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Plan for Quality Control and Monitoring



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Abstract	<p>The Plan for Quality Control and Monitoring define quality requirements and provide mechanisms for collection, monitoring and analysis of project management. According to the Project Quality Assurance Strategy the aim is to ensure that the project processes and outcomes will match the expected quality standards and indicators. The following tasks will be part of <i>Quality Control Manual Metrics for the study and LLL programs</i> and it will consist of internal monitoring and quality assurance (action plan, questionnaires) and external quality assurance (evaluation). Metrics will be set through qualitative and quantitative indicators. All internal and external reports and other indicators will be submitted in the final dissemination report about quality assurance.</p>
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VERSIONING AND CONTRIBUTION HISTORY

Version	Date	Description	Responsible members
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ABBREVIATIONS

AGROKAZ	Development of bachelor program in agroecology with dual education in Kazakhstan
DE	Dual education
HEI	Higher Education Institution
LC	Local Committee
SC	Steering Committee
QC	Quality Committee
WP	Work package
WPL	Work package Leader



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Objectives

Defining *Plan for project quality control and monitoring* is a task within WP6 entitled “Quality Control and Monitoring” of the AGROKAZ project. The goal of this activity is to develop the quality control and monitoring plan. This plan will include project processes, policies, goals and creation of Management Quality Manual according to ISO 9001:2008 standards. Project partners will be acquainted with the project quality standards – ISO 9001:2008. All partners will determine the quality specifications and evaluation criteria at the SC (Steering Committee) meetings. The Manual will define the minimum quality requirements and provide the mechanisms for collecting, monitoring and analyzing the management of the project, its implementation and deliverables.

The quality control and assessment plan implementation will be on the agenda of each SC meeting for progress review and updates based on beneficiaries and stakeholders' feedback to reduce any misunderstandings within the partnership.



1. Introduction

The aim of quality assurance framework is to ensure that the project processes and outcomes will match the expected quality standards and indicators. *Plan for project quality control and monitoring* contains all the relevant information about Quality Expectation, Quality Assurance Strategy and Metrics for AGROKAZ. It is intended to be a work of reference for the involved project participants and facilitates project management by providing structured processes that can be followed. During the project, quality control will be carried out according to developed plan. Quality control of the project will be done through a series of evaluation meetings.

The purpose of training under the dual program is not only to teach skills for performing certain jobs, but also to form the ability for teamwork, social competence and responsibility. Also, strengthening the practical orientation of teaching by eliminating the main shortcomings of traditional forms and methods of teaching. It is important to reduce/eliminate the gap between theory and practice by bringing the training as close as possible to the specific requirements of production. In this way, employers will get exactly the kind of experts they need. After the implementation of the dual education system, students/future experts will be encouraged to study more consciously and with interest/motive.



2. Quality Expectations

The Management Quality Manual formalizes the approach that will be followed by the partners of the AGROKAZ project to ensure the highest possible quality of the project activities, outputs, outcomes and project management.

2.1. Quality of the project implementation

The project aims to develop and implement the sustainable dual study undergraduate program in Agroecology at three universities in Kazakhstan as well as to establish lifelong courses for professionals. In the modern agriculture, developing resource-saving technologies for the cultivation of agricultural crops, methods for producing high-quality crop products, effective ways of reproducing soil fertility, and methods of agroecological monitoring allows not only to survive despite all challenges, but also to successfully deal with fierce competition. The main goal of the project is to reduce the gap in the structure, volume and quality of labour resources from the real requirements of specific farms/enterprises and to educate professionals with competencies related to modern technologies. The (re)design of the educational program in agroecology in Kazakhstan through establishment of sustainable, internationally oriented dual study program will make students better prepared for all challenges facing agriculture in the future. After adequate preparation and curriculum development, the program (new bachelor and lifelong courses) will be implemented.

The general objective of this project is to implement, test and validate AE education into study programs at HEIs in Kazakhstan through cooperation with industry. Creation of more universal educational trajectories (curricula) through dual DE education, and better connection between HEIs and companies in Kazakhstan is in line with the action of Capacity-Building in the field of Higher Education (CBHE). DE will improve the competences of



students and enhance their competitiveness at labour market and the competencies of the teachers. Additionally, it will bring better and more intensive cooperation between industry and higher education and it will contribute towards increase of innovation capacities. Besides, students on dual education will be the channel for transferring knowledge and ideas from companies to academia and vice versa.

The overall aims of the project are:

- 1) Modernization and innovation of the agroecology education in Kazakh HEIs to enhance its relevance for the labour market and the society.
- 2) Developing, implementation, testing and validating new techniques in dual AE study programs at three HEIs in Kazakhstan in accordance with EU priorities for this country.
- 3) Contributing through education process to agroecological transition of agricultural system, adapted to climate change and respectful of biodiversity, and the sustainable and integrated management of the resources.

2.2. Quality of project deliverables, events and promotion

The project deliverables are classified into tangible such as reports, publications, manuals, printed and electronically available promotional material as well as intangibles deliverables in form of organized events (conferences, trainings, study visits, info days etc...) A common quality expectation for all deliverables is their relevance to reach the overall objective and the specific objectives, with a further focus on their development in an efficient and effective manner. Timely delivery following the project work-plan as identified in the Application Form as well as the Partner Agreement is expected.



All events within the project should be organized professionally. The organizers should provide in due time to the participants the draft agenda and a note on the logistics (informing about travel arrangements, venue, suggested hotels, etc.). The meeting organizers ensure smooth registration processes (including list of attendees) and the implementation of the meetings respecting appropriate time for event sessions and breaks as well as the availability of all necessary materials. The organizers will also ensure the recording of minutes of the meetings. Where appropriate also feedback forms will be distributed among participants and event reports related to feedback forms will be prepared by organizers. Power point presentation should be prepared using appropriate template. Each event should be documented when appropriate by presentations (upon the approval of the presenter) or video materials (upon approval of authors). Based on obligations of the beneficiaries, the partners shall inform the public, press and media (internet included) of the event which must visibly indicate "with the Co-funded by the European Union" as well as the graphic logos of the project and Erasmus+ Programme. Posters, roll-up and other promotional materials shall be displayed during the event.

One person will be selected from each partner institution, who will be responsible for the visibility of project activities, i.e. activities related to public relations and promotion of the project activities at the national / institutional level.

The website of the project aims to be main point for digital communication with target groups and all stakeholders. It will be developed in English, Kazakh and Russian language. Profiles on social media is digital medium for two-way communication with stakeholders and all target groups in a project. It will be developed in English language. Both website and profiles will incorporate project identity kit.



3. Project Quality Assurance Strategy

Project Quality Assurance Strategy aims to ensure that the project processes and outcomes will match the expected quality standards and indicators.

- 1) Internal monitoring and quality assurance
- 2) External quality assurance - evaluation
- 3) Final dissemination report

The quality assurance strategy of the project will ensure that quality is planned for both the deliverables and activities. This project will consist of implementing the project's internal guidelines for reporting and reviewing procedures to ensure the project's quality assurance. It will focus on assessing quality assurance and monitoring and evaluating project management, communication, dissemination strategies, working meetings, and SC meetings. It will review the quality of project outputs in the framework of quality indicators approved by all the partners. The monitoring of project progress and quality of outputs in each WP will ensure the high quality of project outcomes and will guarantee the compliance of project results with project objectives.



3.1. Internal monitoring

Internal monitoring will be carried out by all partners, including self-evaluation, questionnaires /satisfaction surveys of target groups (e.g. participants of dissemination and events). The AGROKAZ platform and homepage will also be used for monitoring of project activities.

Internal monitoring	
Project Monitoring	Quality Assurance via Metrix
Deliverables WP1-WP7	Questionnaires
Project SC members	<ul style="list-style-type: none"> ○ Students ○ Teachers ○ Companies
Dissemination of project activities and results - available on AGROKAZ platform and homepage	

One person will be selected from each partner institution, who will be responsible for the project monitoring (quality assurance of WP deliverables)

Quality Committee

University of Novi Sad	BE 001	UNS	Bojan Matkovski
Kostanay Engineering and Economics University Named after M. Dulatov	BE 002	KEnEU	Saule Koblanova
Kazakh National Agrarian University	BE 003	KazNAU	Zhanar Kussainova
Toraighyrov University	BE 004	PSU	Nazymgul Mustafaeva
Dimokrito Panepistimio Thrakis	BE 005	DUTH	Spyridon D. Koutroubas



Sveuciliste Josipa Jurja Strossmayera	BE 006	UNIOS	Tihana Sudarić
Agricultural experimental station Zarechnoye	BE 007	Zarechnoye	Saniya Tulkubayeva
Kazakh research institute of plant protection and quarantine named after Zhazken Zhiyembayev	BE 008	KRIPPQ	Alibek Uspanov

Project evaluation is an executive summary of quality assurance throughout the project that includes preventive and corrective measures taken in order to achieve project goals. According to the internal monitoring and quality control, the project management team, if necessary, will take measures to improve the quality of the project realization. Main tasks that will be performed within this activity are: 1. Project key performance indicator evaluation, 2. Project goal success rate evaluation, 3. Partner evaluation through internal interviews. 4. Reporting.

Quality Assurance via Metrix formalizes the approach that should be followed by the partner universities when preparing, accrediting and performing a Dual Study Program. Goal of the project is to ensure the highest possible quality of the developed new dual curricula and realization of the dual study programs and cooperation among the students (1), teachers (2) and companies (3).

The beneficiaries of the project outputs are: students (about 100 students per year: PSU and KazNAU 40 students per year, KEnEU 20 students per year), teachers, participating universities, companies, professionals (around 10 per year), and higher education system in Kazakhstan as a whole. More precisely, not only the Kazakh system of higher education, but society as a whole will benefit greatly, since through dual higher education the problems of providing qualified personnel to the agricultural sector are solved. Also, the feedback questionnaires will be used throughout the duration of the project



3.2. External monitoring

External evaluation will be conducted by two experts from the outside of consortium (from two countries). They will be engaged in order to evaluate the quality of the developed BA dual and LLL programs. Two partners from program countries will publish the public call for two experts in the field of dual education and AE. Two experts will have two months to evaluate the program and to write the report on external evaluation. The report will be publicly available on AGROKAZ website. On the basis of the report, consortium will correct the study program if necessary.

3.3. Final dissemination report

All internal and external reports will be submitted to SC, which will generate and submit final report about quality assurance.

The quality assurance includes four activities of quality control which will deliver the final outcome of the project. The purpose of these activities is: development of quality and monitoring plan, defining metrics that will be used to analyse, internal project monitoring and control, monitoring metrics that will be used to analyse implemented dual study program. The quality control and monitoring process will be performed following the conditions and requirements of the project, especially relying on the experience of EU partners that have successfully implemented dual undergraduate AE study programs. During the course of the project, quality control will be carried out according to developed plan. Quality control of the project will be done through a series of evaluation meetings, especially through a series of LC meetings. At these meetings the project directions can be discussed, and eventual corrections can be initiated. The kick-off meeting at the beginning of the project will assure that all project members will have the same notions about the quality assurance process. All partners will generate and submit internal reports about performed quality control activities in AGROKAZ. They will be in contact with each other and resolve problems about reaching of milestones and deliver final dissemination report.



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The final dissemination report is to be prepared in last stages of the project. At the end, final conference will be organized with the aim of demonstration of achievements of the project and working out plans for the sustainability of project result.



4. Metrics for AGROKAZ

Working in the DE methodology will be evaluated by the participants that are directly involved in this process: students, teachers and experts. All of these direct participants will be asked about problems that they encountered during the implementation of the program. Moreover, they should point out possible ways for further development of the education methodology.

Students will give their opinion about the significance of the implemented programs, as well as the competencies that they have acquired. Teachers will be asked to identify the advantages of the methodology, which is to identify the differences between students who enrolled the DE program and those who did not. Experts who attended LLL courses will be asked about quality of new LLL courses. The feedback information will be included in the final analysis at the last meeting of management team at the end of third project year. All these opinions will help that the AE program can be slightly adjusted if needed, before the second generation of students enroll the program.

Plan for Quality Control and Monitoring will set and define metrics for AGROKAZ according to the practices and experiences of the successful dual AE study programs and LLL courses. This material will contain the list of measurable indicators about the quality of dual study program in AE and about the project as a whole. The following tasks will be a part of this activity:

- defining metrics for operation of the study program,
- defining metrics for number of contacts with companies,
- defining metrics for number of engaged students,
- defining metrics for AGROKAZ influence on preparing for a carrier,
- defining metrics for employability of students.



Special set of metrics will be defined through system of learning analytics for measurement of students' performance at study program and courses individually. Workshop will be organized to introduce the institutions organizing study program and LLL courses to set quality metrics.

4.1. Qualitative indicators – curriculum

Compatibility with the dual study program curriculum objectives following a five-point scale (5 – in full compatible, 1 – no compatible).

Nº	Qualitative indicators	1	2	3	4	5
1.	The objectives of dual education are evident.					
2.	The dual curriculum meets project objectives.					
3.	The dual curriculum meets the objectives of the academic study program.					
4.	The dual curriculum is appropriate for the target group of students (content, workload, class schedule).					
5.	The dual curriculum is feasible both at university and in enterprises.					
6.	The dual curriculum is well structured.					
7.	The dual curriculum provides a good balance between academic studies and practice.					
8.	The sequence of subjects is consistent and provides an opportunity for developing knowledge and skills.					
9.	The weight of the courses is accordingly distributed within each semester					
10.	The dual curriculum ensures the knowledge and skills matching the current qualification profile in IAR.					



11.	The dual curriculum ensures the acquisition of professional skills and key skills for working in a business environment.					
12.	The schedule of the dual curriculum enables students to master the courses in terms of their quantity and quality.					
13.	The dual curriculum allows students to master the workload both in the university and enterprise.					
14.	The dual curriculum offers students the opportunity to shape their studies according to their interests.					
15.	The dual curriculum enables students to actively participate in the learning process					
16.	The dual curriculum allows students to work on multidisciplinary projects in a real-life business setting.					
17.	The dual curriculum meets the current skills demands of industry.					
18.	The dual curriculum corresponds to current trends in higher agroecology education.					
19.	The dual curriculum is in conformity with National and European higher education regulations.					
20.	The dual curriculum provides an opportunity for faster realization on the labour market and against youth unemployment.					



4.2. Qualitative indicators – organization of dual study program

Compatibility with the dual study program curriculum objectives following a five-point scale (5 – in full compatible, 1 – no compatible).

N°	Qualitative indicators	1	2	3	4	5
1.	Repeated succession of theoretical and practical phases and continuous reflection.					
2.	The practical phases go beyond the usual scope of a professional internship both in terms of time and in terms of specification of the content					
3.	The acquisition of curricular defined competences takes place at two learning locations and is characterized by the combination of science and implementation orientation					
4.	The company commits to a training obligation and is able to convey the intended course content.					
5.	The organization of the theoretical and practical phases provides the framework for a tolerable total workload (h) for students.					
6.	The admission procedures for university and company are in the responsibility of the respective partners and are coordinated with each other					
7.	The relationship between the three partners (student, university and company) is subject to binding regulations for quality assurance.					
8.	There is a continuous training partnership with appropriate remuneration for internships as part of an employment relationship, which is ideally continued consistently for at least two thirds of the study period.					



4.3. Quantitative indicators – respondents

Indicators		Respondents
N° of contacts with companies		10
N° of enrolled students		50
N° of company mentors		10
N° of academic mentors (teachers)		20
N° of questionnaires for students on Dual Study programs		50
N° of questionnaires for students of LLL program		5
N° of questionnaires for companies		10
N° of questionnaires for company mentors		10
N° of questionnaires for academic mentors (teachers)		10

- defining metrics for the work of the study program - the proportions of teaching (60% and professional practice (40%) will be defined



- defining metrics for the number of contacts with companies - contacts will be defined by defining metrics for the number of engaged students (student satisfaction will be investigated after the first year of study)
- definition of student employability metrics (the employability of students in the field of agroecology will be investigated through secondary databases)



5. Annexes

The following tasks will be part of *Quality Control Manual Metrics for the study and LLL programs* and it will consist:

Metrix for:

- Internal monitoring and quality assurance
 - Internal monitoring plan – action plan
 - Questionnaires – for students, LLL students, teachers and companies
- External quality assurance – evaluation/ questionnaires

Defining Metrix for DE methodology will be evaluated by the participants that are directly involved in this process: students, teachers and experts. All of these direct participants will be asked about problems that they encountered during the implementation of the program. Moreover, they should point out possible ways for further development of the education methodology. Students will give their opinion about the significance of the implemented programs, as well as the competencies that they have acquired. Teachers will be asked to identify the advantages of the methodology, which is to identify the differences between students who enrolled the DE program and those who did not. Experts who attended LLL courses will be asked about quality of new LLL courses. The feedback information will be included in the final analysis at the last meeting of management team at the end of third project year. All these opinions will help that the AE program can be slightly adjusted if needed, before the second generation of students enrol the program.