Periodical Report 18 Months of project implementation

New and Innovative

Courses for Precision

Agriculture



TURKMEN AGRICULTURAL INSTITUTE

Mr. Babageldi Kurbanov - Head of the Department of Agricultural land reclamation

Joint Project: Capacity Building in the Field of Higher Education ERASMUS+ 2018 Co-funded by the Erasmus+ Programme of the European Union



PROJECT ACTIVITIES FROM NOVEMBER 2019 TILL MAY 2020



Nº	Question	References	Answer
1.	Turkmen agricultural institute has to develop its own internal plan of activities of the project.	1.1-5.2	The project work plan has been prepared and approved on February 11, 2019.
2.	 a) Develop questionnaires for analysis of existing curricula/disciplines (questionnaire for teachers, students, graduates, young professionals, alumni; + a questionnaire for interested in project non- academic partners: potential employers, local associations, representatives of industrial enterprises, other parties that can somehow relate to the topic of the project; b) Develop a schedule to conduct surveys; c) Conduct surveys of various target groups; d) Analyze the answered questionnaires. 	1.1	 a) Questionnaires (April 2019) developed b) A questionnaire has been drawn up (May 6-8, 2019); c) Questionnaires (questionnaires) were conducted for teachers and students (conducted May 23-29, 2019) d) A questionnaire was analyzed and a report was written (June 1-4, 2019).
3.	 a) Institute examines and adopts the received materials from European HEI and develops on this basis their own courses, curricula, modules; b) Institute should develop digital versions-drafts (.doc files) of their OWN manuals/text books/methodological recommendations for students and teachers for each of the curricula/course/module. 	2.1	a) Materials from the European IOM have been studied and on the basis of which the curricula of TAI courses have been developed and are being prepared (September 15, 2020)

PROJECT ACTIVITIES FROM NOVEMBER 2019 TILL MAY 2020



N⁰	Question	References	Answer
4.	 a) Accreditation of developed subjects/courses/programmes in accordance with valid Institute rules; b) Accreditation at the national level. 	2.1	(a) Curricula of the developed courses were reviewed and submitted to the meetings of the teaching-methodical group of the relevant departments and faculties;b) Submitted to the Ministry of Education of Turkmenistan for national accreditation (September 2020)
5.	 a) Prepare a set of documentation for PAL and VCR in institute; b) Purchase the equipment incl. software; install the equipment. 	2.2	a) A training room has been identified for PAL and VCR;b) P1, P5 and P10 are responsible for concluding contracts, purchasing and importing equipment.
	 a) Develop criteria for the selection of teachers to participate in trainings planned at EU universities; b) Plan and carry out actions to prepare the selected candidates to participate in trainings including language training 	2.3	 (a) The criteria for selecting teachers to participate in planned courses at EU universities have been developed (March 11-14, 2019); b) Candidates selected to participate in the course underwent language training (B. Kurbanov - June-August 2019)
7.	 a) Develop a plan for dissemination and sustainability of the project in institute, including activities on involving new participants in the project; b) Operation starting of the first version of the WEB platform. 	4.1 4.2	Featured parts of the project's deployment and sustainability plan: - a specialist has been appointed who will be responsible for posting information about the project on the Internet - M. Atayev; - a publishing plan has been drawn up; - drew up a list of local measures for the sustainable development and dissemination of project results; - it is planned to publish information about the participation of the institute in the project on its website

PROJECT ACTIVITIES FROM NOVEMBER 2019 TILL MAY 2020



Nº	Question	References	Answer
8.	Organize dissemination of leaflets about the project amongst students and teachers.	4.1 4.2	Information about the NICOPA project was posted on the faculty notice boards
9.	a) Develop and approve a package of organizational documents for the creation of PASO in Institute;b) Institute should purchase and install equipment.	4.3	The charter of components for the PASO organizational documents has been developed and submitted for approval.
10.	a) Conduct training for employees of PASO and start of functioning PASO;b) Start pilot operation of PASO.	4.4	a) Responsible for the organization and organization of P2 and P4 training
11.	Management of the project including project management online, daily project administration and coordination.	5.1	Action and project management documents have been prepared, including protocols from the local coordinator.
12.	Coordination meetings.	5.2	An annual meeting plan has been developed (taking into account international, regional and local meetings).
	Monitoring and controlling of project activities: development of questionnaires for partner universities regarding project implementation.	5.1	Project Monitoring (October 1, 2020)
14.	Ensure using SKYPE to held meetings of the project consortium team.	5.1	The SKYPE meeting of local coordinators is held quarterly

MODERNIZED COURSES DEVELOPMENT PROCESS



	Table 1.2.1. UPDATED COURSES			
Course №	Title of the existing course to update (Bachelor, Master)	ECTS	Name of the person(s) responsible for update + email	Estimate the percentage of the course development
Course 1	Geodesy	7,5	 Babageldi Kurbanov (baba_kur_83@mail.ru) Saparmurat Babajanov (is.geodesy@gmail.com) 	100
Course 2	Agrometeorology	3,0	 Babageldi Kurbanov (baba kur_83@mail.ru) Sayara Baltayeva (narmemedowa09@gmail.com) 	100
Course 3	Climatology	3,0	 Babageldi Kurbanov (baba kur 83@mail.ru) Sayara Baltayeva (narmemedowa09@gmail.com) 	100
Course 4	Hydrology and hydrometry	5,0	 Babageldi Kurbanov (baba_kur_83@mail.ru) Ayjemal Artykova (ayjemalartykowa545@gmail.com) 	100

MODERNIZED COURSES DEVELOPMENT PROCESS



Table 1.2.1. UPDATED COURSES				
Course №	Title of the existing course to update (Bachelor, Master)	ECTS	Name of the person(s) responsible for update + email	Estimate the percentage of the course development
Course 5	Soil science	7,0	Yazguly Atayev (Yazgulyatayew@gmail.com)	100
Course 6	Mechanization of technological work in animal husbandry	6,0	 Dovlet Durdyev (meh.durdyew@mail.ru) Bashim Matniyazov (bashimmatniaz@gmail.com) 	100
Course 7	Operation of the tractor fleet	7,5	1. Dovlet Durdyev (<u>meh.durdyew@mail.ru</u>) 2. Nurgeldi Nurgeldiyew (nurgeldiyev <u>@mail.ru</u>)	100
Course 8	Fruit growing and viticulture	4,5	Aynabat Atayeva (<u>aynabat-atayeva@mail.ru</u>)	100

MODERNIZED COURSES DEVELOPMENT PROCESS



	Table 1.2.1. UPDATED COURSES				
Course №	Title of the existing course to update (Bachelor, Master)	ECTS	Name of the person(s) responsible for update + email	Estimate the percentage of the course development	
Course 9	Agricultural economics	2,5	 Merdan Bayramov Musa Hanov (<u>musahanow1987@gmail.</u>com) Gulalek Yazmedova (<u>yazmedowa1980@gmail.com</u>) 	90	
Course 10	Organization of agricultural production	, í	 Merdan Bayramov Gulalek Yazmedova (yazmedowa1980@gmail.com) 	90	

 \sum (Total number of updated courses) = 10 \sum (Total number of ECTS) = 51

NEW COURSES DEVELOPMENT PROCESS



		1.2.2. NEW	COURSES	
Course №	Title of the new course (Bachelor, Master)	ECTS	Name of the person(s) responsible for developing + email	Estimate the percentage of the course development
Course 1	Geoinformation systems	4	 Batyr Nuryev (batyr-info@mail.ru) Shatlyk Pygamov (pygamowshatlyk@gmail.com) Babageldi Kurbanov (baba_kur_83@mail.ru) Dovlet Durdyev (meh.durdyew@mail.ru) 	100
Course 2	Photogrammetry and remote sensing	4	 Babageldi Kurbanov (baba_kur_83@mail.ru) Shatlyk Pygamov (pygamowshatlyk@gmail.com) 	100

NEW COURSES DEVELOPMENT PROCESS



	1.2.2. NEW COURSES				
Course №	Title of the new course (Bachelor, Master)	ECTS	Name of the person(s) responsible for developing + email	Estimate the percentage of the course development	
Course 3	Precision Agriculture	2,5	 Dovlet Durdyev (meh.durdyew@mail.ru) Batyr Nuryev 	100	
Course 4	Innovation technology in agronomy	2,5	 Akmurat Gurbanov Dovlet Durdyev (<u>meh.durdyew@mail.ru</u>) 	90	

 \sum (Total number of new courses) = 4 \sum (Total number of ECTS) = 13

TEACHING MATERIALS



	1.3. TEACHING MATERIALS					
Nº	Title of the materials	Type (manuals/text books/methodological recommendations)	Short description	Estimated date of the development of the digital versions-drafts (.doc files)		
1.	Geoinformation systems	text book		January, 2021		
2.	Geoinformation systems	manuals book		January, 2021		
3.	Precision Agriculture	text book		January, 2021		
4.	Agrometeorology	text book		January, 2021		
5.	Climatology	text book		January, 2021		
6.	Geodesy	text book		January, 2021		



	QUALITY ASSURANCE – Courses				
Course №	Course title	Peer reviewers (Name, position, organization)			
		1. Ibadullayev A. – Manager, Land administration of the Dashoguz			
		province;			
1.	Geoinformation systems	2. Babajanov M. – Head of the water use Department, production			
1.		assosiation "Dashoguz water industry";			
		3. Rahmanov A. (c.t.s.) – Senior lecturer of the Department of			
		Computer Technology, Turkmen Agricultural Institute			
		1. Ibadullayev A. – Manager, Land administration of the Dashoguz			
2.	Photogrammetry and remote sensing	province;			
4.		2. Annayev A. (c.ph-m.s.) – Head of the Department of Operation			
		of Agricultural Machinery, Turkmen Agricultural Institute			
		1. Kakabayev O. (c.t.s.) – training and technical support manager,			
3.	Precision Agriculture	IPC Agri joint venture;			
5.		2. Orazbayeva M. (c.agr.s.) – Lecturer of the Department Crop			
		production, Turkmen Agricultural Institute			
4.	Innovation technology in agronomy	Prepared			



	QUALITY ASSURANCE – Courses				
Course №	Course title	Peer reviewers (Name, position, organization)			
5.	Geodesy	 Ibadullayev A. – Manager, Land administration of the Dashoguz province; Orazbayeva M. (c.agr.s.) – Lecturer of the Department Crop production, Turkmen Agricultural Institute 			
6.	Agrometeorology	 Babajanov M. – Head of the water use Department, production assosiation "Dashoguz water industry"; Annayev A. (c.ph-m.s.) – Head of the Department of Operation of Agricultural Machinery, Turkmen Agricultural Institute 			
7.	Climatology	 Babajanov M. – Head of the water use Department, production assosiation "Dashoguz water industry"; Annayev A. (c.ph-m.s.) – Head of the Department of Operation of Agricultural Machinery, Turkmen Agricultural Institute 			



	QUALITY ASSURANCE – Courses			
Course №	Course title	Peer reviewers (Name, position, organization)		
8.	Hydrology and hydrometry	 Babajanov M. – Head of the water use Department, production assosiation "Dashoguz water industry"; Orazbayeva M. (c.agr.s.) – Lecturer of the Department Crop production, Turkmen Agricultural Institute 		
9.	Soil science	 Ibadullayev A. – Manager, Land administration of the Dashoguz province; Gurjiyev G. – Head of the Department Agrochemical and soil science, Turkmen Agricultural Institute 		
10.	Mechanization of technological work in animal husbandry	 Baymyradov T. – Production and technical Department, Agricultural production association in Dashoguz province; Annayev A. (c.ph-m.s.) – Head of the Department of Operation of Agricultural Machinery, Turkmen Agricultural Institute 		



QUALITY ASSURANCE – Courses			
Course №	Course title	Peer reviewers (Name, position, organization)	
11.	Operation of the tractor fleet	 Baymyradov T. – Production and technical Department, Agricultural production association in Dashoguz province; Meredov A. – Lecturer of the Department of Operation of Agricultural Machinery, Turkmen Agricultural Institute 	
12.	Fruit growing and viticulture	 Amantaganov H. – Director, research and research production facility in Turkmen Agricultural Institute; Orazbayeva M. (c.agr.s.) – Lecturer of the Department Crop production, Turkmen Agricultural Institute 	
13.	Agricultural economics	Prepared	
14.	Organization of agricultural production	Prepared	



Table 2.1. DISSEMINATION EVENTS-1

N⁰	Question	Answer
	How many dissemination events were conducted?	 At a scientific-production conference held at the Turkmen Agricultural Institute, teacher D.Durdyev "Precision farming is the future of agriculture" (<i>March 27, 2019</i>); A meeting with students (351) and teachers (54) was held in the conference hall of the Turkmen Agricultural Institute. During the meeting, students and teachers were introduced to the main goals and objectives of the NICOPA project (B. Kurbanov), as well as an introductory presentation on Precision Agriculture (D. Durdyev) (<i>April 8, 2019</i>); Questionnaire survey among teachers and students of Turkmen Agricultural Institute (<i>May 23-29, 2019</i>); The members of the project working group (students and teachers) participated in the scientific-practical conferences held at the institute and spoke about the work done on the NICOPA project and the current importance of Precision Agriculture (<i>June 1-4, 2019</i>);



Table 2.1. DISSEMINATION EVENTS-1 (THAT ARE NOT MENTIONED IN REPORT 12M/ FROM NOVEMBER 2019 TILL MAY 2020)				
N⁰	Question Answer			
	How many dissemination events were conducted?	 5. Members of the Working Group on GEF / UNDP / MA&EP of Turkmenistan "Revenue Alternative to Agricultural Profitability through Innovative Technologies and Sustainable" Practices of the Project "Supporting climate resilient livelihoods in agricultural communities in draught-prone areas of Turkmenistan (SCRL) (#00097376)". Teachers delivered speeches by A. Atayeva (Growing Fruit Trees Using Innovative Technologies) and D. Durdyev (Precision Agricultural Advantage) (<i>July 18</i>, 2019); 6. At the scientific-production conference held at the Turkmen Agricultural Institute, student D.Makhmudov (under the guidance of teacher D.Durdyev) "Application of satellite data in agriculture" and student H.Geldimuradov (under the guidance of teacher B.Kurbanov) on "Water management 		
		systems of GIS programs application" (March 30, 2020);		



Table 2.1. DISSEMINATION EVENTS-1

N⁰	Question	Answer
		7. Scientific and practical conference on the occasion of the 25th anniversary of the Permanent Neutrality of Turkmenistan was held at the Turkmen Agricultural Institute. The celebration, organized at the main entrance of this university, was attended by 2 students led by teacher D. Durdyev (<i>May 13, 2020</i>);
1.		8. The members of the working group took part in the GEF / UNDP / MA&EP of Turkmenistan workshop on "Implementing the Integrated Water Resources Management Course" in the project "Supporting climate resilient livelihoods in agricultural communities in draught-prone areas of Turkmenistan (SCRL) (#00097376)". Teacher B.Kurbanov delivered a speech (Problems of Incorporating the Resource Management Program into the Curriculum) (<i>May 27, 2020</i>);



Table 2.1. DISSEMINATION EVENTS-1

N⁰	Question	Answer	
	How many dissemination events were conducted?	 9. At the scientific-practical conference held at the Turkmen Agricultural Institute, teacher D.Durdyev "Technology of fertilizer delivery in a differentiated manner", student D.Mahmudov (under the guidance of teacher D.Durdyev) "Features of electronic harvesting cards" and student A.Abdyrahmanova (under the guidance of teacher B.Kurbanov) delivered a speech entitled "Precision farming is the future of the agricultural sector" (<i>June 8, 2020</i>); 10. The project competition among the students of Turkmenistan was attended by 2 students led by NICOPA project teacher D.Durdyev (<i>June 9, 2020, Ashgabat</i>). 	
2.	How much and which new dissemination materials were produced (leaflets, brochures, flyers etc)?	 Send us prepared/published E-layouts or drafts of brochures and leaflets; Inform us about the dates of approximate printing, publishing and distribution of brochures and leaflets. 	



Table 2.1. DISSEMINATION EVENTS-1

N₂	Question	Answer
<u>№</u>	Question Report on the dissemination of the information about the project in mass media	 → Send us links or scans/files of publications about the project in mass media: magazines, newspapers, TV, the Internet, etc., with the date of their publications. 1. The newspaper "Neutral Turkmenistan" published an article by Ismail Ibragimov "Based on innovative technologies" (page 3), 2019.07.23; 2. Teacher D. Durdyev's article "World Experience" was published in the newspaper "Bereketli Toprak" (page 2), 2019.10.28; 3. Teacher K. Kurbanov, D. Durdyev's article "Precision farming technologies" was published in the "Täze oba" (New Village) magazine (pages 6-8), October, 2019; 4. Teacher K. Kurbanov, D. Durdiyev's article "Precision Livestock Technologies" was published in the "Täze oba" (New Village)
		 magazine (pages 24-26), April, 2020. → If they are not published yet, inform us when you are planning to publish them



Table 2.1. DISSEMINATION EVENTS-1

N⁰	Question	Answer
4.	Planned dissemination activities	Please, send us the plan of future dissemination activities until November 2020



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SIZI TÜRKMENISTANYŇ OBA HOJALYK V GURSAWY GORAMAK MINISTRLI	 Rejepow O., Türkmen oba hojalyk institu mugallym-öwrenijisi. 16. Hormatty Prezidentimiziň Suw diplom sebitdäki ekologiýa meselelerini çözme Agajanow E., Türkmen oba hojalyk institu 	SIZI TÜRKMENISTANYŇ OBA HOJALYK ' GURŞAWY GORAMAK MINISTRL	 27. Ýarym taýýar maldarçylyk önümleriniň taýýarlanyş aýratynlyklary. Kurýazowa A., Türkmen oba hojalyk institutynyň mugallymy. 28. Kiej göwrümli daýhan hojalyklarynda haşal otlara garşy göreşmegiň aýratynlyklary.
TÜRKMENISTANYŇ BILIM MINISTR TÜRKMEN OBA HOJALYK INSTITI TARAPYNDAN GEÇIRILÝÄN	Aggjanow E., Turkmen oba nojalyk institu mugallym-öwrenijisi. 17. Takyk ekerançylyk oba hojalygynyň gel Durdyýew D., Türkmen oba hojalyk institu 18. Oba hojalygynyň suw üpjünciligini gow	TÜRKMENISTANYŇ BILIM MINISTI TÜRKMEN OBA HOJALYK INSTITI TARAPYNDAN GEÇIRILÝÄN	Eltezarow T., Türkmen oba hojalyk institutynyň 3-nji ýyl talyby. 29. Oba hojalygynda emeli hemralardan alynýan maglumatlaryň ulanylyşy. Mahmudow D., Türkmen oba hojalyk institutynyň 2-nji ýyl
"HORMATLY PREZIDENTIMIZIŇ ÝURI OBA HOJALYGYNY YLMY ESASDA ÖSI BARADAKY DÖWLET SYÝASA1 AZYK BOLCULYGYNYŇ ÖZENID	derwaýys meseleleri. Kurbanow B., Türkmen oba hojalyk institu 19. Ýurdumyzyň ykdysadyýetiniň ösüşiniň täsiri.	 "HORMATLY PREZIDENTIMIZ ÝURDUMYZDA OBA HOJALYGY YLMY ESASDA ÖSDÜRMEK BARADAKY DÖWLET SYÝASA 	 Malmudow D., Turkmen oba nojatyk institutynyn 2-nji yyl talyby. 30. Tut agaçlarynyň suwy tygsytlaýjy tehnologiýalardan peýdalanylyp ýetişdirilişi Uraýew T., Türkmen oba hojalyk institutynyň 3-nji ýyl talyby.
atly ylmy-önümçilik maslahatyna uly hormat bilen çagyrýarys	 Jammaýew Ç., Türkmen oba hojalyk instit mugallym-öwrenijisi. Ekologiýa abadançylygy - rowaçlygyň k Saparlyýew I., S.A. Nyýazow adyndaky Tť uniwersitetiniň Gidrotehniki desgalar kafe 	AZYK BOLÇULYGYNYŇ ÖZENIE atly ylmy-önümçilik maslahatyn: uly hormat bilen çagyrýarys	Çykyşlar. Bölümiň işini jemlemek.
	 21. Azyk bolçulygyny ösdürmekde ykdysad Hallyyéwa O., Türkmen oba hojalyk institu mugallym-öwrenijisi. 22. Türkmenistanda azyk howpsuzlygyny ü hojalyk önümçiligini kämilleşdirmegiň : 	2 2	
Ylmy-önümçilik maslahaty 2019-njy ýylyň 27-nji martynda institutyň uly mejlishanasynda sagat 14:00-da başlanýar.	 Kuwatniýazowa A., Türkmen oba hojalyk mugallym-öwrenijisi. Döwlet ülňüsine (standartyna) laýyklyk önümleriniň hiline baha berilişi. Kurýazowa A., Türkmen oba hojalyk instit mugallym-öwrenijisi. 	Ylmy-önümçilik maslahaty 2020-nji ýylyň 30-njy martynda institutyň uly mejlishanasynda sagat 14:00-da başlanýar.	





May 13, 2020





June 9, 2020, Ashgabat

COMMUNICATION PROCESS, ADDITIONAL INFORMATION



Table 6.1. COMMUNICATION PROCESS, ADDITIONAL INFORMATION			
N⁰	Question	Answer	
1.	Please, report on the communication process between your University and other PC Universities, EU partners, the Coordinator, and other project participants	Means of communication to communicate with other PC Universities, EU partners, the Coordinator and other project participants: Skype, email, telephone etc.	
2.	Additional information	-	



Thank you for you attention!



Co-funded by the Erasmus+ Programme of the European Union Babageldi Kurbanov - Head of the Department of Agricultural land reclamation Tel.: +993 65941740 E-mail: baba.kur@gmail.com