	e BES		
			Kyrgyzstan	4	3	4	3	2	0		
			Tajikistan	4	6	7	3	4	4	_	
		I –	Uzbekistan	2	0	0	0	0	0	4	
			TOTAL	10	9	11	6	6	4		
			anuals or guide				-	-	-		
		-	ct Agreement. ed during the ir				-				
			aimed at holistic reform of the country's extension system. The capacity-building materials developed in the framework of the project were translated into Russian and shared with								
		training participants and interested parties and could be further used for training purposes.									

			nunications capacities of agricultural extension speci g yield and production are validated	alists on				
	Indicators		Target	Achieved				
Output 1	country. – Finalized	n workshop in each participating project work plan. lent of national and international nts.	<ul> <li>4 inception workshops conducted in each participating country.</li> <li>1 project work plan.</li> <li>2 International consultants, 1 TCDC expert and 2 national consultants per each country recruited (in total 8 national consultants).</li> </ul>					
Baseline	0		·					
Comments	TCDC expert	TCDC expert was replaced by an international consultant.						
Activity 1.1	<u>Achieved</u>	Following delays in signing the Project Document by the governments of the project countries, inception workshops were held in Uzbekistan on 11 May 2018, in Kyrgyzstan on 12 July 2018, in Azerbaijan on 12 April 2019 and in Tajikistan on 25 April 2019. Awareness was raised and project objectives were presented and discussed with the wide group of stakeholders in the workshops. During the workshops, the status of national agricultural extension and rural advisory services was discussed and a strengths, weaknesses, opportunities, and threats analysis was carried out. The FAO concept of sustainable crop production and the objectives of the project were presented in the launching workshop of CAC-FRAS held on 27-31 August 2018 in Issyk-Kul, Kyrgyzstan.						
		nical areas and modalities for impl	ementation					
Activity 1.2	Achieved	Achieved       Yes         Achieved       Xes         At the inception workshops, the FAO concept of sustainable intensification of crop production and potential technical areas was presented and discussed. With the active involvement of male and female stakeholders, it was agreed to train agricultural extension specialists in CA, OA, IPM and seed technologies. Subsequently, based on the beneficiaries' request, the sustainable production of vegetables in greenhouses was added to the technical areas. It was agreed to implement the project in cooperation with local SPs and the support of national experts. Through a tendering process, the public organizations "Agrolead" in Kyrgyzstan and "Neksigol" in Tajikistan were selected as SPs and Letters of Agreement were issued. It was agreed to implement project activities in Azerbaijan and Uzbekistan through the recruitment of national consultants on agronomy and on training and extension.						
	Based on ide		nt plan, develop technical specifications and tender	documents				
		deliver the tools Yes During the inception workshops i	n Kyrgyzstan, Tajikistan and Uzbekistan, it was agree					
Activity 1.3	Comments	beneficiaries in CA. Accordingly, t tender results, three no-till drills Tajikistan and Uzbekistan) was de	echnical specifications were developed and, based of were procured and one no-till drill per country (Kyrg elivered. The Government of Azerbaijan signed the P 9, leaving insufficient time to procure the no-till drill	yzstan, roject				
	Finalize the p	project work plan						
	Achieved	Yes						
Activity 1.4	Comments		sed at the national workshops and activities were ac ing the Project Document and the time left until the	-				
		cruit the national and internationa	l consultants					
Activity 1.5	Achieved Comments	countries, six experts were select Extension, OA, CA, Greenhouse Crop Manag the support of the Ministry of Ag FAO, training in IPM was provide The following national consultant Expert, Gender Expert; ii) Kyrgyzs	ning the Project Document by the governments of the red and recruited as international consultants in: Par gement, Seed Technology and Horticulture (Greenho riculture, Israel, and the Permanent Representative d by an Israeli expert in the respective beneficiary co ts were recruited: Azerbaijan: i) Training Expert, Exte stan: Training and Extension Expert, Gender Expert; sion Expert, Gender Expert; and iv) Uzbekistan: Agrou sport, Gender Expert.	ticipatory uses). With of Israel to untries. nsion				

Output 2       Indicators       Target         -       Project field demonstration sites and agreement on protocols.       -       2 field demonstration sites and agreement on protocols.         -       Regional ToT workshop.       -       1 regional ToT workshop.       -         -       Training modules and materials.       -       5 training modules and materials developed         -       Field days at demonstration sites.       -       4 field days at demonstration sites.         -       Manuals on sustainable crop production intensification.       -       2 manuals on sustainable crop production intensification published.         Baseline       0       -       2 manuals on sustainable crop production intensification published.         Activity 2.1       Identify and establish project field demonstration sites and agree protocols       -         Activity 2.1       The pilot sites in each project countries were selected and demonstration plots were selected and demon	Achieved							
Output 2       agreement on protocols.       on protocols.         -       Regional ToT workshop.       -       1 regional ToT workshop.         -       Training modules and materials.       -       5 training modules and materials developed         -       Field days at demonstration sites.       -       4 field days at demonstration sites.         -       Manuals on sustainable crop production intensification.       -       2 manuals on sustainable crop production intensification published.         Baseline       0       -       2 manuals on sustainable crop production intensification published.         Comments       Identify and establish project field demonstration sites and agree protocols         Activity 2.1       The pilot sites in each project countries were selected and demonstration plots were	. Yes							
Baseline       0         Comments       Identify and establish project field demonstration sites and agree protocols         Activity 2.1       Identify and establish project field demonstration sites and agree protocols         Comments       The pilot sites in each project countries were selected and demonstration plots were								
Comments         Identify and establish project field demonstration sites and agree protocols           Activity 2.1         Achieved         Yes           Comments         The pilot sites in each project countries were selected and demonstration plots were								
Activity 2.1 Achieved Yes Comments The pilot sites in each project countries were selected and demonstration plots we								
	re established							
for each technology to be adopted and promoted.								
Implement Farmer Demonstrations								
Achieved Yes								
In total, 31 demonstration plots were established and managed:	-							
Activity 2.2 Country CA OA IPM Seeds Greenhouse Kyrgyzstan 3 3 3 3 0	-							
Comments         Kyrgyzstan         3         3         3         3         0           Tajikistan         3         2         3         3         1	-							
Uzbekistan         1         2         2         2         0	-							
TOTAL         7         7         8         8         1	-							
Conduct the regional training of trainers (TOT) workshop on adult learning and participatory appro	oaches							
Achieved Yes								
Activity 2.3 Comments national experts on training and extension, and on gender and social inclusion. The participated in the discussions and group exercises, especially in developing fact sh releases, discussing the areas to be covered by the study on the status of agricultur and advisory service (AEAS) and the formulation of the draft national strategies on development of the extension system. Based on the outputs of the group work, the country reports on the status of the AEAS and draft strategy were formulated, press	and advisory service (AEAS) and the formulation of the draft national strategies on the development of the extension system. Based on the outputs of the group work, the outlines for country reports on the status of the AEAS and draft strategy were formulated, presented and discussed at the workshop. An FAO Technical Officer and the Team Leader elaborated these two							
Develop and implement the training modules and training materials								
Activity 2.4 Achieved Yes								
Five training modules and materials were developed in selected technical areas – C	Five training modules and materials were developed in selected technical areas – CA, OA, IPM,							
Seeds and Greenhouse Cultivation								
Organize the Field Days at demonstration sites           Achieved         Yes								
	With the support of the project 13 Field Days were conducted on the thematic areas in the							
Activity 2.5 Country CA OA IPM Seeds Greenhou	ise							
CommentsKyrgyzstan12010								
Tajikistan         1         1         1         0								
Uzbekistan         1         1         1         1         1           TOTAL         3         4         2         3         1								
Develop and publish manuals on sustainable crop production intensification								
Achieved Yes								
The SPs in Kyrgyzstan, Tajikistan and national experts in Uzbekistan developed and	published in							
total 45 farmer-oriented manuals and guidelines:								
Activity 2.6 Country CA OA IPM Seed Greenhouse BES Kyrgyzstan 4 3 3 3 2 0	—							
Comments         Kyrgyzstan         4         3         3         3         2         0           Tajikistan         4         6         7         3         4         4	—							
	—							
Uzbekistan 2 0 0 0 0 0 0								

	National strategies on development of effective agricultural extension drafted						
	Indicators		Target Achieve				
Output 3	<ul> <li>National</li> <li>National and advis</li> <li>National strengthe Service (I</li> </ul>	studies on agricultural extension. stakeholder workshop to discuss findings. strategy to strengthen pluralistic extension sory services. workshop to discuss and validate strategy to en agricultural extension and Rural Advisory RAS). Hyshop on project outcomes and the way	<ul> <li>4 national studies on agricultural extension.</li> <li>4 national stakeholder workshops.</li> <li>4 national strategies.</li> <li>4 national workshops.</li> <li>1 final workshop.</li> </ul>	Yes			
Baseline	0		·				
Comments							
Activity 3.1	Conduct a national study on agricultural extension         Achieved       Yes         Comments       Following the regional training held in Tashkent on 2-5 April 2019, the guidelines provided by the FAO technical officers and the international consultant/Team Leader, detailed studies on the history and current state of the national agricultural extension and rural advisory services were carried out in all project countries.						
	Organize the	national stakeholder workshop to discuss the	findings				
	Achieved	Yes	3				
Activity 3.2	Comments The outputs of the studies on agricultural extension were presented and discussed in the national workshops held in each project country and in the technical meeting with the participation of SP representatives and national consultants held in Tashkent on 16 December 2019. The reports on the study developed by the national teams were reviewed and finalized by the international consultant/Team Leader.						
	Eormulate th		duralistic extension and advisory services				
Activity 3.3	Formulate the draft of national strategy for strengthening pluralistic extension and advisory so Achieved Yes         ctivity 3.3       Based on the guidelines developed under the project, the outputs of the study of the stakeholders, draft national strategies for the strengthening of the agricu and rural advisory services were developed by the national teams. Each draft so discussed with the Team Leader and key stakeholders during the meetings. The also discussed the draft strategy with the Team Leader during the technical me Tashkent on 16 December 2019.						
	Organize the	national workshop to discuss and validate the	strategy to strengthen agricultural exten	sion and			
	RAS						
	Achieved	Yes					
Activity 3.4	Comments	The draft strategies were presented and discussed in the national workshops and in the technical meeting with the participation of the SP representatives and national consultants held in Tashkent on 16 December 2019. FAO officers and the Team Leader reviewed and finalized the draft documents. The FAO Offices in each project country will submit the draft document to the governments and follow up on approval and implementation.					
	Support awa	reness-raising activities on sustainable crop pr	oduction intensification				
Activity 3.5	Achieved Comments	Yes The leaflet of the project in A4 format was prepared in Russian and disseminated among the beneficiaries and stakeholders. It made it possible to raise awareness of the project objectives and the promotion of sustainable crop production intensification. Candidates interested in the training were invited through the national mass media and social networks, e.g. Facebook. Based on their background and experience, the selected trainees were divided into senior and junior groups. On the first day of each technical training event, all trainees, senior and junior, attended; during the remaining four days, only the senior extension specialists participated. Subsequently, the senior experts conducted the training for the junior agricultural extension specialists.					
		final workshop on project outcomes and way	forward				
Activity 3.6	Achieved Comments	Yes Owing to a lack of funds, final workshops were not organized in each project country. In their place, a technical meeting with the participation of the SP representatives and national consultants was organized in Tashkent in November 2019 to discuss project outcomes and further steps for the adoption and implementation of the national strategies for the strengthening of the capacity of the agricultural extension and rural advisory services.					

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