

Periodical Report  
12 Months of project  
implementation

## New and Innovative Courses for Precision Agriculture



NICOPA

# 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 MAY 2019 TILL NOVEMBER 2019



№	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.	<p>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;</p> <p>b) Develop a schedule to conduct surveys;</p> <p>c) Conduct surveys of various target groups;</p> <p>d) Analyze the answered questionnaires.</p>	1.1	<p>a) Questionnaires (April 2019) developed</p> <p>b) A questionnaire has been drawn up (May 6-8, 2019);</p> <p>c) Questionnaires (questionnaires) were conducted for teachers and students (conducted May 23-29, 2019)</p> <p>d) A questionnaire was analyzed and a report was written (June 1-4, 2019).</p>
3.	<p>a) Institute examines and adopts the received materials from European HEI and develops on this basis their own courses, curricula, modules;</p> <p>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.</p>	2.1	<p>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)</p>

# PROJECT ACTIVITIES FROM MAY 2019 TILL NOVEMBER 2019



№	Question	References	Answer
4.	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.
5.	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)
6.	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 MAY 2019 TILL NOVEMBER 2019



№	Question	References	Answer
7.	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
8.	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.
9.	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
10.	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.
11.	Coordination meetings.	5.2	An annual meeting plan has been developed (taking into account international, regional and local meetings).
12.	Monitoring and controlling of project activities: development of questionnaires for partner universities regarding project implementation.	5.1	Project Monitoring (October 1, 2020)
13.	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**

<b>Course №</b>	<b>Title of the existing course to update (Bachelor, Master)</b>	<b>ECTS</b>	<b>Name of the person(s) responsible for update + email</b>	<b>Estimate the percentage of the course development</b>
<b>Course 1</b>	Geodesy	7,5	1. Babageldi Kurbanov ( <a href="mailto:baba_kur_83@mail.ru">baba_kur_83@mail.ru</a> ) 2. Saparmurat Babajanov (is.geodesy@gmail.com)	100
<b>Course 2</b>	Agrometeorology	3,0	1. Babageldi Kurbanov ( <a href="mailto:baba_kur_83@mail.ru">baba_kur_83@mail.ru</a> ) 2. Sayara Baltayeva (narmemedowa09@gmail.com)	100
<b>Course 3</b>	Climatology	3,0	1. Babageldi Kurbanov ( <a href="mailto:baba_kur_83@mail.ru">baba_kur_83@mail.ru</a> ) 2. Sayara Baltayeva (narmemedowa09@gmail.com)	100
<b>Course 4</b>	Hydrology and hydrometry	5,0	1. Babageldi Kurbanov ( <a href="mailto:baba_kur_83@mail.ru">baba_kur_83@mail.ru</a> ) 2. Ayjermal Artykova (ayjemalarthykova545@gmail.com)	100

# MODERNIZED COURSES DEVELOPMENT PROCESS



**Table 1.2.1. UPDATED COURSES**

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

# MODERNIZED COURSES DEVELOPMENT PROCESS



**Table 1.2.1. UPDATED COURSES**

<b>Course №</b>	<b>Title of the existing course to update (Bachelor, Master)</b>	<b>ECTS</b>	<b>Name of the person(s) responsible for update + email</b>	<b>Estimate the percentage of the course development</b>
<b>Course 9</b>	Agricultural economics	2,5	1. Merdan Bayramov 2. Musa Hanov ( <a href="mailto:musahanow1987@gmail.com">musahanow1987@gmail.com</a> ) 3. Gulalek Yazmedova ( <a href="mailto:yazmedowa1980@gmail.com">yazmedowa1980@gmail.com</a> )	90
<b>Course 10</b>	Organization of agricultural production	5,0	1. Merdan Bayramov 2. Gulalek Yazmedova ( <a href="mailto:yazmedowa1980@gmail.com">yazmedowa1980@gmail.com</a> )	90

$\Sigma(\text{Total number of updated courses}) = 10$

$\Sigma(\text{Total number of ECTS}) = 51$

# 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	1. Batyr Nuryev ( <a href="mailto:batyr-info@mail.ru">batyr-info@mail.ru</a> ) 2. Shatlyk Pygamov (pygamowshatlyk@gmail.com) 3. Babageldi Kurbanov ( <a href="mailto:baba_kur_83@mail.ru">baba_kur_83@mail.ru</a> ) 4. Dovlet Durdyev ( <a href="mailto:meh.durdyew@mail.ru">meh.durdyew@mail.ru</a> )	100
Course 2	Photogrammetry and remote sensing	4	1. Babageldi Kurbanov ( <a href="mailto:baba_kur_83@mail.ru">baba_kur_83@mail.ru</a> ) 2. 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	1. Dovlet Durdyev ( <a href="mailto:meh.durdyew@mail.ru">meh.durdyew@mail.ru</a> ) 2. Batyr Nuryev ( <a href="mailto:batyr-info@mail.ru">batyr-info@mail.ru</a> ) 3. Babageldi Kurbanov ( <a href="mailto:baba_kur_83@mail.ru">baba_kur_83@mail.ru</a> )	100
Course 4	Innovation technology in agronomy	2,5	1. Akmurat Gurbanov 2. Dovlet Durdyev ( <a href="mailto:meh.durdyew@mail.ru">meh.durdyew@mail.ru</a> )	90

$\Sigma(\text{Total number of new courses}) = 4$

$\Sigma(\text{Total number of ECTS}) = 13$

# TEACHING MATERIALS



## 1.3. TEACHING MATERIALS

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

# QUALITY ASSURANCE OF THE NEW COURSES



## QUALITY ASSURANCE – Courses

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

# QUALITY ASSURANCE OF THE NEW COURSES



## QUALITY ASSURANCE – Courses

Course №	Course title	Peer reviewers (Name, position, organization)
5.	Geodesy	1. Ibadullayev A. – Manager, Land administration of the Dashoguz province; 2. Orazbayeva M. (c.agr.s.) – Lecturer of the Department Crop production, Turkmen Agricultural Institute
6.	Agrometeorology	1. Babajanov M. – Head of the water use Department, production association “Dashoguz water industry”; 2. Annayev A. (c.ph-m.s.) – Head of the Department of Operation of Agricultural Machinery, Turkmen Agricultural Institute
7.	Climatology	1. Babajanov M. – Head of the water use Department, production association “Dashoguz water industry”; 2. Annayev A. (c.ph-m.s.) – Head of the Department of Operation of Agricultural Machinery, Turkmen Agricultural Institute

# QUALITY ASSURANCE OF THE NEW COURSES



## QUALITY ASSURANCE – Courses

Course №	Course title	Peer reviewers (Name, position, organization)
8.	Hydrology and hydrometry	1. Babajanov M. – Head of the water use Department, production association “Dashoguz water industry”; 2. Orazbayeva M. (c.agr.s.) – Lecturer of the Department Crop production, Turkmen Agricultural Institute
9.	Soil science	1. Ibadullayev A. – Manager, Land administration of the Dashoguz province; 2. Gurjiyev G. – Head of the Department Agrochemical and soil science, Turkmen Agricultural Institute
10.	Mechanization of technological work in animal husbandry	1. Baymyradov T. – Production and technical Department, Agricultural production association in Dashoguz province; 2. Annayev A. (c.ph-m.s.) – Head of the Department of Operation of Agricultural Machinery, Turkmen Agricultural Institute

# QUALITY ASSURANCE OF THE NEW COURSES



## QUALITY ASSURANCE – Courses

Course №	Course title	Peer reviewers (Name, position, organization)
11.	Operation of the tractor fleet	1. Baymyradov T. – Production and technical Department, Agricultural production association in Dashoguz province; 2. Meredov A. – Lecturer of the Department of Operation of Agricultural Machinery, Turkmen Agricultural Institute
12.	Fruit growing and viticulture	1. Amantaganov H. – Director, research and research production facility in Turkmen Agricultural Institute; 2. Orazbayeva M. (c.agr.s.) – Lecturer of the Department Crop production, Turkmen Agricultural Institute
13.	Agricultural economics	Prepared
14.	Organization of agricultural production	Prepared

# IMPACT AND SUSTAINABILITY



**Table 2.1. DISSEMINATION EVENTS-1**

**(THAT ARE NOT MENTIONED IN REPORT 12M/ FROM NOVEMBER 2019 TILL MAY 2020)**

<b>№</b>	<b>Question</b>	<b>Answer</b>
1.	<b>How many dissemination events were conducted?</b>	<ol style="list-style-type: none"><li>1. 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>);</li><li>2. 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>);</li><li>3. Questionnaire survey among teachers and students of Turkmen Agricultural Institute (<i>May 23-29, 2019</i>);</li><li>4. 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>);</li></ol>

# IMPACT AND SUSTAINABILITY



**Table 2.1. DISSEMINATION EVENTS-1**

**(THAT ARE NOT MENTIONED IN REPORT 12M/ FROM NOVEMBER 2019 TILL MAY 2020)**

<b>№</b>	<b>Question</b>	<b>Answer</b>
<b>1.</b>	<b>How many dissemination events were conducted?</b>	<b>5.</b> 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, 2019</i> );



# IMPACT AND SUSTAINABILITY



**Table 2.1. DISSEMINATION EVENTS-1**

**(THAT ARE NOT MENTIONED IN REPORT 12M/ FROM NOVEMBER 2019 TILL MAY 2020)**

<b>No</b>	<b>Question</b>	<b>Answer</b>
<b>2.</b>	<b>How much and which new dissemination materials were produced (leaflets, brochures, flyers etc)?</b>	<b>→</b> Send us prepared/published E-layouts or drafts of brochures and leaflets; <b>→</b> Inform us about the dates of approximate printing, publishing and distribution of brochures and leaflets.

# IMPACT AND SUSTAINABILITY



**Table 2.1. DISSEMINATION EVENTS-1  
(THAT ARE NOT MENTIONED IN REPORT 12M/ FROM NOVEMBER 2019 TILL MAY 2020)**

№	Question	Answer
3.	<b>Report on the dissemination of the information about the project in mass media</b>	<p>→ Send us links or scans/files of <b>publications</b> about the project in mass media: magazines, newspapers, TV, the Internet, etc., with the date of their publications.</p> <ol style="list-style-type: none"><li>1. The newspaper "Neutral Turkmenistan" published an article by Ismail Ibragimov "<b><i>Based on innovative technologies</i></b>" (page 3), 2019.07.23;</li><li>2. Teacher D. Durdyev's article "<b><i>World Experience</i></b>" was published in the newspaper "Bereketli Toprak" (page 2), 2019.10.28;</li><li>3. Teacher K. Kurbanov, D. Durdyev's article "<b><i>Precision farming technologies</i></b>" was published in the "Täze oba" (New Village) magazine (pages 6-8), October, 2019;</li></ol> <p>→ If they are not published yet, inform us when you are planning to publish them.</p>

# IMPACT AND SUSTAINABILITY



**Table 2.1. DISSEMINATION EVENTS-1**

**(THAT ARE NOT MENTIONED IN REPORT 12M/ FROM MAY 2019 TILL NOVEMBER 2019)**

<b>№</b>	<b>Question</b>	<b>Answer</b>
<b>4.</b>	<b>Planned dissemination activities</b>	Please, send us the plan of future dissemination activities until November 2020

# IMPACT AND SUSTAINABILITY



HORMATLY \_\_\_\_\_!

SIZI TÜRKMENISTANYŇ OBA HOJALYK WE DAŞKY  
GURŞAWY GORAMAK MINISTRLOGI,  
TÜRKMENISTANYŇ BILIM MINISTRLOGI,  
TÜRKMEN OBA HOJALYK INSTITUTY  
TARAPYNDAN GEÇIRILÝÄN

“HORMATLY PREZIDENTIMIZIŇ ÝURDUMYZDA  
OBA HOJALYGNY YLMY ESASDA ÖSDÜRMEK  
BARADAKY DÖWLET SYÝASATY  
AZYK BOLÇULYGNYŇ ÖZENIDIR“

atly ylmy-önümçilik maslahatyna  
uly hormat bilen çagyryýars

Ylmy-önümçilik maslahaty  
2019-njy ýylyň 27-nji martnynda  
institutyň uly mejlishanasynda  
sagat 14:00-da başlanýar.

14. **Suw strategiýasy - ösüş we abadancylyk.**  
Myradow G., Türkmen oba hojalyk institutynyň mugallymy.
15. **Ýurdumyzda durnukly azyk bolçulygyny döretmek oba hojalyk ulgamynyň önünde goýlan esasy wezipedir.**  
Rejepow O., Türkmen oba hojalyk institutynyň mugallym-öwrenijisi.
16. **Hormatly Prezidentimiziň Suw diplomatiýasynyň sebitdäki ekologiýa meselelerini çözmekdäki orny.**  
Agajanow E., Türkmen oba hojalyk institutynyň mugallym-öwrenijisi.
17. **Takyk ekerançylyk oba hojalygynyň geljegidir.**  
Durdyýew D., Türkmen oba hojalyk institutynyň mugallymy.
18. **Oba hojalygynyň suw üpjünçiligini gowulandyrmagyň derwaýys meseleleri.**  
Kurbanow B., Türkmen oba hojalyk institutynyň mugallymy.
19. **Ýurdumyzyň ykdysadyýetiniň ösüşiniň azyk bolçulygyna täsiri.**  
Jammaýew Ç., Türkmen oba hojalyk institutynyň mugallym-öwrenijisi.
20. **Ekologiýa abadancylygy - rowaçlygynyň kepili.**  
Saparlyýew I., S.A.Nyýazow adyndaky Türkmen oba hojalyk uniwersitetiniň Hidrotehniki desgalary kafedrasynyň müdiri.
21. **Azyk bolçulygyny ösdürmekde ykdysadyýetiň orny.**  
Hallyýewa O., Türkmen oba hojalyk institutynyň mugallym-öwrenijisi.
22. **Türkmenistanda azyk howpsuzlygyny üpjün etmede oba hojalyk önümçiligini kämilleşdirmegiň ähmiýeti.**  
Kuwatniýazowa A., Türkmen oba hojalyk institutynyň mugallym-öwrenijisi.
23. **Döwlet ülüsine (standartyňa) laýyklykda azyk önümleriniň hiline baha berilişi.**  
Kurýazowa A., Türkmen oba hojalyk institutynyň mugallym-öwrenijisi.

26. **Ekerançylyga innowasiýa tehnologiýalarynyň ornaşdyrylyşy.**  
Meredow A., Türkmen oba hojalyk institutynyň mugallymy.
27. **Ýarym taýýar maldarçylyk önümleriniň taýýarlanylşy aýratynlyklary.**  
Kurýazowa A., Türkmen oba hojalyk institutynyň mugallymy.
28. **Kiçi göwrümlü daýhan hojalyklarynda haşal otlara garşy göreşmegiň aýratynlyklary.**  
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 talyby.
30. **Tut agaçlarynyň suwy tygyslatýjy tehnologiýalardan peýdalanylýp ýetirdirilişi**  
Urayew T., Türkmen oba hojalyk institutynyň 3-nji ýyl talyby.

Çykyşlar.  
Bölämiň işini jemlemek.



# COMMUNICATION PROCESS, ADDITIONAL INFORMATION



**Table 6.1. COMMUNICATION PROCESS, ADDITIONAL INFORMATION**

<b>№</b>	<b>Question</b>	<b>Answer</b>
<b>1.</b>	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.
<b>2.</b>	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](mailto:baba.kur@gmail.com)**