Periodical Report
12 Months of project
implementation

New and Innovative Courses for Precision Agriculture



TASHKENT INSTITUTE OF IRRIGATION AND AGRICULTURAL MECHANIZATION ENGINEERS (TIIAME),

FACULTIES: LAND MANAGEMENT, HYDROMELIORATION, MECHANIZATION

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



Work plan



MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION OF THE REPUBLIC OF UZBEKISTAN

TASHKENT INSTITUTE OF IRRIGATION AND AGRICULTURAL MECHANIZATION ENGINEERS

Vice Rector for Adademic Affairs of THANKS Rector of TIIAME

Superson of TIIAME

Super

INTERNAL WORK PLAN
of the Erasmus+ CBHE Project
"NICoPA: New and Innovative courses for Precision Agriculture"
for 2018-2021 years

Tashkent - 2018

Project activities including deadlines and distribution of responsibilities among work group members

Nt	Activities	Ref.	Performers	Start	End
1	Develop internal plan of activities of the project.	1.1 - 5.2	I.Abdurahmanov	01.12.2018	15.12.2018
2	Make a list of valid subjects/courses for analysis and future updates	1.1	Sh.Narbaev, M.Reimov	10.12.2018	20.12.2018
3	a) Develop questionnaires for analysis of existing curricula/disciplines (questionnaire for teachers, students, graduntes, 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	1.Abdurahmanov, Z.Mamutkulov	20.12.2018	15.04.2019
4	Develop an analytical report on the results of the analysis of existing curricula/disciplines. Make a list of curricula that you plan to upgrade. Develop a schedule for updates of the selected curricula.	1.1	Sh.Narbaev, M.Reimov, Z.Mamatkulov	15.04.2019	30.04.2019
5	Agreement on instructional strategy and guidelines for BA/MSc curricula design including the use of new Educational Technologies	1.2.	U.Umurzakov, B.Mirzaev, Sh.Narbaev, I.Abdurahmanov	15.11.2018	30.04.2019
6	a) Examine and adopt the received materials and develop on this basis their own courses, curricula, modules. b) Target universities should develop digital	2.1	Sh.Narbaev, I.Abdurahmanov, M.Reimov, Z.Mamatkulov, I.Aslanov, R.Oymatov, U.Mukhtorov	a)01.12.2018 b)01.10.2019	a)31.03.2020 b)31.10.2020

	b) Start pilot operation of PASO			b)01.09.2020	
20	Refresh training courses for graduates in PASO	4.5	I.Abdurahmanov, Sh.Narbaev	01.09.2020	31.07.2021
21	Organization of International BA/ MSc Summer Schools	4.6	M.Reimov, A.Khamraliev, Z.Abdurahmonov, J.Niyozov	01.04.2020	31.04.2021
22	Management of the project including project management online, daily project administration and coordination	5.1	I.Abdurahmanov, M.Reimov	15.11.2018	14.11.2021
23	Coordination meetings	5.2	I.Abdurahmanov, M.Reimov	15.11.2018	14.11.2021
24	Monitoring and controlling of project activities: development of questionnaires for partner universities regarding project implementation	5.1	LAbdurahmanov, M.Reimov	M5, M11, M17, M29, M35	M6, M12, M18, M30, M36
25	Ensure using SKYPE/ZOOM to held meetings of the project consortium team.	5.1	I.Abdurahmanov, M.Reimov	15.11.2018	14.11.2021

Abbr.: PAL - Precision agriculture lab VCR - Virtual Class Room

PASO - Precision Agriculture Service Office

Coordinator of the project at TIIAME



LAbdurahmanov

Work group



ı	No	Name, Surname,	Position	Responsibility
		email		(WP, tasks according to the work plan)
	1	Prof. Dr. Uktam Umurzakov	Rector	Project Advisor (1.2 Prep., 2.3 Dev., 3.1 Quality)
		uktam.umurzakov@gmail.com		
	2	Dr. Bakhadir Mirzaev	Vice rector for Academic Affairs	Academic leader (1.2 Prep., 2.1, 2.3, 2.4, 2.5, 2.6 Dev., 3.1
		bahadir.mirzaev@bk.ru		Quality, 4.1, 4.4 Diss.)
	3	Ilhom Abdurahmanov	PhD student, Department of Land	Coordinator + contact person of the project (1.1, 1.2 Prep.,
		ilhom.isakovich@gmail.com	Use, Faculty of Land Management	2.1, 2.2, 2.3, 2.4, 2.5, 2.6 Dev., 3.1 Quality, 4.1, 4.2, 4.3, 4.4,
				4.5 Diss., 5.1, 5.2 Manag.)
	4	Mamanbek Reimov	PhD student, EcoGIS Center,	Project Manager (1.1, Prep., 2.1, 2.3, 2.4, Dev., 3.1 Quality,
		maman1990@mail.ru	Faculty of Hydromelioration	4.3, 4.6 Diss., 5.1, 5.2 Manag.)
	5	Ilkhom Khasanov	Chief Accountant	Project Accountant (2.2 Dev., 4.3 Diss.)
		tiim_hisobot@umail.uz		
	6	Dr. Sharafatdin Narbaev	Dean, Faculty of Land	Teacher (1.1, 1.2 Prep., 2.1, 2.5, 2.6 Dev., 3.1 Quality, 4.4,
		narbaev_sh@mail.ru	Management	4.5 Diss.);
	7	Dr. Alim Pulatov	Head, EcoGIS center	Teacher (2.1, 2.2, 2.5, 2.6, Dev., 4.3, 4.4, 4.5, Diss.)
		alimpulatov@mail.ru		3

Work group (continuation)



No	Name, Surname,	Position	Responsibility
	email		(WP, tasks according to the work plan)
8	Uzbekhon Mukhtorov	Senior teacher, Department of Geodesy	Teacher (2.1, Dev.)
	muxtorov-84@mail.ru	and Geoinformatics, Faculty of Land	
		Management	
9	Ilhomjon Aslanov	Assistant teacher, EcoGIS Center, Faculty	Teacher (2.1, Dev.)
	ilhomaslanov@gmail.com	of Hydromelioration	
10	Khojiakbar Khasanov	Assistant teacher, Department of	Teacher (2.1 Dev.)
	kh.kh.khasanov@gmail.com	Hydraulic structures, Faculty of	
		Hydromelioration	
11	Zokhid Mamatkulov	PhD student, Department of Geodesy and	Teacher (1.1 Prep., 2.1, 2.5 Dev.)
	zohid3095@gmail.com	Geoinformatics, Faculty of Land	
		Management	
12	Akbar Khamraliev	Specialist, International Cooperation	Technical Assistant (2.1, 2.2, 2.6 Dev., 3.1
	khamraliyev@mail.ru	Department	Quality, 4.1, 4.2, 4.3, 4.6 Diss.)
13	Zoir Abdurahmonov	MSc student	Volunteer student (4.1, 4.2, 4.6 Diss.)
	z.abdurakhmonov@gmail.com		
14	Javokhir Niyozov	BSc student	Volunteer student (4.1, 4.2, 4.6 Diss.)
	java_9696@mail.ru		4

NEW MSc Program in PAg



New MSc Program "5A430401 – Precision Agriculture" was lunched from 2019 and 3 MSc students were accepted to study for 2019-2020 academic years at TIIAME.

It is planned to approve the updated curricula of this MSc program till June, 2020. New developing and modernized courses within NICoPA project are included to this updated curricula.

It is planned to accreditate the planned NICoPA courses/moodles on the institutional level till September, 2020.

Courses to update



Name of the course to be upgraded	Person/teacher/department/faculty responsible for the course upgrade	What has to be upgraded in the course?	Work progress	Estimated completion date
Geographic Information System	Uzbekhon Mukhtorov, Senior teacher, Department of Geodesy and Geoinformatics, Faculty of Land Management	GIS tools and applications	90 %	June, 2020
Remote Sensing	Zokhid Mamatkulov, Department of Geodesy and Geoinformatics, Faculty of Land Management	Methodological instructions on practice will be developed.	40 %	June, 2020
Geographic Information System	Khojiakbar Khasanov, Department of Hydrotecnical structures and engineering construction	2 Methodological instructions on practice will be developed	75 %	June, 2020

Courses to develop



Name of the course to be upgraded		What has been done?	Work progress	Remain issues	Estimated completion date
Precision Agriculture	Alim Pulatov, Head, EcoGIS Center, Faculty of Hydromelioration Ilhomjon Aslanov, Assistant teacher, EcoGIS Center, Faculty of Hydromelioration	Course syllabus	40 %	 Methodological instructions on teaching Methodological instructions on practice 	June, 2020

Criteria for teacher selection for trainigs





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NICOPA Selection Criteria

NICOPA Selection Criteria for teachers

Objective:

This document contains information about selection criteria for teachers to participate in trainings planned at EU universities.

Selection Committee:

- 1. Dr.Bahadir Mirzaev (Chair, Vice Rector for Academic Affairs, TIIAME)
- Dr.Sharafatdin Narbaev (Vice Chair, Dean of the faculty of Land Management, TIIAME)
- Dr.Sherzod Rakhmonov (Head of International Cooperation Department, TIIAME)
- 4. Mr.Ilhom Abdurahmanov (member, PhD student, TIIAME)

Compulsory (scanned) Documents:

- 1. Photocopy of international passport (only main/photo page)
- 2. Academic and/or professional Curriculum Vitae (europass model)
- English language certificate
- 4. Motivation Letter
- 5. One letter of recommendation supporting your application
- 6. Other Documentation (optional)

Selection Criteria:

The selection procedure is established according to the minimum requirements set by the European Commission. The selection procedure guarantees the transparency of the selection process and an equitable treatment of individual applications. The selection process is starting with shortlisting. The short list will be based on an interview by national (local) coordinator persons for initial "filtering". This initial filtering based on rating contributes to the selection procedure. Rating is done by national (local) coordinator and is based on this standard evaluation form.

The Selection Committee will receive a summary of ratings and (filtered) proposals from the project administration, where we also will take care of all quotas as planned in the proposal. Each applicant will be interviewed. Based on the ratings and interviews the Selection Committee will provide a proposal for the project leader before places being offered on the mobility programmer.

NICOPA Point Score

Rating	Code Rating
80- 100	Outstanding
60- 80	Highly competent

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NEW AND INNOVATIVE COURSES FOR PRECISION AGRICULTURE
Joint Project: Capacity Building in the Field of Higher Education ERASMUS+
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NICOPA:
NEW AND INNOVATIVE COURSES FOR PRECISION AGRICULTURE



NICOPA Selection Criteria

40- 60	Competent
20- 40	Not yet competent
0- 20	Not achieved

	Applicant: Fu	ll Name	
№	Criteria Items	Points max.	Points scores
1.	Level of English of instruction at host institution	20	
2.	Average of grades in presented certificates	20	
3.	Prior Learning in subjects related with trainings within the project	20	
4.	Motivation letter	20	
5.	Bonus points (max. 4 points each) - Publications - Conference presentations - Teaching Experience - First scholarship award - Other	20	
	TOTAL Points (/ 100)	100	
	Evaluator is encouraged to conduct a personal/phone in deemed necessary to fairly assess the candidate's qualificat Additional Comments:		ere this

Feedback for the training material, August, 2019m Berlin



Feedback on training materials of the training seminar "New and Innovative Courses for Precision Agriculture –NICOPA"

Within the framework of the Erasmus + Project NICOPA project "New and innovative courses for precision agriculture", a training seminar was held from August 18 to 31, 2019.

The seminar training was held at the Technical University of Berlin, Germany, the purpose of which is to improve and implement educational programs using the best practices of European universities in the field of precision agriculture.

Training presentations were made by professors and doctors from German and Bulgarian universities on the topics:

Prof. Kada topics of GIS Geovisualization, GIS Internet, Mobile, and Distributed GIS, GIS Advanced Methods for Geospatial Analysis, GIS, Data processing and adjustment Processing of remote sensing data obtained from satellites, Spatial Databases and Infrastructures, GIS Geographical Information Systems;

Dr. Abror Gafurov topics of MODSNOW-Tool – a remote sensing based instrument to monitor water resources. Introduction into MODSNOW-Tool. Manual processing scheme of satellite snow cover data. Operational monitoring of snow and water using the satellite data. Time series analysis of satellite snow cover data. Statistical modelling of water availability using the satellite snow cover data. Quality assessment of MODSNOW-processing and modelled results;

Prof. Kumhála František topics of Yield sensors for Precision Agriculture, Soil physical properties and its measurement;

Dr. Jan Chyba topics of Application of Precision Agriculture for crops growing;Prof. Harald Schuh topics of Space Geodetic Techniques.

Prof. Klaus Briess topic of Remote Sensing and Space Sensors Systems

Prof. Dimo Atanasov topics of Using of SENTINEL 1-2-3 imagery for agricultural field monitoring Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources. Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources;

Prof. Krum Hristov topics of Global Navigation Satellite Systems (NAVSTAR, GLONASS, GALILEO);

Precision Agriculture – an integrated crop management system using global positioning technologies (GPS), geographic information systems (GIS), satellite photography, yield estimation technologies, etc. Precision Agriculture is obtaining maximum information about the condition of the object, and then, based on the data obtained, form an optimal strategy for each specific situation. Ideally, this system should provide constant and detailed monitoring of the sown area (soil condition, weather and climate conditions, dynamics of crop growth, the presence of foci of various lesions, etc.), the operational processing of the entire array of information received and the development of precise and efficient crop management based on it.

These lectures of seminar training, will help to implementation of these modules under the project "New and Innovative Courses for Precision Agriculture" (NICOPA) will allow, to increase the competence of future agricultural specialists in terms of qualification requirements and the needs of our high education system and give the high motivation in obtaining knowledge is achieved.

Assistant professor, EcoGIS Center, Faculty of Hydromelioration

Aslanov I.M.

Feedback on training materials of the training seminar "New and Innovative Courses for Precision Agriculture –NICOPA"

Precision agriculture requires to utilize new advanced technologies such as GPS, variety of sensors, GIS and Remote Sensing help to increase crop yields and profitability while falling down the levels of traditional characters needed to grow crops (and, water, fertilizer, herbicides and insecticides). It means, utilizing precision agriculture is using less to grow more. Therefore, course curricultures and programs regarding to current digital agriculture should be analyzed and updated, further strengthening of integration into the training of agricultural specialists in Central Asia.

In case of developing and updating new courses on precision a griculture Erasmus+ NICOPA project was launched, with the participations of European (Germany, Czech Republic, Bulgaria) and Central Asian (Uzbekistan, Kazakhstan, Turkmenistan) countries. The project was funded by the European Union's Erasmus + program and designed for the period 2018-2021.

In the framework of Erasmus+ NICOPA project, the first training on "New and Innovative Courses in Precision Agriculture" was held at Technical University of Berlin (Germany) in the period of August 19-30, 2019.

During the training, precision agriculture related lots of professors and experts presented their presentations which included research, experiment and results. For instance, presentations "Development of the academic content and methodology" and Presentation of international joint publication on "Precision agriculture" by Prof. Alipbeki Onggarbek, "Processing of remote sensing data obtained from satellites" by Prof. Kada, "MODSNOW-Tool – a remote sensing based instrument to monitor water resources" by Dr. Abror Gafurov, "Yield sensors for Precision Agriculture" by Dr. Jitka Kumhálová, Prof. Kumhála František, and "Application of Precision Agriculture for crops growing" by Dr. Jan Chyba's etc. were presented. As well as a study tour to the Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences camied out. In the future, NICOPA project will provide the further trainings where I would like to combine theoretical and practical experience, with the direct application of the acquired knowledge and skills in the production processes of precision agriculture.

PhD student, Department of Geodesy and Geoinformatics, Faculty of Land Management

Zokhid Mamatkulov

Teachers that will develop new courses



No	Name, Surname	Position	Email
1	Ilhom Abdurahmanov	PhD student, Department of Land Use, Faculty of Land Management	ilhom.isakovich@gmail.com
2	Mamanbek Reimov	PhD student, EcoGIS Center, Faculty of Hydromelioration	maman1990@mail.ru
3	Dr. Sharafatdin Narbaev	Dean, Faculty of Land Management	narbaev_sh@mail.ru
4	Dr. Alim Pulatov	Head, EcoGIS center	alimpulatov@mail.ru
5	Uzbekhon Mukhtorov	Senior teacher, Department of Geodesy and Geoinformatics, Faculty of Land Management	muxtorov-84@mail.ru
6	Ilhomjon Aslanov	Assistant teacher, EcoGIS Center, Faculty of Hydromelioration	ilhomaslanov@gmail.com
7	Khojiakbar Khasanov	Assistant teacher, Department of Hydraulic structures, Faculty of Hydromelioration	kh.kh.khasanov@gmail.com
8	Zokhid Mamatkulov	PhD student, Department of Geodesy and Geoinformatics, Faculty of Land Management	zohid3095@gmail.com
9	Akbar Khamraliev	Specialist, International Cooperation Department	khamraliyev@mail.ru

Equipment & Software



Equipment/S oftware	Name of the person(s) responsible for the equipment/software installation	Occupation of the responsible persons	Contact information of the responsible persons
Precision	Ilhom Abdurahmanov	PhD student, Geoinformatics	ilhom.isakovich@gmail.com
Agriculture	Akbar Khamraliev	PhD student, Geoinformatics	tiim_hisobot@umail.uz
Laboratory	Ilkhom Khasanov	Chief Accountant	khamraliyev@mail.ru
Precision	Ilhom Abdurahmanov	PhD student, Geoinformatics	ilhom.isakovich@gmail.com
Agriculture	Akbar Khamraliev	PhD student, Geoinformatics	tiim_hisobot@umail.uz
Service office	Ilkhom Khasanov	Chief Accountant	khamraliyev@mail.ru
Virtual	Ilhom Abdurahmanov	PhD student, Geoinformatics	ilhom.isakovich@gmail.com
Classroom	Akbar Khamraliev	PhD student, Geoinformatics	tiim_hisobot@umail.uz
	Ilkhom Khasanov	Chief Accountant	khamraliyev@mail.ru

Dissemination plan



ERASMUS PLUS HIGHER EDUCATION CAPACITY BUILDING





Erasmus+ Project
New and Innovative Courses for Precision Agriculture
(NICOPA)

WP4 - Dissemination and Exploitation

NICOPA strategy - plan for Dissemination, Sustainability and exploitation

Prepared by: ECM Space Technologies GmbH

	Document contr	ol data			
Document ref. : NICOPA-WP4-ECM_V01					
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New and Innovative Courses for Precision Agriculture

NICOPA strategy - plan for Dissemination, Sustainability and exploitation

Effective dissemination is essential in order to make sure that the project and their effect will be visible. The NICOPA consortium will be disseminating the results of the project to multiple audiences, via different channels, at different intervals, etc. The aim of this dissemination strategy is to maximize the impact, visibility and credibility of the project. The objectives of the strategy are as follows:

- · Design, develop and regularly update the NICOPA website.
- Share information about the project and publish its findings via both traditional media (e.g. press relation) and digital media (e.g. social media)
- Transfer knowledge to industry about changes in academic area the creation of new training materials, educational resources and the new curricula.
- · Support the development of a strategy for the exploitation.

1. Strategy of activities

Dissemination & exploitation activities will address the following target groups and be organized following:

- Event-based dissemination. The project will organize a minimum of 3 annual dissemination
 workshops to inform and engage with the national academic communities. The Final project
 Conference will address a broader audience bringing together additionally policy makers,
 NGOs, education authorities, other stakeholders important to the best practice proliferation in
 the countries.
- Web-based dissemination. The project website will serve as a major interface and community building platform. In addition to being a repository to all tangible outcomes (training and teaching materials, webinars, results of the Feasibility Study, Repository entry point, methodological materials, efference materials, etc.), it will enable community activities (blogs, social networks interface, FAQ, etc.). On top of that, all partners will use other available web-based dissemination channels (own websites, mailing lists, community resources). All target groups will be addressed.
- Traditional dissemination. The project will produce the set of traditional promotional
 materials, it will publish major results in media (general public) and professional journals
 (academic community). Additionally, the project will organize several briefing meetings with
 policy making stakeholders to enable a multiplier effect.
- 2. Exploitation planning and exploitation of the results:
- Exploitation planning. The project will plan the exploitation (including how to bear running costs) of such principle outcomes as the set of developed methodological materials, the Repository, the website, etc. for the period of 3-5 years after the project end.
- Exploitation nature: public nature openly available for re-use.
- Involving into practical aspects of dissemination/exploitation: involving external stakeholders in Evaluation trial and in developing practical tutorials during workshops to ease external exploitation and uptake.

- The executive part of the Memorandum will include agreed and supported measures aimed at exploitation of the project results (concluded at the Final Conference).
- Activities after the end of the project: continuing further dissemination (as described above); developing ideas for future cooperation; evaluating achievements and impact; contacting relevant media; contacting policy-makers on request; cooperating with the European Commission by providing useful inputs to its dissemination and evaloitation efforts.

2. Components of the dissemination and sustainability plan of the

2.1. Target groups:

2.1. Specific audience (SA):

- Academic community: students, researchers, professors or other people involved in activities related to the project's topic and interested in following its development and outcomes):
- stakeholders, potential employers of graduates; experts or practitioners in the field (graduate engineers) and other interested parties;
- decision-makers at local, regional, national level;

Generic audience (GA):

 People who may not have professional interests in the project, but that in terms of visibility result to be very important for the project.

2.2. Channels:

- Traditional channels: local, regional, national press and media;
- Modern social networks, such as: Newsletter Facebook page; Twitter profile; Instagram; Research gate etc.

3. Activities:

- 3.1. In order to regularly update information on the project web-site to assign a "blogger" from each university.
- 3.2. Development of a publication plan by each of the universities (1 publication every 3 months) (SA)
- 3.3. Publication can be in local or national media channels (newspapers, information leaflets, brochures, other print media, TV etc.), on the Website of the university; social media networks (for instance, Facebook, Instagram, Twitter, etc.); every publication should contain a link to the project website www.nicopa.eu; every publication (scan of it if it's printed or link to it in the Internet where this publication is situated) should be sent to a stafknow@com-space de
- 3.4. Schedule of local sustainability activities and dissemination of the project results (one event every 3 months) each year of the project; the schedule should be developed by the regional coordinator, activities can be: local meetings of the partner universities, conferences, etc.
- 3.5 Development of a list of related universities and non-academic partners involved in the activities of the project; organizations interested in the project.
- 3.6.Development of a schedule of meetings for non-academic partners, such as other universities, organizations that might be interested in the project
- 3.7 Preparation of press releases of each of the meetings mentioned in 3.4. and 3.6.

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Schedule of dissemination events for 2018-2019



No	Dissemination event	Dissemination method	Period
1	Coordination meeting with Uzbek partner universities, NUU, Tashkent, Uzbekistan	Event-based	Nov., 2018
2	Project announcement on website of TIIAME, Tashkent, Uzbekistan	Web-based	Jan.,2019
3	Kick-off Meeting, TUB, Berlin, Germany	Event/web-based	March, 2019
4	Erasmus+ DSinGIS Awareness building seminar, SamSACEI, Samarkand	Event/web-based	April, 2019
5	Republican scientific-practical conference on "Innovative approaches to land management and protection: problems and creative solutions", TIIAME, Tashkent, Uzbekistan	Event-based, web- based	May, 2019
6	Erasmus+ DSinGIS Awareness building seminar, KSU, Nukus, Uzbekistan	Event/web-based	May, 2019
7	International Assembly 6th Plenary Meeting of Eurasia-Pacific Uninet, Vienna, Austria	Event/web-based	May, 2019
8	Result of training, TUB, Berlin, Germany	Web-based	Sep., 2019
9	Rectorate meeting, TIIAME, Tashkent, Uzbekistan	Event-based	Sep., 2019

Schedule of dissemination events for 2018-2019



N	1 0	Dissemination event	Dissemination method	Period
1	.0	GI Conference, SamSACEI, Samarkand, Uzbekistan	Event-based, web- based, traditional	Oct., 2019
1		Presentation about project and its achievements, seminar for the students, TIIAME, Tashkent, Uzbekistan	Event-based, web-based	Nov., 2019
1	.2	Scientific committee meeting, TIIAME, Tashkent, Uzbekistan	Event-based	Nov., 2019
1	.3	International GIS day, TIIAME, Tashkent, Uzbekistan	Event-based, web- based, traditional	Nov., 2019
1	.4	Information about project achievements on Scientific and technical journal "Sustainable agriculture"	Traditional	Dec., 2019
	.5	Information about project related events, achievements, materials etc. on the web of: - Erasmus+ DSinGIS project (http://geoinformatics.uz/dsingis/, http://dsingis.eu); - TIIAME (http://tiiame.uz); - Social media and channels (http://facebook.com, http://telegram.org); - mass media (http://kun.uz, http://uza.uz, http://uzbekistan24.uz,	Web-based	Regularly
		http://daryo.uz)		14

Schedule of dissemination events for 2020



Nº	Dissemination event	Dissemination method	Period
1	Coordination meeting with Uzbek partner universities, TUIT, Tashkent, Uzbekistan	Event-based	March
2	International Earth Day, TIIAME, Tashkent, Uzbekistan	Event-based, web-based	April
3	Annual Republican XIX practical-scientific conference of young scientists, MSc and BSc students on topic "Modern problems of agriculture and water resources", TIIAME, Tashkent, Uzbekistan	Event-based, web-based	May
4	International GIS in Central Asia Conference – GISCA 2020 InterCarto.InterGIS 2020, DSinGIS GI 2020 Conference, TIIAME, Tashkent, Uzbekistan	Event-based, web-based	June
5	Result of Summer School, Czech University of Life Sciences Prague, Czech Republic	Web-based	July
6	Presentation about project and its achievements, seminar for the students, TIIAME, Tashkent, Uzbekistan	Event-based, web-based	September
7	Result of training, Agricultural University of Plovdiv, Bulgaria	Event-based, web-based	October
8	Erasmus+ Info Day	Event-based, web-based	October
9	International GIS day, TIIAME, Tashkent, Uzbekistan	Event-based, web-based, traditional	November
10	Information about project achievements on Scientific and technical journal "Sustainable agriculture"	Traditional	December
11	Information about project related events, achievements, materials etc. on the web of: - Erasmus+ DSinGIS project (http://geoinformatics.uz/dsingis/, http://dsingis.eu); - TIIAME (http://tiiame.uz); - Social media and channels (http://facebook.com, http://telegram.org); - mass media (http://kun.uz, http://uza.uz, http://uzbekistan24.uz, http://daryo.uz)	Web-based	Regularly



LIST OF NON-ACADEMIC PARTNERS AND ORGANIZATIONS

Nº	Name of the organisations	Nº	Name of the organisations
1	Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan (MHSSERUz)	8	State Committee of the Republic of Uzbekistan on Land Resources, Geodesy, Cartography and State Cadastre (Goskomzemgeodezkadastr) (NICoPA partner)
2	State Committee of Forestry of the Republic of Uzbekistan	9	State Committee on Ecology and Environmental Protection
3	Inspection of state geodesic supervision	10	State Committee for Architecture and Construction
4	Ministry of Water Resources of the Republic of Uzbekistan	11	National center for state cadastre, geodesy and cartography
5	Ministry of Emergency Situations	12	State Uninar Enterprise "Geoinformcadastre"
6	State Committee for Roads	13	State land scientific-design institute (Uzdavyerloyiha)
7	State Committee for Geology and Mineral Resources	14	Ministry of Agriculture of the Republic of Uzbekistan



LIST OF NON-ACADEMIC PARTNERS AND ORGANIZATIONS (continuation)

Nº	Name of the organisations	Nº	Name of the organisations
15	Central Aero-Geodesy Enterprise	22	Uzbek Agency of automobile and river transport
16	Samarkand Aero-Geodesy Enterprise	23	Centre of Hydrometeorological Service
17	Land Resources and State Cadastre Departments (in 13 provinces)	24	Center for the Introduction and Development of Computerization and Geoinformation Technology
18	State scientific-production enterprise "Cartography"	25	International Water Managament Institute (IWMI)
19	Research Institute of Soil Science and Agrochemistry	26	Gesellschaft für Internationale Zusammenarbeit (GIZ)
20	Qishloq qurilish loyiha (Rural construction design institute)	27	Central Asia Regional Economic Cooperation (CAREC)
21	Scientific Research Institute of Roads	28	United Nations Development Programme (UNDP)



LIST OF POTENTIAL EMPLOYERS (Enterprises):

Nº	Name of the organisations	Nº	Name of the organisations
1	Central Aero-Geodesy Enterprise	10	(Goskomzemgeodezkadastr) (NICoPA partner)
2	State Committee of Forestry of the Republic of Uzbekistan	11	State Committee on Ecology and Environmental Protection
3	Inspection of state geodesic supervision	12	State Committee for Architecture and Construction
4	Ministry of Water Resources of the Republic of Uzbekistan	13	National center for state cadastre, geodesy and cartography
5	Samarkand Aero-Geodesy Enterprise	14	State Uninar Enterprise "Geoinformcadastre"
6	State Committee for Geology and Mineral Resources	15	State land scientific-design institute (Uzdavyerloyiha)
7	State Committee for Roads	16	State scientific-production enterprise "Cartography"
8	United Nations Development Programme (UNDP)	17	International Water Managament Institute (IWMI)
9	Ministry of Agriculture of the Republic of Uzbekistan	18	Land Resources and State Cadastre Departments (in 13 provinces)



LIST OF POTENTIAL EMPLOYERS (Enterprises):

Nº	Name of the organisations	Nº	Name of the organisations
19	Research Institute of Soil Science and Agrochemistry	21	Center for the Introduction and Development of Computerization and Geoinformation Technology
20	Centre of Hydrometeorological Service	22	Association of Farmers of the Republic of Uzbekistan
		23	Research Institute of Irrigation and Water Problems (SANIIRI)



LIST OF POTENTIAL EMPLOYERS (Academic):

Nº	Name of the organisations	Nº	Name of the organisations
1	Tashkent Institute of Architecture and Construction (TIAC)	10	Samarkand State Architectural and Civil Engineering Institute (SamSACEI)
2	Karakalpak State University named after Berdakh (KSU)	11	Turin Polytechnic University in Tashkent
3	Tashkent State Agrarian University (TSAU)	12	Urgench State University
4	Tashkent State Technical University named after Islam Karimov (TSTE)	13	Nukus Branch of Tashkent State Agrarian University
5	Andijan Branch of Tashkent State Agrarian University	14	Karshi Engineering Economic Institute
6	Bukhara Branch of TIIAME	15	Geodesy and cartography college in Tashkent
7	Karshi Branch of TIIAME		

PASO creation at **TIIAME**, Draft Document



УТВЕРЖДАЮ Проректор по учебной работе

положение о создании сервис-офиса (PASO) при факультете "Управления земельными ресурсами"

1. ОБШИЕ ПОЛОЖЕНИЯ

- 1.1.Сервис-офис (далее "PASO ") является структурным подразделением факультета "Управления земельными ресурсами".
- 1.2.PASO создан на основании приказа ректора № ____ от "_____ г. 1.3. Работники PASO назначаются и освобождаются от должности на основании решения

ректора по представлению Руководитель PASO. 1.4.PASO в своей работе руководствуется:

- законами Республики Узбекистан:
- указами и распоряжениями Президента Республики Узбекистан;
- постановлениями и распоряжениями Республики Узбекистан;
- уставом университета:
- настоящим положением.
- 1.5.В PASO должны быть документы и материалы по следующим вопросам:
- методические материалы по вопросам оказание услуг, базирующихся на глубоком освоении учебных материалов, создаваемых в рамках проекта новых курсов, дисшиплин:
- перспективы развития PASO;
- номенклатура видов выполняемых работ (услуг);
- единая государственная система делопроизводства;
- методы эффективного применения оргтехники и других технических средств управленческого труда;
- правила внутреннего трудового распорядка;
- правила и нормы охраны труда.

2. CTPYKTYPA PASO

- 2.1. Структуру и штаты PASO утверждает Ректор университета.
- 2.2. Руководство PASO осуществляет руководитель PASO.

3. ОСНОВНЫЕ ЗАДАЧИ PASO

- 3.1.Разработка и проведение курсов обучения и/или повышения квалификации различных
- 3.2.Способствование поступлению финансовых средств для поддержания и развития созданной проектом лабораторной базы.
- 3.3. Вовлечение студентов в активности PASO.
- 3.4.Обмен информацией, планирование/согласование совместных мероприятий с PASO других ВУЗов консорциума.

- 3.5.Создание сети PASO (поочерёдное дидерство участвующих университетов). подготовка Меморандума и плана совместных действий.
- 3.6.Создание совместного веб ресурса.
- 3.7.Создание информационной системы и базы данных для трудоустройства и поиска мест практики выпускников и студентов.
- 3.8.Оказание услуг, базирующихся на глубоком освоении учебных материалов, создаваемых в рамках проекта новых курсов, дисциплин.

4. ФУНКПИИ PASO

- В соответствии с возложенными на него запачами PASO осуществляет следующие
- 4.1.Создание базы данных нормативных правил и документов в предметной (акалемической) области факультета.
- 4.2.Разработка и проведение мероприятий по подготовке и повышению квалификации в предметной (академической) области факультета.
- 4.3.Организация тренингов, семинаров, конференций.
- 4.4.Повышение информированности целевых групп (напр., публикации в СМИ и на веб
- 4.5.Поиск спонсоров заинтересованных в развитии PASO.
- 4.6.Участие в координации вопросов в области развития учебных программ университетов по подготовке специалистов, переквалификации и повышении квалификации кадров.
- 4.7.Выявление и освоение технических новществ, научных открытий и изобретений. передового опыта, способствующих улучшению по подготовке и повышению квалификации для сотрудников PASO.
- 4.8. Анализ, поиск, привлечение источников финансирования деятельности.
- 4.9.Организацию ведения нормативно-справочной информации, относящейся к функциям
- 4.10.Обеспечение в пределах своей компетенции защиты сведений, составляющих государственную тайну, и иных сведений ограниченного распространения.
- 4.11.Осуществление в соответствии с законодательством Республики Узбекистан работы по комплектованию, хранению, учету и использованию архивных документов, образовавшихся в ходе деятельности PASO.
- 4.12.Возложение на PASO функций, не относящихся к компетенции PASO, не
- 4.13.Организация инженерно-технических работ по запросу / заказу заинтересованных

5. ITPARA

PASO для решения возложенных на него задач имеет право:

- 5.1.Запрашивать в установленном порядке от факультета информацию (материалы) по вопросам, входящим в компетенцию PASO.
- 5.2.Создавать экспертные и рабочие группы по вопросам улучшения и контроля курсов обучения и/или повышения квалификации различных целевых групп.
- 5.3.Проводить в пределах своей компетенции в установленном порядке переговоры со сторонними организациями, подписывать договоры.

- 5.4.Использовать средства, выделяемые на финансирование развития учебных программ университетов по полготовке специалистов, переквалификации и повышении квалификации кадров.
- 5.5.Вносить предложения по вопросам, входящим в компетенцию PASO, в виде проектов.
- 5.6.Привлекать к участию при разработке и проведение курсов обучение другие факультеты.

6. ВЗАИМОЛЕЙСТВИЕ СО СТРУКТУРНЫМИ ПОЛРАЗЛЕЛЕНИЯМИ ПРЕДПРИЯТИЯ

- 6.1.В процессе деятельности факультета PASO взаимодействует со следующими кафедрами и центром:
- Геолезия и Геоинформатика:
- Землепользование:
- Государственный кадастр:
- Совместный исследовательский центр "Геоинформатики";
- Кластер научных исследований и инноваций.

7. ОТВЕТСТВЕННОСТЬ

- 7.1.Соблюдать трудовое законодательства и иные нормативные правованые акты. содержащие нормы трудового права, локальные нормативные акты, условия коллектикного договора, соглашений и трудовых договоров.
- 7.1.Всю полноту ответственности за качество и своевременность выполнения возложенных настоящим Положением на PASO задач и функций несет Руководитель
- 7.2.Степень ответственности других работников устанавливается должностными
- 7.3. Руководитель и другие сотрудники PASO несут персональную ответственность за соответствие оформляемых ими документов и операций с корреспонденцией законодательству Республики Узбекистан.

8. КРИТЕРИИ ОПЕНКИ ЛЕЯТЕЛЬНОСТИ РАЅО

- 8.1.Своевременное и качественное выполнение поставленных целей и задач.
- 8.2.Качественное выполнение функциональных обязанностей.

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	/	

Preparation of premises for the new equipment



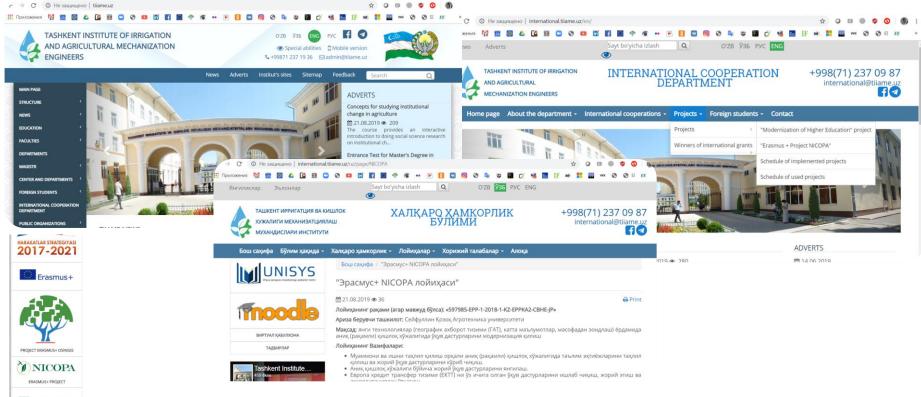


2 rooms in the building №5, 4th floor, TIIAME



Forum





A link to TIIAME website, where we posted information about the participation in the project and a link to the project webpage: http://international.tiiame.uz/oz/page/NICOPA







Regional Meeting with UZ Partner Universities was held at NUU on November 20, 2018, Tashkent, Uzbekistan.





Kick off meeting of the Erasmus+ NICOPA project was held at TUB on March 3-4, 2019, Berlin, Germany.







Field monitoring meeting of the Erasmus+ NICOPA project was held at NUU on May 2, 2019, Tashkent, Uzbekistan.







Presentation of the Project NICoPA by Mr.M.Reimov during Dissemination event of Erasmus+ DSinGIS: Doctoral Studies in Geoinformation Sciences" was held at Karakalpak State University on May 4, 2019, Nukus, Karakalpakstan, Uzbekistan.





Presentation of the Project NICoPA by Mr.M.Reimov during conference dedicated to "22 April - International Earth Day" on April 21, 2019 at TIIAME, Tashkent, Uzbekistan.







Presentation of the Project NICoPA by I.Abdurahmanov during the dissemination event on "The tasks carried out within the framework of the Erasmus+ DSinGIS project" was held at Samarkand State Architecture and Civil Engineering Institute named after Mirzo Ulugbek on April 9, 2019, Samarkand, Uzbekistan.







Presentation of the Project NICoPA by I.Abdurahmanov during the 6th Plenary Meeting of Eurasia-Pacific Uninet on May 17, 2019, Vienna, Austria.







Discussion of the Field monitoring meeting results of the Project NICoPA on August 4, 2019, NUU, Tashkent, Uzbekistan.







Training within the Erasmus+ NICOPA project was held at TUB on August 17-31, 2019, Berlin, Germany.







Presentation Erasmus+ NICOPA project on the Exhibition during the Erasmus+ Info day held at Tashkent State Technical University on October 4, 2019, Tashkent, Uzbekistan.







Presentation of the Project NICoPA by I.Abdurahmanov during the Scientific committee meeting on November 28, 2019 at TIIAME, Tashkent, Uzbekistan.



Other publication materials:

http://www.erasmusplus.uz/news/161.htm

http://www.erasmusplus.uz/Information-about-the-projects/Erasmus-plus/4-call/index.htm

http://tiiame.uz/oz/article/deuch

http://uzbekistan24.uz/uzk/yangiliklar/11/8904/

https://kun.uz/news/2019/03/09/ozbekiston-otm-germaniya-universitetlari-bilan-hamkorlikni-kuchaytirmoqda

https://daryo.uz/2019/03/07/ozbekiston-milliy-universiteti-nicopa-aniq-qishloq-xojaligida-yangi-va-innovatsion-

kurslar-loyihasi-uchrashuvida-qatnashdi/

http://uza.uz/oz/society/berlinda-zmu-mutakhassislari-ishtirokida-isti-bolli-loyi-a-a-06-03-2019

http://geoinformatics.uz/dsingis/2019/04/10/awarenness2/

http://geoinformatics.uz/dsingis/2019/05/05/awarenness3/

http://tiiame.uz/article/31-09-19-1

Quality group



Table 4. Quality group

#	Name, Surname	Occupation	Organization	Contact info (email)
1.	Bakhadir Mirzaev	Vice rector for Academic Affairs	TIIAME	bahadir.mirzaev@bk.ru
2.	Ilhom Abdurahmanov	PhD student, Department of Land Use, Faculty of Land Management	TIIAME	ilhom.isakovich@gmail.com
3.	Mamanbek Reimov	PhD student, EcoGIS Center, Faculty of Hydromelioration	TIIAME	maman1990@mail.ru
4.	Sharafatdin Narbaev	Dean, Faculty of Land Management	TIIAME	narbaev_sh@mail.ru
5.	Uzbekhon Mukhtorov	Senior teacher, Department of Geodesy and Geoinformatics	TIIAME	muxtorov-84@mail.ru
6.	Ilhomjon Aslanov	Assistant teacher, EcoGIS Center, Faculty of Hydromelioration	TIIAME	ilhomaslanov@gmail.com
7.	Zokhid Mamatkulov	PhD student in Geoinformatics, Faculty of Land Management	TIIAME	zohid3095@gmail.com
8.	Khojiakbar Khasanov	Assistant teacher, Department of Hydraulic structures, Faculty of Hydromelioration	TIIAME	kh.kh.khasanov@gmail.com
9.	Akbar Khamraliev	PhD student in Geoinformatics, Faculty of Land Management	TIIAME	khamraliyev@mail.ru
10.	Elbek Mamadaliev	MSc student in Precision Agriculture	TIIAME	
11.	Abdusoli Suyunov	Professor, Head of Department of Geodesy and Cartography (peer-reviewer)	Samarkand State Architecture and Civil Engineering Institute	suyunov_s@rambler.ru
12.	Utkir Shermanov	Specialist, Department of Computerization and Introduction of Geoinformation Systems (peer-reviewer)	"Geoinformcadastre" State Unitar Ent. (SUE)	shermanov.utkir@gmail.com
13.	Bakhodir Khakimov	PhD student in Land Management, Cadaster and Monitoring (Alumni)	Scientific Institute "Uzdaverloyiha"	mr.baxodir@mail.ru 36

Quality Assurance Plan



MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION OF THE REPUBLIC OF UZBEKISTAN

TASHKENT INSTITUTE OF IRRIGATION AND AGRICULTURAL MECHANIZATION ENGINEERS





QUALITY ASSURANCE PLAN OF THAME

for the Erasmus+ CBHE Project

"NICoPA: New and Innovative courses for Precision Agriculture"

for 2018-2021 years

Νè	Activity	Deadlines	Responsible people
1.	Establishment of Quality group	January, 2019	B.Mirzaev, I.Abdurahmanov
2.	Conducting a workshop on ESG & ECTS User's Guide documents	February, 2019	B.Mirzaev, I.Abdurahmanov
3.	Conducting a need analysis of university regarding curricula update/development	March, 2019	B.Mirzaev, I.Abdurahmanov
4.	Defining requirements of the labor market	April, 2019	Sh.Narbaev
5.	Formulating competences of specialists that will be valuable in the next 3-5 years	April, 2019	Sh.Narbaev, M.Reimov
6.	Conducting of surveys of target groups in order to learn about their opinion regarding curricula/courses/modules/modernization/development	April, 2019	Sh.Narbaev, M.Reimov, A.Khamraliev
7.	Development of indicators for quality assessment of implementation of each new/ modernized curricula or curricula package in the target field	August, 2019	I.Abdurahmanov, Sh.Narbaev
8.	Creating a list of 1-3 potential peer reviewers (organizations or persons)	September, 2019	I.Abdurahmanov
9.	Conducting negotiations with peer reviewers of when to send them materials for a peer review	September, 2019	I.Abdurahmanov

10.	Creating a list of curricula/courses/modules that should be modernized	October, 2019	Sh.Narbaev, M.Reimov
11.	Creating a list of new curricula/courses/modules that should be developed	October, 2019	Sh.Narbaev, M.Reimov
12.	Creating a plan of modernization and development of curricula/courses/modules	October, 2019	B.Mirzaev, I.Abdurahmanov
13.	Ensuring of communication with the labor market, potential employers and other organizations during implementation of the tasks	regularly	I.Abdurahmanov, Sh.Narbaev, M.Reimov
14.	Regular conducting of meetings, negotiations regarding the tasks	regularly	B.Mirzaev, I.Abdurahmanov
15.	Studying of teaching material received from the European consortium partners; summarizing, studying and disseminating of the information received on the trainings in the European universities	October, 2019	Z.Mamatkulov I.Aslanov, Kh.Khasanov, U.Mukhtorov
16.	Studying of national/international educational standards, as well as recommendation of Bologna process	November, 2019	B.Mirzaev, I.Abdurahmanov
17.	Studying of the latest (up to 5 years old) results of scientific research of foreign scientists	November, 2019 – March, 2020	Z.Mamatkulov I.Aslanov, Kh.Khasanov, U.Mukhtorov
18.	Implementation of modernization and development of curricula/courses/modules with participation of teaching staff that took part in the trainings in European universities	September, 2020	B.Mirzaev, I.Abdurahmanov, Sh.Narbaev, M.Reimov
19.	Feedback questionnaires from students/academics/ stakeholders	November, 2020	M.Reimov, A.Khamraliev
20.	Organization and implementation of peer review	December, 2020	I.Abdurahmanov. M.Reimov
21.	Providing self monitoring reports	in each 6 months	I Abdurahmanov, M Reimov
22.	Providing presentation based on the report	in each 6 months	I Abdurahmanov, M Reimov

Coordinator of the project at THAME



I.Abdurahmanov

Quality Indicators



Quality indicators

- Balance of student's workload: theory, practical work (not less than 50%), individual work, internship in a company, testing system
- Application of ECTS by developing new modules/courses/curricula or modernizing the old ones
- Usage of information about the latest (up to 5 years old) results of scientific research of foreign scientists in teaching materials
- Usage of the university online educational platform during the educational process
- 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.
- Partial teaching and implementation of reporting works in English
- Correspondence to the national norms (standards) of education
- Consideration of a new module by the university council of experts with the participation of potential employers (chair meeting, meeting of educational council)
- Publications of teaching staff or students, participation in conferences on the module's topics

Peer reviewers



A list of possible peer reviewers of the future new curricula:

Prof.A.Suyunov, Professor, Head of Department of Geodesy and Cartography,
 Samarkand State Architecture and Civil Engineering Institute

2. U.Shermanov, Specialist, Department of Computerization and Introduction of Geoinformation Systems, "Geoinformcadastre" State Unitar Enterprise (SUE)

Communication



We use following communications tools/methods to communicate with other PC Universities, EU partners, the Coordinator and other project participants:

Zoom, Skype, Imo, Telegram, WhatsApp, Google Hangouts, Duo, E-mail, Telephone

There is no any problem in communication

BUT...

Additional information



SUGGESTION:

In order to process an efficient project, it is important to organize online meetings between partner universities/organizations once in a month in following groups:

- International (with participation all main partners);
- Central Asia (with participation all CA partners);
- Regional (with participation all UZ partners).







Thank you for you attention!

MR. ILHOM ABDURAHMANOV

PhD student in Geoinformatics

ilhom.isakovich@gmail.com

