

Periodical Report
24 Months of project
implementation

New and
Innovative
Courses for
Precision

NATIONAL UNIVERSITY OF UZBEKISTAN
NAMED AFTER MIRZO ULUGBEK

Dr. ABDUMANAP NASIROV



Joint Project: Capacity Building in
the Field of Higher Education
ERASMUS+ 2018

Co-funded by the
Erasmus+ Programme
of the European Union





1.1. Project activities – from May 2020 till November 2020

The university has implemented the following activities (+ short description of their deliverables) from 16.05.2020 till 15.11.2020 according to the work plan:

WP1:

Agreement on instructional strategy and guidelines for BA/MSc curricula design including the use of new Educational Technologies

It was agreed to update following modules:

Geodesy (BA)
Geographic Information Systems (BA)
Photogrammetry and Remote Sensing (BA)
Soil and Agroecology (BA)
Applied Geoinformatics (MSc)
Applied Geodesy (MSc)
Data Acquisition and Data Integration (MSc)
Innovative technologies in soil science (MSc)

Soil cover monitoring (MSc)
Agricultural Meteorology (BA /MSc)

It was agreed to develop following new modules:

Basics of the Precision agriculture (BA)
Global Navigation Satellite Systems (MSc)
Remote Sensing and Application of Earth and Environment related PA (MSc)
Application of Precision Agriculture for crops growing (MSc)
Yield sensors for Precision Agriculture (MSc)
10 teaching staff involved in the new courses development.



1.1. Project activities – from May 2020 till November 2020

WP2:

- **2.1 Prepare a set of new core curricula and transferable modules inclusive innovative teaching/ learning facilities; develop syllabi; adopt new curricula and modules on institutional /accredit on national level**

The courses “Remote Sensing and Application of Earth and Environment related PA” and “Global Navigation Satellite Systems” have been accepted at institutional level and allowed to publish (license uploaded to the Google Drive).

- **2.2 Prepare a set of documentation for PAL and VCR; purchase the equipment incl. software; install the equipment**

Documentation of PASO have been approved (uploaded to the Google Drive). A list of equipment has been approved. Tender announcement have been posted, and winner company selected. Agreement on EQ purchase have been signed.



1.1. Project activities – from May 2020 till November 2020

WP3:

3.1. The Quality assurance strategy/QA Plan of each PC university including internal/external Quality evaluation/reports according to QA Plan

QA Plan of NUU has been developed and approved. Quality Group has been established and 3 specialists involved in Internal Evaluation Board.

WP4:

4.1. Project DISS& EXP /communication plan using a Set of Promotional Materials; Dissemination Events, Joint WEB based platform, “NICOPA+” Agreement

Schedule of dissemination events for 2021 year have been developed (uploaded to the Google Drive). 4 Dissemination events have been organized from 16.05.2020 till 15.11.2020 (press releases uploaded to the google drive). The total number of participants of the dissemination events is more than 327.



1.1. Project activities – from May 2020 till November 2020

WP5:

5.1 Management of the project including Project management online, daily project administration and coordination

1 staff member involved in Management and Coordination who is the National Project coordinator (Abdumanap Nasirov). 1 internal reports (18M) prepared and submitted.

5.2 Coordination meetings

2 coordination events (meetings) have been organized so far.

2 internal management teleconferences have been organized so far.



1.2. Positive changes/benefits at NUU (so far)

The updated modules has been included to this curricula:

5311500 - Geodesy, cartography and cadastre (BA)
5A313401- Geodesy and geoinformatics (MSc)
5A141001 - Soil science (MSc)

The new modules has been included to this curricula:

5A313401– Geodesy and Geoinformatics (MSc)
5A311502– Geodesy and Cartography (MSc)

3 master classes organized and 14 teachers have been retrained.

The updated modules “Geodesy”, “Geographic Information Systems”, “Photogrammetry and Remote Sensing” have been accepted at national level and allowed to publish (license uploaded to the Google Drive).

The new modules “Remote Sensing and Application of Earth and Environment related PA” and “Global Navigation Satellite Systems” have been accepted at institutional level and allowed to publish (license uploaded to the Google Drive).

Teachers have been retrained, they improved their skills on PA.



1.3. Problems / difficulties...

Because of Covid-19, equipment purchase/installation and trainings at the EU partner universities have been postponed.



2.1. Updated Courses

Table 2.1.1. UPDATED COURSES

Course №	Title of the course and in which program it is taught (Bachelor, Master)	Its volume (in ECTS)	Number of students participating in the course	Name new elements in the course and estimate the percentage they represent in relation to the preexisting course	Link to the course on the university page	Accreditation and recognition: Specify the date when the course was accredited in the curriculum and when the pilot teaching started
Course 1	“Geodesy”	6	240	Surveying, GNSS systems, Field Data processing 20%	http://webdars.nuu.uz/login/index.php This is a Moodle platform of NUU. Teachers and students have a	Accredited on June 30, 2020. Pilot course started on September 3, 2020.
Course 2	“Geographic Information Systems”	5	310	Spatial Data Visualization, Geospatial Analysis, Application of GIS, 33%	http://webdars.nuu.uz/login/index.php This is a Moodle platform of NUU. Teachers and students have a	Accredited on June 30, 2020. Pilot course started on September 3, 2020.
Course 3	“Photogrammetry and Remote Sensing”	5	250	Digital Image Processing, Object-based classification, NDVI, Classification technics and algorithms, 25%	http://webdars.nuu.uz/login/index.php This is a Moodle platform of NUU. Teachers and students have a personal login and password.	Accredited on June 30, 2020. Pilot course started on September 3, 2020.

$\Sigma(\text{Total number of updated courses}) = 3$

$\Sigma(\text{Total number of ECTS}) = 16$



2.2. New Courses

Table 2.2.2. NEW COURSES

Course №	Title of the course and in which program it is taught (Bachelor, Master)	Its volume (in ECTS)	Number of students participating in the course	Link to the course on the university page	Accreditation and recognition: Specify the date when the course was accredited in the curriculum and when the pilot teaching started
Course 1	Remote Sensing and Application of Earth and Environment related PA	4	30	https://websaboq.nuu.uz/auth/login This is a Moodle platform of NUU. Teachers and students have a personal login and password.	Accredited on June 30, 2020. Pilot course started on September 3, 2020.
Course 2	Global Navigation Satellite Systems	4	30	https://websaboq.nuu.uz/auth/login This is a Moodle platform of NUU. Teachers and students have a personal login and password.	Accredited on June 30, 2020. Pilot course started on September 3, 2020.
Course 3	Application of Precision Agriculture for crops growing			...in the process	
Course 4	Yield sensors for Precision Agriculture			...in the process	
Course 5	Basics of the Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources			...in the process	

Σ (Total number of new courses) = 2

Σ (Total number of ECTS) = 8



3. Quality Assurance Plan



«APPROVE»
Rector
National University of
Uzbekistan
A. Marakhimov

Quality Assurance Plan of NUU for the project "NICOPA: New and Innovation Courses for Precision Agriculture" in the framework Erasmus+ program

No	Activity	Deadlines	Responsible
1.	Need analyses - to design and make a survey and needs analysis concerning the design of a new courses and update existing courses.	December 2018	A. Nasirov, A. Ruziev, B. Khalmatjanov, I. Abdullaev
2.	Development of selection criteria for teachers to participate in trainings planned at EU universities	February 2019	R. Shirinova, A. Nasirov, T. Abdrakhmonov, Kh. Muborakov
3.	Needs-analysis report and its feedback, Review of the current curricula for BA/MSc, which will be identified, based on needs analysis and responses. List of proposed new and existing courses, which needs development and update	April 2019	A. Nasirov, A. Ruziev, B. Khalmatjanov, I. Abdullaev
4.	Design short course specifications for selected courses	May 2019	I. Abdullaev, A. Muminov, S. Salohitdinova, A. Ruziev, E. Mirmakhmudov, B. Kholmatjanov, A. Nasirov, P. Parchinskiy, M. Fakhruddinova, T. Abdrakhmonov
5.	Internal quality monitoring and evaluation	May, October Annually	A. Nasirov, M. Fakhruddinova, P. Parchinskiy,
6.	External quality monitoring and evaluation	May, October Annually	R. Shirinova, A. Nasirov, T. Abdullaev, F. Eshankulov
7.	Project monitoring and evaluation	Regularly	R. Shirinova, A. Nasirov, I. Abdullaev
8.	Preparation of Progress Reports, which will collect, analyze, and use data to answer questions about the	May, October Annually	R. Shirinova, A. Nasirov, M. Fakhruddinova, P. Parchinskiy,

	effectiveness and efficiency of the project reaching the intended effect		I. Abdullaev
9.	Peer review of new or modernized courses	September 2019 August 2020	A. Nasirov, T. Abdullaev, F. Eshankulov
10.	Develop of indicators for quality assessment of implementation of each new or modernized courses or curricula package in the target field	June 2020	A. Nasirov, M. Fakhruddinova, P. Parchinskiy, I. Abdullaev
11.	Implementation of modernization and development of courses with participation of teaching staff that took part in the trainings in European universities	August 2020	R. Shirinova, A. Nasirov, tbd.
12.	Evaluation of developed and updated courses	October 2020	A. Nasirov, M. Fakhruddinova, P. Parchinskiy,
13.	Implementation and evaluation of learning infrastructure those will be establish and equipped with advanced hardware and geospatial software within the project	November 2020	A. Nasirov, T. Abdrakhmonov, Kh. Muborakov, I. Abdullaev
14.	Evaluation of the results of the implementation of updated and new courses in BA / MSc programs	January 2021	R. Shirinova, A. Nasirov, T. Abdrakhmonov, Kh. Muborakov

The aim of this plan is to insure an integrated quality assurance, project evaluation and quality enhancement mechanism in the project based on Quality assurance strategy of NICOPA project and based on resolution of Cabinet Ministers of the Republic of Uzbekistan Laws on Education, National Program of Personnel training, and "On organization of the state inspection for supervision of quality in education under the Cabinet of Ministers the Republic of Uzbekistan" dated on 28.07.2017.

National coordinator

Abdumanap Nasirov



3. Quality Assurance (indicators)

Which quality indicators have you chosen for the peer review template?

1. Balance of student's workload: theory, practical work (not less than 50%), individual work, internship in a company, testing system
2. Application of ECTS by developing new modules/courses/curricula or modernizing the old ones
3. Usage of information about the latest (up to 5 years old) results of scientific research of foreign scientists in teaching materials
4. Usage of the university online educational platform during the educational process
5. Ability of students to influence the educational content or process. For instance, ability of students to choose a topic of reporting or practical works, to attend elective modules/courses.
6. Correspondence to the national norms (standards) of education
7. Consideration of a new module by the university council of experts with the participation of potential employers (chair meeting, meeting of educational council)



3. Quality Assurance (Peer-review)

Report on the peer review procedure: which new modules have you chosen for the peer review?

- Remote Sensing and Application of Earth and Environment related PA
- Global Navigation Satellite Systems

Who are/will be peer reviewers?

- Head of the Department of Topography and Remote Sensing of the Central Air Geodetic Enterprise
- Head of the Department Remote Sensing, Geodesy and cartography under The State Committee on Land Resources, Geodesy, Cartography and State Cadastre
- Head of the Department Geodesy and cadaster of the Tashkent Institute of Architecture and Civil Engineering

When did you conduct peer reviews? If you haven't done it yet: When will you send the peer review questionnaire and get a feedback from peer reviewers?

Peer reviews were conducted in 2020.



3. Quality Assurance (Peer-review information)

4 peer reviews have been conducted for the 2 new courses which developed within the Erasmus+ NiCoPA Project in 2020.

Experts reviewed the course Remote Sensing and Application of Earth and Environment related PA:

- M.N.Kenjaboev - Head of the Department of Topography and Remote Sensing of the Central Air Geodetic Enterprise under The State Committee on Land Resources, Geodesy, Cartography and State Cadastre
- B.Khushvaqto'v - Head of the Department Remote Sensing, Geodesy and cartography under The State Committee on Land Resources, Geodesy, Cartography and State Cadastre

Experts reviewed the course Global Navigation Satellite Systems:

- Prof. S.Tashpolatov – Head of the Department Geodesy and cadaster of the Tashkent Institute of Architecture and Civil Engineering
- M.N.Kenjaboev - Head of the Department of Topography and Remote Sensing of the Central Air Geodetic Enterprise under The State Committee on Land Resources, Geodesy, Cartography and State Cadastre



3. Quality Assurance (Peer-review, main conclusions)

- In order to meet the needs of the stakeholders in the field of precision agriculture, the have been modernized existing curricula and developed new modules using GNSS, Remote Sensing and GIS technologies in compliance with the principles of the Bologna Process.
- The developed new and innovative courses are focused on the application of remote sensing techniques and skills for getting information from imagery and ability to solve complex tasks based on remote sensing in the field of precision agriculture. In the courses authors more focused on topics, like using of modern smart technologies in the field of GNSS, Geographic Information System, Big data, Digital Image Processing, Application of Remote Sensing in Natural resource management.
- In general, by authors have been analyzed and implemented foreign experience this area in education system of NUU to develop the professional activities of graduates that meet the requirements of employers.



4. Laboratories and equipment

Titles of laboratory works that are planned to be conducted at PAL and VCR and which equipment is planned to be used in these works (specify modules, in which these laboratory works are planned to be conducted and at which faculties)

Laboratory works in the course “Geographic Information Systems”, “Basics of the Precision agriculture”, “Soil and Agroecology”, “Soil cover monitoring” (at the Faculty of Geography and Natural resources and the Faculty of Biology and Soil Sciences):

- **Sensing Technology on Precision Agriculture**
 - IMETOS® IMT280, ECH874EXT, SEN-SDI12, SE1200S;
- **Data collection and Analysis on Precision Agriculture**
 - IMETOS® IMT280, ECH874EXT, SEN-SDI12, IM5041D, SE1200S;
- **Sustainable Intensification in Crop Farming and Yield Monitoring Technology**
 - PI54-D/5, MD510SM;
- **Smart Farming Technology Types, Equipment for Variable Rate Application**
 - ECH874EXT, TNS107, SE1200S.

Moreover, all equipment of VCR will be used during the practical works of this course.



4. Laboratories and equipment

All equipment of VCR will be used during the following practical works of the course “Geographic Information Systems”, “Photogrammetry and Remote Sensing”, “Remote Sensing and Application of Earth and Environment related PA”, “Global Navigation Satellite Systems” (at the Faculty of Geography and Natural resources):

- Digital Image Processing
- Image Classification
- Object-based image analysis
- Land Cover/Land Use and Change Detection
- Working with ArcMap software
- Application of Remote Sensing in Agriculture
- Geographical and attribute information
- Development of map configuration and preparation for publication

- Display data in Geographic Information System.

The following equipment of VCR will be used during the laboratory and practical works of the courses “Geographic Information Systems”, “Basics of the Precision agriculture”, “Soil and Agroecology”, “Soil cover monitoring” (at the Faculty of Geography and Natural resources):

Personal Computer All in One;

Mobile Workstation;

Color MFD A3;

Monochrome MFD A4;

Smart Board;

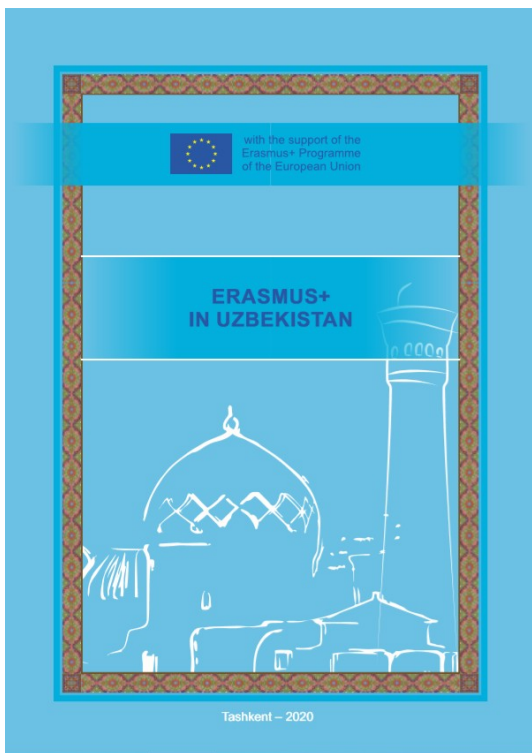
Projector.

All the equipment of VCR will be used for processing the data obtained during the practical and laboratory works of the courses “Geographic Information Systems”, “Basics of the Precision agriculture”, “Soil and Agroecology”, “Soil cover monitoring” (at the Faculty of Geography and Natural resources).



5.1. Dissemination (16.05.2020 till 15.11.2020)

- Paper with the title “Project Management, Curriculum and Achievements of the NICoPA project” in the proceedings “Erasmus+ in Uzbekistan”: http://www.erasmusplus.uz/images/shared/file/ERASMUS+_IN_UZB_2020_print.pdf (page#119)



Then Anvar Nizamov, module leader in Team University, spoke on “Training and development as a part of Human resource management”, and Anvar Shirinov gave a lecture on “Recent changes in labor legislation in Uzbekistan”.

Topics were discussed by speakers and participants of the seminar.

The seminar was organized at a high level and was widely disseminated through social networks and the media (<https://buxdu.uz/index.php/en/activity-en/international-cooperations/active-projects/2757-talent-project>, <https://youtu.be/n7IW3bRwvVA>).

In conclusion, the project results will serve to satisfy public and civil organizations with qualified HR managers soon. In this regard, local organizations are trying to prepare their HR managers according to the program formulated by the TALENT project team.

Project Management, Curriculum and Achievements of the NICoPA project

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Abdurahmanov³*

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Abstract: The aim of the Erasmus+ project “NICoPA: New and Innovative Course for Precision Agriculture” is to modernize curricula in precision agriculture using new technologies such as Geographic Information System (GIS), Big Data and Remote Sensing. Project is addressed to improve the quality of higher education and enhance its relevance for the labor market and society, the level of competences and skills in HEIs by developing new and innovative education programs, support the modernization and internationalization of the HE in precision agriculture in the targeted Universities in Kazakhstan, Uzbekistan and Turkmenistan through innovation of two cycles curricula. The information about the project management, curriculum and output activities done within the project NICoPA are given in this paper.

Based on the obtained skills of NICoPA project and experience of EU universities, the following new BSc and MSc programs have been established and they have started admission of students from the 2020/2021 academic year:

- Geoinformation systems and technologies, MSc Program, Tashkent university of information technologies named after Muhammad al-Khwarizmi;
- Innovative technologies in Remote Sensing of Land Resources, BSc Program, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers.

Prospective BSc and MSc students will study on modern curriculum which is developed in collaboration with highly experienced European partner universities (Technical University of Berlin, Agricultural University Plovdiv, Czech University of Life Sciences Prague). Specialization modules that are Geoinformation systems, Remote sensing technologies and applications, SENTINEL-1-2-3 imagery processing, Computer vision, Web technologies for geo-portal, geo-services and geo-analytical systems, Precision agriculture basics, Artificial intelligence in geoinformation systems, WebGIS, Digital Photogrammetry, 3D Modelling in GIS, Space Geodesy, Geospatial Data Visualization, Spatial Data Analysis, Decoding Spatial Images and other subjects are included in the curriculum.

According to the statistics of the Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan: 19 applicants with a bachelor degree submitted their documents to continue the study in MSc program in Geoinformation systems and technologies, and 3 of them have been accepted to study in this program at TUIT; more than 300 applicants submitted their documents to study in BSc program in Innovative technologies in Remote Sensing of Land Resources, and 29 of them have been accepted to study in this program at TIAME. It is planned opening the new PAL (Precision Agriculture Lab) laboratory and VCR (Virtual Classroom) for BSc and MSc students to study modules and conduct their researches effectively using modern hardware and software tools.

To complete BSc program in Innovative technologies in Remote Sensing of Land Resources students should score 240 ECTS, and to get MSc degree in Geoinformation systems and technologies, they should score 120 ECTS at all. Credits are divided into the three modules that are general (21%), major (48%) and elective (31%) subjects in MSc program.

References

1. Erasmus+ CBHE Project “DSinGIS: Doctoral Studies in Geoinformation Sciences” (<http://www.dsingis.eu/>, <http://www.dsingis.eu/>).
2. Erasmus+ CBHE Project “Environmental Protection In Central Asia (EPCA): Disaster Risk Management With Spatial Methods”, <http://www.eu-epca.eu/>.
3. Erasmus+ CBHE Project “NICoPA: New and Innovative courses for Precision Agriculture”, <http://www.nicopa.eu/>.



5.1. Dissemination (16.05.2020 till 15.11.2020)

'GIS IN CENTRAL ASIA' CONFERENCE – GISCA 2020, "Applied Geoinformatics for Sustainable Development", Online, June 1-2, 2020

PRESS RELEASE

'GIS IN CENTRAL ASIA' CONFERENCE – GISCA 2020

"Applied Geoinformatics for Sustainable Development"

Online, June 1-2, 2020

GISCA Conferences

Geographic Information Science and Technologies have evolved into a key instrument for managing our societies, environments and infrastructures, as well as individuals' daily lives. Continued success of this development depends on cooperation across disciplines, open information policies and a highly educated workforce.

The GISCA series of conferences aims at building a Central Asian network of GIS professionals supporting the sustained development of this region into an environmentally friendly, secure and prosperous society. It serves as a platform for communication, collaboration and learning in Geographic Information Science, GIS and related sciences and technologies. GISCA was launched by the Austria-Central Asia Centre for GIScience in 2005.

The main objectives of this English language conference are to bring together geospatially oriented academics, researchers and practitioners in the Central Asian countries and encourage international cooperation and knowledge exchange in GIS education.

GISCA 2020

In 2020, GISCA is focused on the theme "Applied Geoinformatics for Sustainable Development". Geographic Information Science as a conceptual foundation, Geoinformatics as the methodology and GIS as software technologies are powerful instruments for linking information across different sources by location. This is exactly what is needed to successfully manage our environments and natural resources, our economies and ultimately our societies.

GISCA 2020 is being organized by the Austria-Central Asia Centre for GIScience (ACA*GIScience) jointly with the Erasmus+ DSinGIS project led by the Alba Regia Technical Faculty, Óbuda University, Hungary and the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIAME).

GISCA 2020 is supported by Trimble International, GeoTwo and the Austrian Academy of Sciences. The conference originally was planned to be held in Tashkent, Uzbekistan, but due to current circumstances has been scheduled entirely online as a virtual conference on June 1-2, 2020.

The GISCA conference series and its publications are managed by ACA*GIScience supported by Eurasia-Pacific Uninet and the Austrian Academy of Sciences' Commission for GIScience.

Key topics of the GISCA 2020

Key themes (additional themes and sessions are welcome) of the conference are:

- GIS for regional Sustainable development



CERTIFICATE

of attendance

given to

Ilkhomjon ABDULLAEV

confirming participation in the 'GIS in Central Asia' Conference – GISCA 2020 "Applied Geoinformatics for Sustainable Development".

1-2 June 2020, International Online Conference



Prof. Dr. Josef Strobl
Austrian Academy of Sciences
GIScience Commission

Prof. Dr. Uktam Umurzakov
Rector, Tashkent Institute of Irrigation and
Agricultural Mechanization Engineers (TIAME)

Dr. Földváry Lóránt
Erasmus+ DSinGIS Project Coordinator
Óbuda University

- Development of Spatial Data Infrastructure
- GIS for management in the field of environmental protection
- GIS for the prevention and elimination of emergency situations
- GIS for water resources management
- GIS in agriculture
- New trends and technologies in geodesy, cadastre and land management
- Professional and farther education in the field of geoinformatics
- GIS in Hydrotechnical Construction and Melioration
- GIS in Mechanization and Automatization of Agriculture and Water Resources.

Participants

Participants: Erasmus+ DSinGIS and NiCoPA Project Partners (staff and students), BSc, MSc and PhD students in GIS related specialties, GIS related organisations and companies.

Organizers

- Austria-Central Asia Centre for GIScience (ACA*GIScience);
- Erasmus+ DSinGIS project;
- Universität Salzburg, Austria;
- Alba Regia Technical Faculty, Óbuda University, Hungary;
- Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIAME).

Contacts

Contact to TIAME – Local organizers (Uzbekistan)

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Department of Geoinformatics, University of Salzburg &

GIScience Commission of the Austrian Academy of Sciences



5.1. Dissemination (16.05.2020 till 15.11.2020)



Co-funded by the Erasmus+ Programme of the European Union



ERASMUS+ Capacity Building in the Field of Higher Education (CBHE)

NICOPA PROJECT

«New and Innovative Courses for Precision Agriculture» (NICOPA)
597985-EPP-1-2018-1-KZ-EPPKA2-CBHE-JP

Advisory monitoring meeting (Online)

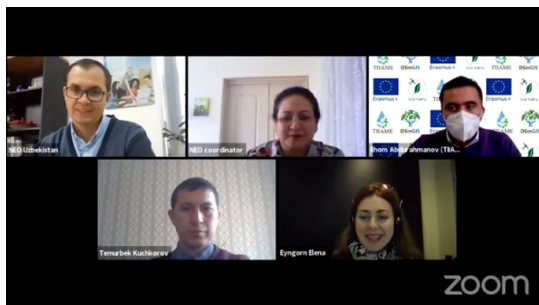
9 October 2020 at 14.30 (Tashkent time)

Online communication details: <https://us02web.zoom.us/j/81960206603>

MEETING AGENDA

14:30-14:40	Opening speech	Raima Shirinova , Vice-rector for International Relations of NUU
14:40-14:50	Objectives of the Advisory Monitoring visit	Aziza Abdurakhmanova , NEO coordinator Kudratkhon Bakhadirov , NEO expert
14:50-15:20	Activities performed of NICOPA project in TIAME	Ilhom Abdurahamanov , Institutional coordinator of NICOPA project
15:20-15:50	Activities performed of NICOPA project in TUIT	Temurbek Kuchkorov , Institutional coordinator of NICOPA project
15:50-16:20	Activities performed of NICOPA project in NUU and, in general, in Uzbekistan	Abdumanap Nasirov , National coordinator of NICOPA project
16:20-16:35	On the progress of work on the NICOPA project in partner universities of Uzbekistan	Anastasiya Tatarintseva - Project Manager, EXOLAUNCH GmbH, Berlin, Germany, Sara Kitaibekova - Project coordinator, S. Seifullin KATU, Kazakhstan
16:35-17:00	Discussion	All participants
17:00-17:10	Conclusions and preliminary recommendations of the monitoring	Aziza Abdurakhmanova , NEO coordinator Kudratkhon Bakhadirov , NEO expert

Advisory monitoring meeting by NEO



Advisory Monitoring

New and Innovative Courses for Precision Agriculture



**NATIONAL UNIVERSITY OF UZBEKISTAN
NAMED AFTER MIRZO ULUGBEK**

Dr. ABDUMANAP NASIROV

Joint Project: Capacity Building in the Field of Higher Education ERASMUS+ CBHE

Co-funded by the Erasmus+ Programme of the European Union



ERASMUS+ Capacity Building in the Field of Higher Education (CBHE)

Co-funded by the Erasmus+ Programme of the European Union



NICOPA PROJECT

«New and Innovative Courses for Precision Agriculture» (NICOPA)
597985-EPP-1-2018-1-KZ-EPPKA2-CBHE-JP

Advisory monitoring meeting (Online)
9 October 2020 at 14.30 (Tashkent time)

List of participants

Organisation	Name, surname, position, email of authorized representatives
National University of Uzbekistan	Raima Shirinova , Vice-rector for International Relations of NUU r.shirinova@nuu.uz Abdumanap Nasirov , Associate professor, National coordinator, aanasirov1962@gmail.ru Ilhomjon Abdullaev , Senior Lecturer, Local Manager, ilhomjon.abdullaev@gmail.com Pavel Parchinskiy , Associate professor, project member, pavelphys@mail.ru Azizjon Ruziev , Senior Lecturer, project member, azizjon.ruziev84@gmail.com Andrey Nebesny , Blogger of the project, nebesny-andrey@yandex.ru
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S. Seifullin KATU, Kazakhstan	Sara Kitaibekova , Project coordinator, saraorazbek@mail.ru
National Erasmus+ Office (NEO) in Uzbekistan	Aziza Abdurakhmanova , NEO coordinator, coordinator@erasmusplus.uz Kudratkhon Bakhadirov , NEO expert, expert@erasmusplus.uz Gulshoda Karibaeva , NEO project manager, neo@erasmusplus.uz

<https://telega.ph/Erasmus-project-New-and-Innovative-Courses-for-Precision-Agriculture-NICOPA-2018-2021-10-09>



5.1. Dissemination (16.05.2020 till 15.11.2020)

Erasmus+ Info Week, October 12-17, 2020

Erasmus+ Family in Uzbekistan
235 members

Pinned message #1
Photo, 🚀 The new EACEA website has gone live today at this address...
Interdisciplinary Master Program on Computational Linguistics at Central Asian Universities.
Web-site: <http://erasmus-class.eu/> 1354 10:45 AM

via @like

NICOPA

NICOPA: Aniq qishloq xo'jaligi uchun yangi va innovatsion kurslar / New and Innovative Courses for Precision Agriculture. Website: <https://www.nicopa.eu/> 2065 10:46 AM

via @like

Erasmus+ Family in Uzbekistan
235 members

Pinned message #1
Photo, 🚀 The new EACEA website has gone live today at this address...
WE HAVE OUR WINNERS!

National Erasmus+ Office in Uzbekistan
www.erasmusplus.uz

👥 "Erasmus+ loyihalarining foto va video ko'rgazmasi" tanlovi natijalarini e'lon qilamiz!

Erasmus+ dasturining loyihalari ishtirok etdi. 🗳️ Ijtimoiy tarmoqlarimizda berilgan ovozlar natijalariga ko'ra g'oliblar aniqlandi va eng ko'p ovozga ega bo'lgan loyihalar quyidagilar:

- ✅ 1 o'rin - CBHE DSinGIZ loyihasi
- ✅ 2 o'rin - CBHE MechaUZ loyihasi
- ✅ 3 o'rin - CBHE NICOPA loyihasi

Ushbu tanlovda g'olib bo'lgan loyihalarni tabriklaymiz va faol ishtirokingiz uchun minnatdorchilik bildiramiz! 🥳
! G'oliblar sertifikat va sovg'alalar bilan taqdirlanadilar!



5.1. Dissemination (16.05.2020 till 15.11.2020)

Regional Cluster Meeting Capacity Building in Higher Education Project impact in Central Asia 19-20 November 2020



Regional Cluster Meeting

- Capacity Building in Higher Education
 - Project impact in Central Asia

On-line event coordinated by NEO Uzbekistan

Day 1 - 19 November 2020

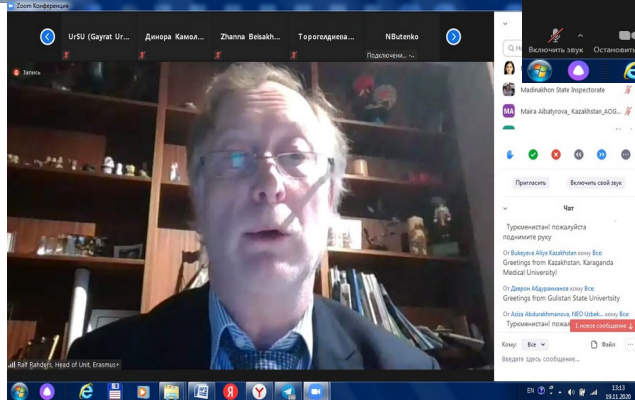
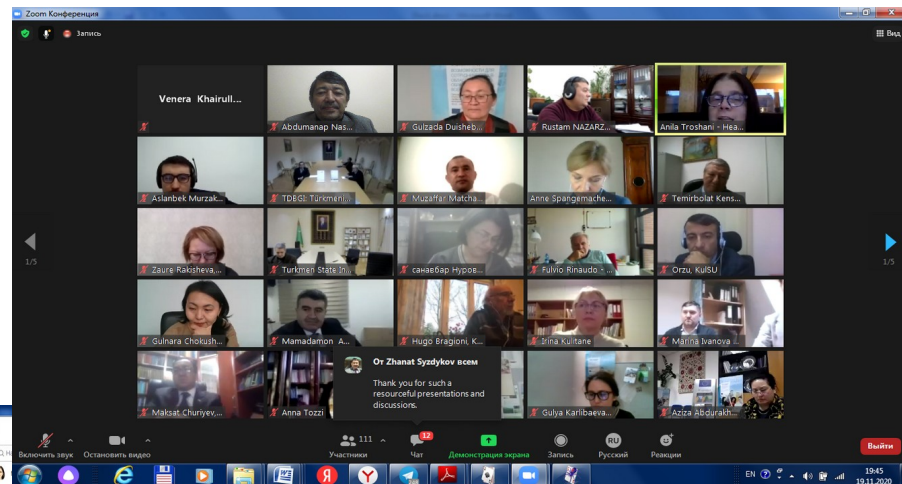
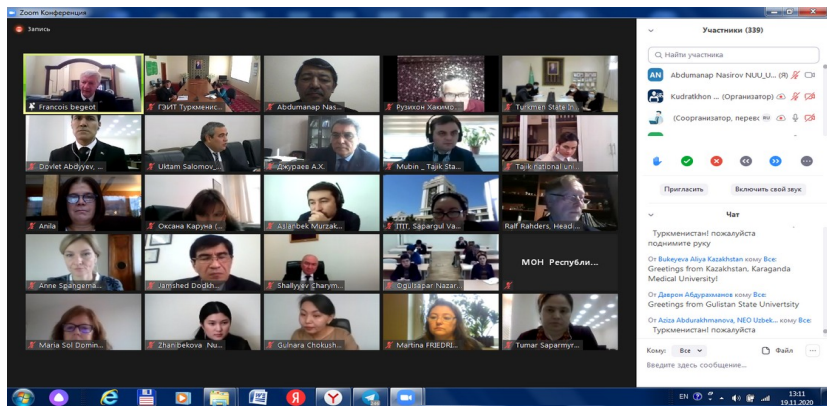
08:15 CET	On-line connection of participants
08:35-09:05	<p>Chairman (Anila Troshani) - Head of Sector Erasmus+: Higher Education – International Capacity Building (CBHE), Education Audiovisual and Culture Executive Agency)</p> <p>Welcome by the Ministers of Education and Science</p> <ul style="list-style-type: none"> • Uzbekistan • Kazakhstan • Kyrgyzstan • Tajikistan • Turkmenistan • Delegation of the European Union in Tashkent, Uzbekistan (10 minutes)
09:05-09:15	Impact of Capacity Building in the field of Higher Education in Central Asia – presentation PP





5.1. Dissemination (16.05.2020 till 15.11.2020)

Regional Cluster Meeting Capacity Building in Higher Education Project impact in Central Asia 19-20 November 2020





5.1. Dissemination (16.05.2020 till 15.11.2020)

Dissemination (internet links)

www.facebook.com (5) Nicopa NUU | Facebook

book

Nicopa NUU
@Nicopa.NUU · Не компания

Сообщение

Главная Отзывы Фото Информация Ещё

Никопра Коммуникация Поддержка

NICOPA

Tender UZ



5.1. Dissemination (16.05.2020 till 15.11.2020)

Dissemination (internet links)

Information about the project is available on the University website (in English, Uzbek and Russian)

<https://nuu.uz/eng/info/nicopa>

<https://nuu.uz/uzc/info/nicopa>

<https://nuu.uz/rus/info/nicopa>

The screenshot shows the Uzbek version of the NICOPA project page. At the top, there is a navigation bar with links for 'Электрон кутубхона', 'Масофавий ўқитиш тизими', and 'Узб'. Below this is a banner image of the university building. The main content area features the project title 'NICOPA: аниқ қишлоқ хўжалиги учун янги ва инновацион курслар' and a sub-header 'Лойиҳа давомийлиги: 3 йил (15.11.2018-14.11.2021)'. The budget is listed as 'Лойиҳа бюджети: 999,847, EUR'. A sidebar on the right contains the heading 'Халқаро лойиҳа ва грантлар' and lists the project partners: UNICAC, DSI&GIS, and SPACECOM. The main text describes the project's aim to modernize curricula in precision agriculture using new technologies like GIS, Big Data, and Remote Sensing. It also mentions activities to update existing curricula and develop new ones based on educational needs and labor market demands.

The screenshot shows the English version of the NICOPA project page. The navigation bar includes 'Electronic library', 'Distance learning system', and 'ENG'. The banner image is the same as in the Uzbek version. The main content area features the project title 'NICOPA: New and Innovative Courses for Precision Agriculture' and a sub-header 'Project duration: 3 years (15.11.2018-14.11.2021)'. The budget is listed as 'Budget of the project: 999,847, EUR'. A sidebar on the right contains the heading 'International Projects and Grants' and lists the project partners: UNICAC, DSI&GIS, and SPACECOM. The main text describes the project's aim to modernize curricula in precision agriculture using new technologies like GIS, Big Data, and Remote Sensing. It also mentions activities to update existing curricula and develop new ones based on educational needs and labor market demands.

The screenshot shows the Russian version of the NICOPA project page. The navigation bar includes 'Электронная библиотека', 'Система дистанционного обучения', and 'РУС'. The banner image is the same as in the other versions. The main content area features the project title 'NICOPA: новые и инновационные курсы для точного земледелия' and a sub-header 'Продолжительность проекта: 3 года (15.11.2018-14.11.2021)'. The budget is listed as 'Бюджет проекта: 999,847, EUR'. A sidebar on the right contains the heading 'Международные проекты и гранты' and lists the project partners: UNICAC, DSI&GIS, and SPACECOM. The main text describes the project's aim to modernize curricula in precision agriculture using new technologies like GIS, Big Data, and Remote Sensing. It also mentions activities to update existing curricula and develop new ones based on educational needs and labor market demands.



5.2. Regional Cooperation

Within the last 6 months of the project, were any employment events/fairs conducted and how many?
No;

How many agreements with non-academic stakeholders/other members of the consortium/ other non-consortium members have been signed so far or are planned to be signed in the future to maintain and develop the project results?

1 (one) NICOPA+ agreements have been signed so far with the following non-academic stakeholders:
"UNITEK STANDART" LLC;

3 (three) planned to be signed:

“Asrorbek Javohir” farmer associations;

State Committee of the Republic of Uzbekistan on Land Resources, Geodesy, Cartography and State Cadastre;

Scientific Research Hydrometeorological Institute (NIGMI)

How many bilateral agreements between consortium members were signed?

2 (two) with the following consortium members:

Engineering Consulting and Management for Space Technologies GmbH.

S. Seifullin Kazakh Agrotechnical University, Kazakhstan;



5.2. Regional Cooperation

Table 5.2. INDUSTRIAL PARTNERS

- 1. State Committee of the Republic of Uzbekistan on Land Resources, Geodesy, Cartography and State Cadastre.**
- 2. “UZGASHKLITI” State Unitary Enterprise.**

2 bilateral agreements with the following consortium members were signed

- 1. Engineering Consulting and Management for Space Technologies GmbH.**
- 2. S. Seifullin Kazakh Agrotechnical University, Kazakhstan**



5.3. Sustainability of PASO Offices

Table 2.4. PASO Service Office

No	Question	Answer
1	Name of the person(s) responsible for PASO operation in your university	Azizjon Ruziev, project member
2	Provide scan of PASO regulations approved at institutional level	Provided
3	Provide scan of PASO work plan/business plan approved at institutional level	...in the preparation process.
4	Indicate activities, that was already been implemented according to PASO work plan (title of activity, date, link to agenda, number of persons involved)	<ul style="list-style-type: none"> - The Regulation of the PASO was prepared and signed; - Pilot operation of PAL and VCR started with on-line meetings on discussion and confirmation the list of equipment;
5	Provide link to the PASO web page at the university website / FB page or any other digital source of PASO	https://www.nuu.uz/eng/info/nicopa https://www.facebook.com/Nicopa.NUU
6	How many NICOPA+ agreements were signed so far?	<p>1 (one) NICOPA+ agreements have been signed so far with the following non-academic stakeholders: "UNITEK STANDART" LLC;</p> <p>3 (three) planned to be signed: "Asrorbek Javohir" farmer associations; State Committee of the Republic of Uzbekistan on Land Resources, Geodesy, Cartography and State Cadastre; Scientific Research Hydrometeorological Institute (NIGMI)</p>



6. Social and Gender Inclusion

- Involvement of people with fewer opportunities (examples are provided below) in % of the students involved in the curricula developed in the framework of the NICOPA project:
 - 0 %
- The gender balance in % of the students involved in the curricula developed in the framework of the NICOPA project:
 - 28 % *female*
 - 72 % *male*



7. Communication process, additional information

We use the following communication ways to communicate with other PC Universities, EU partners, the Coordinator and other project participants:

- *Zoom, Skype, email, Facebook messenger, Telegram, telephone, face-to-face*

Do you communicate via Skype, email, telephone, etc.? What are the advantages/disadvantages of the means of communication that you use?

- *Yes, advantages: save time, free of charge in 90% case,*

Are there problems with the communication process? If yes, inform us about them in detail.

- *There are no problems with the communication process.*



Thank you for you attention!



Co-funded by the
Erasmus+ Programme
of the European Union

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