Network on doctoral education and research for sustainable agriculture and future farming systems

Russian and Kazakh 3rd Cycle Education Systems in Agriculture with References to the European Higher Education Area and Bologna Process. Background paper

Activity within the project 'Enhancement of Postgraduate Studies on Sustainable Agriculture and Future Farming Systems'

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1. Work Package task and background of this paper

The needs analysis prior to the submission of the proposal for the project 'Enhancement of Postgraduate Studies on Sustainable Agriculture and Future Farming Systems' (SAGRIS) revealed demand and challenges for improving 3rd cycle education in the agricultural related fields in the Russian Federation and in the Republic of Kazakhstan with respect to different aspects and different areas of influence. Some of them – such as structural and institutional changes or financing – are not within the scope of a curriculum development project and the main focus of SAGRIS is in the development of modules for doctoral students. But also for improving and adjusting educational offers in terms of content, teaching resp. learning methods, supervisors skills', learning and research resources and embedding the training offers into the study and research courses, an understanding of the organisation and structure of the 3rd cycle education and recent or current reform processes is needed.

SAGRIS work package 4 - Network on doctoral education and research for sustainable agriculture and future farming systems – was included into the project to serve for a better understanding of the situation, to detect and name needs for action for improving doctoral education and research at agricultural faculties. The work package (WP) network activities shall contribute in a way, that they connect the short-term outputs of the project with long-term strategies. The work package combines activities of analysis and evaluation of the current situation with networking activities among and beyond the partnership. This is based on the assumption that for realising and promoting high quality agricultural education and research, networking and cooperation among – otherwise competitive – higher education institutions will be beneficial as well as with partners from research and educational accreditation / quality assurance agencies.

This paper is the first one of an intended series to share the results of SAGRIS activities on situation analyses and strategy development. In addition to the elaboration of the background paper the compilation of a glossary on frequently used terms in higher education started. The specific intention of this glossary is to reveal where same terms are used with different understanding within the educational wording of official publications from European Educational Institutions, and from the Russian Federation and the Republic of Kazakhstan. Vice versa the glossary shows if other or no terms exist. This glossary as a work-in-process can be followed up on www.sagris.org.

2. Brief description of 3rd cycle education in different countries

A first insight in the existing situation and structure of 3rd cycle education was given during the steering committee meeting at project start by presentations from Erzhena Imeskenova, Buryat State Academy of Agriculture, Russia, Aliya Ismailova, S.Seifullin Kazakh Agro Technical University and Michal Lostak Czech University of Life Sciences Prague. The following brief summary is based on this exchange and was especially revised for the description of the PhD education in the Russian Federation and the Republic of Kazakhstan.





2.1. Doctoral education in EU countries

As Marketa Sedmikova (CZU) explains in a comparative description of doctoral studies in European countries, these 3rd cycle studies are based on the common principles adopted in the Bologna process. The process is not primarily aimed at unifying individual national systems of doctoral studies, but is aimed at increasing mutual permeability while preserving the diversity of national systems. Therefore, there are differences in European countries, which manifest themselves not only between individual countries, but also in the parallel existence of two different types of doctoral studies in one country.

As one example of European Countries, the 3rd cycle education in Czech Republic was presented during the Steering Committee Meeting, February 2020. This was completed afterwards also by a description of an overview on Polish 3rd cycle education (see chapter 4). However, there is no one common or uniform EU example to be presented.

2.2. Doctoral education in the Russian Federation

Before March 2022, the Russian laws and regulations such as the Federal State Educational Standards of Higher Education in the Field of Training of highly qualified personnel defined the 3rd cycle education as a postgraduate study programme to train highly qualified doctoral students/young researchers— scientific and pedagogical — in the framework of full-time and part-time education of 3 or 4 years and 180 or 240 credits. The volume of a full-time study program in one academic year encompasses in general 60 credits. The list of scientific specialties and areas of higher education training currently includes 55 areas of training of highly qualified personnel (PhD) and are determined by the Ministry of Higher Education and Science of the Russian Federation.

The mentioned differences in ECTS result because 3 years of full time programme with yearly 60 ECTS sum up to 180 ECTS and 4 years studies to 240 ECTS. Postgraduate students, who study on the base of an extern ,fast' arrangement for an individual study plan, can get more ECTS per academic year but not more than 75 ECTS per academic year. The total ECTS for them is the same as for regular postgraduate students (180 or 240 ECTS). The number of ECTS depends on the area (specialization) of the postgraduate study.

On March 1, 2022 the following regulations were put into force:

- Order No. 951 of the Ministry of Education and Science of the Russian Federation of October 20, 2021 "On endorsement of the Federal State Requirements to the structure of PhD educational programmes, their implementation and development considering different forms of training, educational technologies and characteristics of special categories of PhD-students". Valid until March 1, 2028;
- Governmental Decree of the Russian Federation № 2122 of November 30, 2021 "On Approval of the Regulations on training PhD-students".

The current regulatory framework on training doctoral students comprises also





- the Order of the Ministry of Education and Science of the Russian Federation No. 118 of February 24, 2021 "On endorsement of the vocabulary of the scientific professions in which the degrees are awarded",
- amendments to the Regulations No.1093 of the Dissertation Advisory Committee operation and the defending of theses endorsed by the Ministry of Education and Science of the Russian Federation of November 10, 2017 and
- the Order No. 786 of August 24, 2021 "On establishment of the correspondence of scientific and pedagogical personnel training areas in postgraduate (adjunct) studies to scientific specialities, provided by the nomenclature of scientific specialities, for which scientific degrees are awarded", approved by the Ministry of Education and Science order № 118 of February 24, 2021.

Doctoral programs are elaborated in line with scientific majors (scientific professions) specified and listed in the vocabulary of scientific majors (scientific professions) the degrees are awarded to. The doctoral programmes are endorsed by the Ministry of Science and Higher Education of the Russian Federation. That means, since the academic year 2022-2023, higher educational institutions which provide doctoral education, enrol doctoral students in line with new Federal State Requirements. Federal State Requirements are mandatory requirements to doctoral educational programmes and further training programs endorsed in line with the Federal Law "On Education in the Russian Federation".

Since 2013, since the current Federal Law No. 273-FZ of December 29, 2012, came into force, postgraduate school has become the 3rd cycle of higher education and can be understand as a PhD study programme. The aim is to conduct academic activities and individual research in the frame of existing majors and profiles.

The 3rd cycle of higher education in Russia to train scientific and pedagogical staff is known under the term 'Aspirantura'. The participants of 3rd cycle study programmes are enrolled full-time or part-time students (aspirants) whose studies aim at scientific research and preparing a scientific qualification work. The study programme is structured, includes mandatory (basic) and elective/optional parts as well as research work and the training for teaching activities (didactics). Mandatory (basic) parts are obligatory for all students regardless of the research topics, whereby elective/optional parts depend on the scientific specialization. Part of the mandatory elements is also the final examination. It consists of the state exam and a scientific report on the main results of the scientific qualification work (dissertation), written in accordance with the requirements established by the Ministry of Education and Science of the Russian Federation. Successfully completing the state exam and the defence of a scientific report is awarded with a diploma. It attests the completion of the graduate education.

Since March 1, 2022, a new concept of doctoral education has been introduced. Now it focuses on enhancement and strengthening of research thus increasing its effectiveness and improving the quality of PhD theses. The necessity to prepare a thesis and its further evaluation is regarded as a prerequisite for defending doctoral thesis and completing doctoral studies. Doctoral students will receive the Evaluation Board decision (paper document) "on dissertation compliance with the criteria specified for the degree of Candidate of Sciences" and certificate of graduation from doctoral course. If the Evaluation Board does not evaluate positively the dissertation, the doctoral student will receive a certificate that he or she studied on PhD-programme.





Besides the 3rd cycle education conducted and certified at the higher education institutions the Russian academic system is characterised by qualifications that build up on this, which is the ,Candidate of Sciences' and the ,Doctor of Sciences' (Fig. 1).

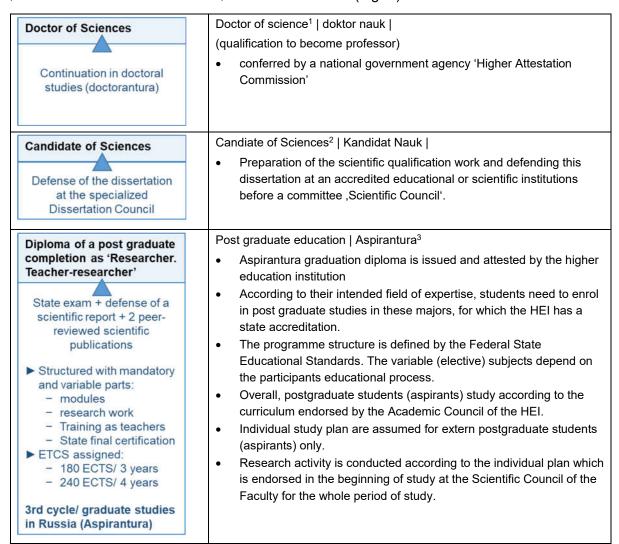


Figure 1: general scheme of academic career degrees in Russian Federation

Note: In the Russian Federation, the terms of "Academic Council of HEI" and "Scientific Council" are different. The Academic Council (or scientific council) is the highest working body of the university management. It provides general guidance to the university on the most important issues of its activities and future development. The chairman of the Academic Council is the rector of the university. It is not a council for awarding academic degrees (Dissertation Council). The Dissertation Council (or Dissertation Board) is a special body established on the basis of a higher educational institution or scientific organization for reviewing candidate and doctoral theses, as well as making a decision on awarding an academic degree.

¹ Doctor of Sciences is Russian equivalent to Habilitation/postdoctoral qualification in Europe

² Candidate of Sciences is Russian equivalent to PhD.

³ Aspirantura is similar to structural doctoral programmes in Germany (strukturierter Promotionsstudiengang). Aspirantura is the next level after MSc. Aspirantura graduates receive a qualification "Teacher-researcher", but not an academic degree. (This can be compared to a certificate about graduation from the structured doctoral programme in Germany, without defense of thesis and receiving PhD degree).





2.3. Doctoral education in the Republic of Kazakhstan

The educational programs of the third cycle (PhD) in the Republic of Kazakhstan according Bologna were introduced in 2005. Doctoral studies in Kazakhstan are implemented in accordance with the State Compulsory Standard of Postgraduate Education, approved by Order Minister of Education and Science. Aim is to train personnel for scientific, pedagogical and (or) professional activities. Two degrees are distinguished, which is the degree of a 'Doctor of Philosophy' (PhD) and the degree of a 'Doctor in Profile' respectively. Both involve fundamental educational, methodological and research training. The PhD has a scientific and pedagogical focus and its studies deepen relevant areas of science for the system of higher and postgraduate education and scientific work. For a Doctor in Profile, research deepens the relevant fields of science in the relevant field of professional activity, related to areas in the economic and social sphere.

Doctoral programmes or doctoral studies are conducted only in full-time form of study in 12 specific areas of training and lasts at least 3 years. Applicants for admission to doctoral studies must have a master's degree, one year of work experience and an international certificate confirming their knowledge of a foreign language.

Doctoral studies encompass an obligatory workload of at least 180 academic credits and consist of:

- Educational component (30%),
- Scientific component (64%), including research and internship for a doctoral student, scientific publications, writing and defence of a doctoral dissertation.

The full academic load of one academic year corresponds to 60 academic credits and corresponds to 1800 academic hours for one academic year.





3. Summarized initial problem analysis of project partners

Following areas of improvement for the scientific education were stated during the problem analysis of the proposal elaboration and is based on the insight of the project partners. Similar problem statements can be found in literature or press. To elaborate the areas of satisfaction or success will be a further step of a qualitative analysis.

3.1. Russian Federation

General

- as a whole, only 18% of dissertations for obtaining degree of candidate of sciences are defended on time⁴. (this is the overall average for the country and for all 55 training areas).
- For the universities represented by the project-partners according to the annual statistical reports of universities, this figure is 45-50%, which is better than the average, but still indicating that a large number of candidate dissertations is not defended on time

Quality of PhD studies

The evaluation of training in postgraduate studies and preparation of PhD theses revealed the following shortcomings

- Need for
 - development of modules focused on postgraduate students working on a dissertation;
 - training on advanced research methods, research design, scientific writing
 - training in writing publications and grant applications
 - inter-, transdisciplinary and applied approaches
- poor qualification of staff with regard to advanced (inter-)disciplinary trends
- insufficient internationalisation of the doctoral education
- low integration of research results into the global academic environment
- limited possibilities of students and scientific staff to participate in internship programs.

Funding and structural problems

- lack of funds for PhD students; reduced number of state-funded study places
- lack of funds for project work, international travel, literature, equipment
- high average age of academic staff
- lack of continuity between educational programs
- reduced number of dissertation/scientific councils as well as difficulties in defending a PhD theses to such a council and to achieve the ,Candidate of Science'
- HEIs presently fail to be centres for innovations and to connect science, education and business, which is an aim of the agricultural education strategy
- insufficient integration of agricultural universities with other national and international research and education institutions

⁴ https://www.pnp.ru/social/vypusknikov-aspirantury-obyazhut-zashhitit-dissertaciyu.html





3.2. Republic of Kazakhstan

General

- In average for the Republic of Kazakhstan according to 2019 data, 249 people (27.5%) of the 905 doctoral students, who completed their studies, have defended their thesis.
- In partner universities, the proportion of defended doctoral students is from 30 to 50% (KATU 56.3%, KazNAU 38.4%, WKATU named after Zhangir Khan 30%, KRU named after A. Baitursynov 50%).

Quality of PhD studies

Critical issues to improve doctoral education are:

- poor theoretical and methodological training;
- insufficient level of interdisciplinary training and cooperation;
- insufficiently level of research skills among doctoral students;
- insufficient use of innovative methods when conducting research studies of doctoral students together with the scientific supervisors;
- poor knowledge of academic English by doctoral students.

To improve the quality of doctoral studies in Kazakhstan, it is necessary to perform the following actions:

- development of educational programs for doctoral studies in cooperation with foreign universities:
- involvement of foreign scientists in the educational process of doctoral studies;
- providing support in the creation of start-up projects and stimulating research and innovation activities of doctoral students;
- improving the knowledge of foreign languages for the implementation of scientific communication and international cooperation;
- the formation of digital competence of teachers and the development of digital teaching materials

Funding and structural problems

- limited access to equipment, material and literature
- lack in finances for additional training and young scientists e.g. to conduct internships or data collection abroad.
- limited research capacities, lack of funds for research and conference participation
- over the past 10 years, the number of scientific personnel has decreased by 8%, and the average age of researchers with a scientific degree reached 57 years (according to statistical data of partner universities);
- requirements for international publications.





4. Scheme to compare and analyse the 3rd cycle education

4.1. Salzburg principles on 3rd cycle education

The three presentations during the 1st SAGRIS steering committee meeting showed the difficulties to systematically describe 3rd cycle education in a way, that equal, similar and different features can be easily understood. Therefore, a template was developed to compare and analyse the 3rd cycle education systems in RU, KAZ and EU-countries. It is based on existing comparative analyses that refer to the Bologna reform process and the European Higher Education Area.

ECTS, Diploma Supplement and national qualifications frameworks (NQF) are considered as the main Bologna tools⁵. For Kazakhstan the NQF concept was introduced and updated in 2016.⁶ According to the National NQF Inventory there is no separate law or decree on an NQF in the Russian Federation, but the Federal Law of 3 December 2012 N 236-Φ3, sets out definitions of qualifications and occupational standards in the Labour Code and in the Law "On Technical Regulation".⁷ The NQF included 9 levels.

Since the description of national pathways for 3rd cycle studies often refer to the Bologna process, the following table incudes also the information on the 3rd cycle determined by the agreements of the European Higher Education Area (EHEA).⁸ The agreement on doctoral programmes as the third cycle roots back on the 2003 Berlin Ministerial Communiqué. Before that, the Bologna Declaration referred to two cycles which include all programmes of tertiary education ("The second cycle should lead to the master and/or doctorate degree as in many European countries"). As the first and second cycle, the third cycle is described with the Dublin Descriptors. However, no credits or range of credits have been assigned to it. Generally, in the framework of the Bologna process doctoral studies are referred to as the third cycle.

The third cycle includes a broad variety of doctoral phases from pure (doctoral) study programmes to fully independent research. These models have various implications for

- the structure of doctoral studies (free, partially or fully structured)
- the responsibility taken and the resources invested (e.g. staff and facilities for taught parts of the programme) by the home institution
- · possible links with enterprises and/or professional bodies
- the relation of mandatory and optional elements for the doctoral student
- the status of the doctoral candidate (student, employee, researcher).

⁵ https://eacea.ec.europa.eu/national-policies/eurydice/content/european-higher-education-area-2018-bologna-process-implementation-report_en

https://connections.etf.europa.eu/wikis/home?lang=en#!/wiki/Wf591e43b607e_4ccf_8d94_a3256a255147/page/Kazakhstan%20-%20NQF%20Inventory

https://connections.etf.europa.eu/wikis/home?lang=en#!/wiki/Wf591e43b607e_4ccf_8d94_a3256a255147/page/Russian%20Federation%20-%20NQF%20Inventory

⁸ Bologna Process Secretariat EHEA Info website http://www.ehea.info/page-three-cycle-system





Especially in countries and/or disciplines where traditionally free individual research dominates the doctoral phase, the individuals carrying out these projects are not regarded as students but as early stage researchers/young professionals. At the same time, occasionally it is doubted that in fully taught doctoral programmes original research remains the essence of the doctorate.

In Europe, a similar situation prevailed as the core element of doctoral studies in almost all disciplines for centuries had to be self-contained research including a scientific dissertation. However, with influences from overseas, a range of structured doctoral programmes has been emerging in response to the changes in society and to challenges of a global labour market. Nevertheless, the self-contained research including a scientific dissertation is still the main component of the doctoral phase.

For all three cycles it is important to remember that the variety of programmes mirrors the diversity of higher education in Europe. However, readable and comparable degrees do not necessarily include equivalency of learning outcomes of all qualifications at the same level.

To describe the doctoral training the Salzburg Principles, 2005 state: "The core component of doctoral training is the advancement of knowledge through original research. At the same time it is recognised that doctoral training must increasingly meet the needs of an employment market that is wider than academia." This is one of ten statements. The recommendations were followed up by the Salzburg II recommendations.

Concerning the European Qualification Framework the descriptor for the third cycle corresponds to the learning outcomes for EQF level 8.

	Knowledge	Skills	Responsibility and autonomy
The learning outcomes relevant to Level 8 are	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialized skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

The International Standard Classification of Education (ISCED) is a similar international level system for organizing information on education maintained by the United Nations

⁹ https://eua.eu/resources/publications/615:salzburg-ii-%E2%80%93-recommendations.html; https://eua.eu/downloads/publications/salzburg%20ii%20recommendations%202010.pdf





Educational, Scientific and Cultural Organization (UNESCO). Programmes at ISCED level 8, or doctoral or equivalent level, are designed primarily to lead to an advanced research qualification. "Programmes at this ISCED level are devoted to advanced study and original research and are typically offered only by research-oriented tertiary educational institutions such as universities. Doctoral programmes exist in both academic and professional fields."





4.2. Description of 3rd cycle educational in project partner countries

according features of Bologna/ EHEA agreement

Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan				
1. How does the law	1. How does the law specify the nature of doctoral degree programme?							
Salzburg principle 1: advancement of knowledge through original research, at the same time meeting the needs of the employment market wider than academia. EQR: level 8	Doctoral degree programmes are aimed at scientific research and independent creative activities in the area of research or development, or independent theoretical and creative activities in the area of the fine arts.	Advancement is defined by the requirements for the graduation in the doctoral degree programme (question 16).	Post graduate study is regulated by the Federal Law No.273 "On Education in the Russian Federation", Federal State Requirements (before March 2022 - Federal State Educational Standard), Procedure of educational activity on the programmes of higher education which are the programmes of training research and pedagogical staff endorsed by the Federal Order. On March 1, 2022 Order No. 951 of the Ministry of Education and Science of the Russian Federation of October 20, 2021 "On endorsement of the Federal State Requirements to the structure of PhD educational programmes, their implementation and development considering different forms of training, educational technologies and characteristics of special	Doctoral program is a postgraduate education, the educational programs of which are aimed at training personnel for scientific, pedagogical and (or) professional activities, with the degree of a Doctor of Philosophy PhD or Doctor in Profile respectively. The educational program for the training of a Doctor of Philosophy (PhD) has a scientific and pedagogical focus and involves fundamental educational, methodological and research training and in-depth study of disciplines in the relevant areas of science for the system of higher and postgraduate education and the scientific field. The educational programs for training of a Doctor in Profile involves fundamental educational, methodological and research training and in-depth study of disciplines in the relevant areas of science for the sectors of the				





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
2. What is the name of in the framework of the	of 3 rd cycle of education (af Doktorský studijní	ter master degree): in count	categories of PhD-students" and Governmental Decree of the Russian Federation № 2122 of November 30, 2021 "On Approval of the Regulations on training PhD-students". Doctoral programmes focus on research activities and individual research within scientific majors (scientific professions). Ty language (as written in law) and 3rd cycle of higher education:	national economy, social sphere (education, medicine, law, art, economics, business administration) and in the field of national security and military cases. They are implemented in accordance with the State Compulsory Standard of Postgraduate Education, approved by Order Minister of Education and Science of Kazakhstan. Id in English Докторантура бағдарламасы /
Bologna process	program (doctoral degree	Education of PhD students.	training of scientific and	Программа докторантуры /
doctoral studies are referred to as the third cycle	programme)		pedagogical staff (Aspirantura) Since 2013, namely since the entry into force of the current Federal Law No. 273-FZ of December 29, 2012, post graduate school has become the 3d cycle of higher education	PhD program
3. What is the name an	d role of participants? (e.g.	enrolled PhD students? Do	ctoral candidates)?	
Name: doctoral candidates	Name: The students of doctoral type of study programmes	Name: PhD student.	Title: students of the 3 rd cycle (aspirants)	Title: Doctoral student - a person studying in doctoral studies
Role: Salzburg principle 4: doctoral candidates are recognised as early (or first stage) researchers	Role: The participants of doctoral study programmes are recognized primarily as students but (compared to master students) this	Role: The PhD students realises an individual research plan as well as (in the case of full time PhD students) the study program of the PhD school.	Role: The participants of 3 rd cycle study programmes are recognized primarily as students but their study aims at scientific research and preparing a scientific	Role: doctoral students are third- level students. They are considered young researchers who receive theoretical training and conduct independent research work (including the completion of a





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
	study aims at scientific research (they are primarily subsidised by the scholarship but the can also act as researchers funded by research grants). As such, they are the students doing (and learning how) to do advanced research.	Thus, the PhD students are recognised both as early researchers and students.	qualification work and a dissertation for the academic title - Candidate of Sciences. Aspirantura students (aspirants) also receive theoretical training in their field of studies and pedagogy.	doctoral dissertation). The research work of a doctoral candidate includes a new scientific achievement or solution to a scientific problem, which makes a significant contribution to the development of the country's economy.
4. Do participants have	e to be enrolled at a Higher	Education Institution?		
	Yes, they must be registered in national register of the students and as such they must be enrolled at a Higher Education Institution accredited to provide PhD degree study programmes (only such body can register the students into national register)	PhD students of a PhD school are enrolled at the Higher Education Institution. However, there is the possibility to realise a PhD in an external mode, but also in this case the Higher Education Institution has to open officially a PhD procedure. The respective Higher Education Institution must have the accreditation to pride a PhD degree for the respective scientific discipline.	Yes, they must be enrolled at the HEI which has state accreditation for the majors the students are intended to be enrolled. Admission rules are approved by the local provisions of the university. The duration of study program in aspirantura and the teaching load are regulated.	Yes, they must enter the doctoral program of the university, whose educational programs are aimed at training personnel for scientific, pedagogical and/or professional activities. Admission and entrance exams to doctoral studies is determined and carried out in accordance with the Model Rules for admission to training in educational institutions that implement educational programs of postgraduate education.
5. What are the conditi	ion to be enrolled (by law ar	nd if detailed by universities)		
	Law does not outline specific differences in entrance procedure for doctoral studies, to	Necessary is a master's degree or master's degree equivalent.	Graduates with the degrees of Specialist and/or Master are allowed to be enrolled in	A master's degree is required for admission to doctoral studies for a PhD. For admission to doctoral studies to obtain a doctoral degree





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
	determine the conditions of admission is the autonomy of the universities. The only conditions set by the law is completed master degree education. The universities usually require at least entrance exam, in doctoral studies the students select the topic of their dissertation and participate in oral entrance exams rotating around selected topic. Once the students are enrolled they become the members of the department of their supervisor.		postgraduate study programmes.	in a profile, a master's degree or an equivalent master's degree is required. If the profile of the doctoral study program matches the profile of the completed master's program, the learning outcomes of the previous level of education are automatically recognized; in case of a mismatch between the profile of the doctoral program and the master's program, the prerequisites for mastering are set for the doctoral student.
6. Fees and costs and	of the doctoral programme	and grants/ financing of stu	dents/ participants?	
Salzburg principle 10: Ensuring appropriate funding: the development of quality doctoral programmes and the successful completion by doctoral candidates requires appropriate and sustainable funding	PhD students get a scholarship 120 000 CZK/year (about 5,000 EUR per year). The student have 6 weeks of vacations. The universities have their own grant agencies supporting research (and remuneration) of the students. The amount of	No fees are charged for training PhD students. PhD students can apply for a scholarship.	State-subsidized students get monthly allowance which differs in HEIs and is specified by the local University regulations, however, it cannot be less than the established standards that can be indexed taking into account the inflation rate. Successful students may also be funded by grants of different funds like Russian Foundation	Education in doctoral program was carried out only based on a state educational order; the amount of educational state grants is about 3000 euros per year. Since 2017 it is allowed to study in doctoral studies and on a paid basis, while the cost of training in doctoral program is determined by each university independently. State scholarship of about 2700 euros per year.





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
	research grants for PhD students varies depending on the internal conditions of the university (minimum is about 4,000 EUR per one grant/year)		for Fundamental Research, Russian National Research Foundation on the competition basis. PhD-students can be enrolled for charge which varies in HEIs.	During their studies, doctoral students may also be involved on a reimbursable basis in the implementation of funded research work (including grants).
7. Length of studies				
Salzburg principle 7: doctoral programmes should operate within an appropriate time duration (three to four years full-time as a rule)	3 – 4 years	3 – 4 years.	3 – 4 years	The term of study in doctoral studies is determined by the amount of acquired academic credits. Upon mastering the established amount of academic credits and achieving the expected learning outcomes for obtaining a PhD or profile, the doctoral educational program is considered fully mastered. The minimum duration of educational programs for PhD and Doctor of profile is 3 years.
8. Do 3 rd cycle program	nmes have to be conducted	full-time? Are part-time pro	grammes possible?	
	Both full time and part time (in Czech called: combined) is possible (the law also enables distant PhD). Full time students also participate in the education under the supervision of their supervisor (the conduct the seminars).	Both full time and external realisation is possible. Full time students also participate in the education according to the program of the PhD school.	Postgraduate students can be enrolled as full-time or part-time students as well as with a combination of learning methods and approaches applied (distance learning, face-to-face learning and e-learning).	Education in educational programs of postgraduate education is carried out in the form of full-time education . (Article 36, clause 1 of the Law of the Republic of Kazakhstan dated July 27, 2007 No. 319-III "On Education" (with amendments and additions as of 07.07.2020)) Full-time education using distance educational technology is used for the academic part of training.





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
				Individual work is related to research.
9. Possibility of interru	upting the studies			
	Yes, max for 2 years (unless taking care about child - the years of carrying about the children up to 4 years of age are not counted into 2 years of general interruption)	The PhD student has the right to rest breaks not exceeding 8 weeks a year During the suspension of PhD education for the determination of the amount of doctoral scholarship shall apply the respective regulations on determining maternity allowance.	Postgraduate students (aspirants) studies assume the possibility for PhD-students to take academic leave, due to health reasons, maternity leave or private (family) reasons, service in Army Forces of the Russian Federation. Due to the impossibility of mastering the postgraduate program for medical reasons, family and other circumstances, a graduate student may be provided an academic leave for a period not exceeding two years. The basis for making a decision on granting an academic leave to a Postgraduate student is his personal statement, as well as: a) the conclusion of a medical commission of a medical organization (for granting an academic leave for medical reasons); b) the summons of the military commissariat, containing the time and place of departure to the place of military service (for	Interruption of training is possible with the provision of academic leave, which is granted to students based on the conclusion of the medical advisory commission for a period of 6 to 12 months due to illness, a summons for military service, birth, adoption (adoption) of a child until he reaches the age of three years. (Chapter 2, clause 34. Standard rules for the activities of educational organizations implementing educational programs of higher and (or) postgraduate education. 30.10.2018, No. 595) In addition, a doctoral student can interrupt his studies of his own free will based on a personal application and be reinstated as a doctoral student, but only on a paid basis (self-financing, without a scholarship). In case of natural disasters, earthquakes, floods, academic leave can last up to 2 years.





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
			granting academic leave in case of conscription);	
			c) documents confirming the basis for granting academic leave (if any).	
10. Are credits assigned	ed to the 3 rd cycle program	ne?		
no credits or range of credits have been assigned	It is not obligator, depends on the university (CZU assign ECTS credits, other Czech universities not). ECTS credits are counted not only for taught courses but also for published papers, participation in the research grants	Syllabi of the PhD school at WULS-SGGW do not contain information about ECTS.	According to new Federal State Requirements, unlike the previous Federal State Educational Standards, there are no requirements for program learning on 3rd cycle and there are no credits (ECTS) in doctoral educational programmes. Earlier (before March 1, 2022) ECTS were assigned to the whole programme (all the elements of doctoral-degree programmes like courses, pedagogical training and research work). 3 year studies – 180 ECTS; 4 year studies – 240 ECTS. Postgraduate students, who study on extern (fast) form on individual study plan, can get more ECTS per academic year (generally 60 ECTS) than regular ones, but not more than 75 ECTS per academic year. The total ECTS for them is the same as for regular	Yes, ECTS are connected with all elements of doctoral programs (taught courses, professional practice, and research). The full academic load of one academic year corresponds to 60 academic credits and corresponds to 1800 academic hours for one academic year.





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
			postgraduate students (180 or 240 ECTS).	
11. Is the 3 rd cycle gen	erally a structured program	me? If yes: is the structure	defined nationally? How is the ge	eneral structure?
Not in general, the variety of programmes mirrors the diversity of higher education in Europe	The structure of the programmes varies across the universities depending on accredited programme (the accreditation is important for shaping the structure). The structure reflects the goals of the study programme and the profile of the students (learning outcomes): Generally, there is not rigid structure of PhD programmes requested to be applied for all types of such programmes	Not in general, besides PhD school is the possibility of an external mode for reaching a PhD diploma.	Yes. The structure is defined by the Federal State Requirements. Doctoral programme includes: scientific component (preparation of thesis for defence, preparation of scientific publications, intermediary evaluation and attestation), educational component (disciplines (modules) and practices/internship, intermediary evaluation of modules and practice/internship), and final attestation. Before March 2022, the structure of doctoral programmes was specified by Federal State Educational Standards. It included a compulsory part (compulsory subjects assigned by FGOS) and a part (elective subjects) formed by participants in educational process.	The structure of the educational program of doctoral studies is determined by the state obligatory standard, workload is indicated in academic hours and academic credits. A significant amount of credits is foreseen for the research work of a doctoral student.





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
12. Do the students ha	ve individual study plan?			
	Yes, they form individual study plan at the beginning of their studies according to conditions stipulated in accredits study programme (there must be written the rules of who to set up individual study plan (what must be included)	For full time PhD students it is defined by the PhD school.	Postgraduate students (aspirants) study according to the individual plan that includes individual research plan and individual academic plan. The procedure of individual plan endorsement is specified by local university regulations. curriculum endorsed by the	Yes, doctoral students form an individual study plan at the beginning of training in accordance with the conditions provided for in the educational curriculum and working curriculum (indicate the topic of the dissertation, periods of internships, research activities for the entire period of study).
13. Which requirement	s exist on the supervision?			
Salzburg principle 5: The crucial role of supervision and assessment: in respect of individual doctoral candidates, arrangements for supervision and assessment should be based on a transparent contractual framework of shared responsibilities between doctoral candidates, supervisors and the institution (and where appropriate including other partners).	Doctoral candidates have to be supervised by those who are approved by scientific council of the faculty managing PhD programme. It assumed that at least PhD degree of the supervisor is needed (but s/he might be also without such degree is approved by scientific council base on quality of research done by potential supervisor). Most often professors or docents habilitated are supervisors are regularly evaluated by the university body on quality	The individual research plans are coordinated between the supervisor and the candidate and have to be approved by the institution. Doctoral candidates have to be supervised by professors or habilitated PhD holders. However, the supervisor can appoint officially an auxiliary promotor, who has to be a PhD holder.	Before March 2022, the postgraduate student's training and research were monitored by the supervisor and the Department of postgraduate training of the university. The supervisor assigned to a PhD student (aspirant) must: - have a scientific degree (candidate or doctor sciences,including a degree awarded abroad and recognized in the Russian Federation), - carry out independent scientific and creative activities (participate in the implementation of such activities) in the field (profile)	Scientific supervision of doctoral students is carried out by consultants in the number of at least 2 people, one of whom is a scientist from a foreign university (with the exception of the group of areas of training "National Security and Military Affairs"). A supervisor must have a doctorate / doctor of philosophy (PhD) / doctor in profile / candidate of sciences, carry out independent scientific activities, have publications based on the results of research in leading domestic and (or) international peer eviewed scientific journals with impact factor, and also experience in international cooperation with scientists from other countries.





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	(Council for internal evaluation of university		have publications based on the results of the research	
	activities). The		and creative activity in leading	
	supervision must be in the		national and (or) international	
	field of the competencies		peer-reviewed scientific	
	of the supervisor. The		journals and publications, as	
	competencies are		well as validation of the	
	documented by the		results of the research and	
	research done by the		creative activities at national	
	supervisor within last 5		and international conferences.	
	years (list of publication			
	within last 5 year and the		Since March 2022, Federal	
	citations and research		State Requirements do not	
	grants writhing last 5		specify the requirements to	
	years). The supervisors		scientific supervisor. They	
	cannot supervise the		mention that not less than	
	theme which is out of their		60% of the research and	
	expertise. University		academic staff involved in	
	Board of Quality		PhD-programme	
	Assurance checks every		implementation, must have	
	year the performance of		the degree and (or) rank.	
	the supervisor in term of			
	his/her expertise (namely			
	publications). Supervisor			
	acts as the consultant			
	within approved individual			
	study plan of the student.			
	The study plans are			
	approved by the board of			
	the Ph.D programme (1/3			
	of board members must			
	be from outside the			
	university). Every year a			





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	student provides the account on his/her work to his/her supervisor who comments the annual achievements and results and suggests future continuation in study. The account must be also approved by the head of department of PhD students and the board of PhD study programme. The board might suggest to stop the studies.					
14. Do 3 rd cycle progra	ammes include teaching co	mponents to qualify future le	cturers? For all subjects? To wh	at extent?		
Not a common specified feature and not obligatory	Full time students have to conduct 4 teaching hours/week during minimally 2 semesters of their study (normally 4 semesters). They conduct the teaching under the supervision of their supervisor (in the courses the supervisors regular teaches). This requirement is individual upon the decision of the universities	Full time PhD students have to teach 45 didactic hours during each the first and second year of the PhD study.	Yes. A post graduate student along with research activities is trained for teaching activities.	In the structure of the educational program of doctoral studies in the scientific and pedagogical direction, the teaching component for the qualification of future lecturers provides for pedagogical practice, and also, depending on the direction of preparation, there may be disciplines designed to form these competencies.		
15. Do 3 rd cycle progra	15. Do 3 rd cycle programmes include international or mobility components?					
Salzburg principle 9: Increasing mobility:	The PhD. student must conduct international	It is not required or obligatory stated in the PhD	Yes, by personal intention of students and in frames of	As part of the research work, an individual doctoral student study		





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Doctoral programmes should seek to offer geographical as well as interdisciplinary and intersectoral mobility and international collaboration within an integrated framework of cooperation between universities and other partners	mobility for minimum one month (requirement by standards of accreditation) or they must actively participate in international research projects of H2020 type	study programme, but PhD students are motivated to such activities. PhD students receive small funds, which they can use for example for participation in conferences.	existing international agreements of the University	plan for acquaintance with innovative technologies and new types of industries provides for mandatory scientific training in scientific organizations and/or organizations in relevant industries or fields of activity, including abroad funded by a doctoral student grant.
16. What are the requir	rements for the graduation	in the doctoral degree progra	amme?	
	Doctoral state examination and the public defence of a doctoral thesis. The state examination is the discussion over the themes related to the field of study (the students know the list of themes in advance). The defence of the thesis might be either the defence of completely investigated issue (a sort of book) not published yet (however, the student must publish at least one paper in journal listed in WoS or Scopus as the first author) or the commented set of papers	PhD student has a master's degree or master's degree equivalent. PhD student obtained learning outcomes for qualifications at level 8 of the Polish Qualifying Framework. Has published one article or one monograph of sufficient scientific level or the achievement of an important artistic work.	Since March 2022, the final examination is seen as assessment of dissertation and its compliance with the indicators specified in Federal Law No. 127-FZ "On science and federal scientific and technological policy". Doctoral students who successfully met all the requirements receive Board Decision "on dissertation for candidate of science degree compliance with the indicators fixed" and Certificate on Postdoctoral qualification. If the Evaluation Board does not evaluate dissertation positively, a doctoral student receives a certificate confirming his postgraduate studies.	Persons who have mastered the doctoral program and defended their doctoral dissertation, if the dissertation councils of universities with special status or the Committee for control in the field of education and science of the Ministry of Education and Science of the Republic of Kazakhstan are positive, according to the results of the examination, are awarded a PhD or Doctor in Profile and issued a state-issued diploma with attachment (transcript).





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	already published in journals listed in WoS or Scopus (minimum 3 such papers but in reality it is 5 required) which were already reviewed.		Before March 2022, doctoral students who have successfully passed the state final certification are awarded a diploma of a post graduate school completion. Further, it was possible for them to defend a dissertation for the degree of Candidate of Sciences at the specialized Dissertation Council. To obtain the degree of Candidate of Science students are obliged to publish not less than 3 articles in the peerreviewed scientific journals accredited by Higher Attestation Commission (VAK). It is advisable to make yourself known in international publications. Publications should cover all stages of research preparation, fully and correctly reflect its content	
17. After finalising the	3 rd cycle programme: what	s the result/ certificate and/	or degree of the graduates?	
	Doctoral degree (Ph.D) in the particular study programme. It means if the study programme is called "Crop production" the students holds PhD in Crop production.	Doctoral degree in the respective scientific discipline.	Since March 2022, the final examination is seen as assessment of dissertation and its compliance with the indicators specified in Federal Law No. 127-FZ "On science and federal scientific and	Degree of Doctor of Philosophy (PhD) / Doctor in Profile and state diploma with transcript.





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
			technological policy". Doctoral students who successfully met all the requirements receive Board Decision "on dissertation for candidate of science degree compliance with the indicators fixed" and Certificate on Postdoctoral qualification. If the Evaluation Board does not evaluate dissertation positively, a doctoral student receives a certificate confirming his postgraduate studies. After defending a dissertation for the Candidate of Sciences degree at the Dissertation Council he/she is awarded a degree of a Candidate of Sciences.	
18. Are there further q	ualification steps following	the 3 rd cycle programme? H	ow are they called?	
	As for academic career: habilitation to get the title of docent. Every university has its criteria and the person must defend his/her habilitation thesis (it must differ from PhD thesis) in front of the faculty scientific board and must have the public lecture for, at least, scientific board members.	For academic career: habilitation, full professor.	A student can continue his studies in doctoral studies (doctorantura) and receive a degree of Doctor of Sciences.	Persons who have received a PhD degree can carry out a postdoctoral program to deepen scientific knowledge, solve scientific and applied problems on a specialized topic.





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	The applicant for			
	habilitation is also			
	evaluated by the			
	committee (5 members, 3			
	must be outside the			
	university – the check all			
	materials submitted by the			
	applicant – papers etc).			
	Professors – after			
	achieving criteria set by			
	every university and			
	scrutinized his/her			
	achievement by 5			
	members committee (3			
	members must be outside			
	university, head of			
	department cannot be			
	member), the applicant			
	holds lectures for faculty			
	scientific board and than			
	for university scientific			
	board. The boards vote			
	for the title docent or			
	professor. As professors			
	they are appointed by			
	prime minister and the			
	president of the Czech			
	Republic (president			
	already refused to appoint			
	3 professors).			





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan		
19. Are diploma supple	19. Are diploma supplements issued to 3 rd cycle (doctoral) graduates?					
Bologna recommendation 20 Are there quality as	It is not binding to issue Diploma supplement but CZU issues this supplement ssessment regulations defi	ned?	Yes	For doctoral studies, European Diploma Supplement is not provided, but a transcript is issued.		
			Forms the assessment system	Vozakhatan universities ere subject		
Further Salzburg recommendations It is necessary to develop specific systems for quality assurance in doctoral education based on the diverse institutional missions and, crucially, linked to the institutional research strategy. For this reason, there is a strong link between the assessment of the research of the institution and the assessment of the research environments that form the basis of doctoral education. Assessment of the academic quality of doctoral education should be based on peer review and be	Quality assessment regulation are defined by university Council for internal evaluation. The internal evaluation is the condition for the accreditation of the study programme. The quality Ph.D study programmes is ensured through annual the evaluation of study programmes; monitoring the activities of the directors of study programmes; feedback from students, academic workers and graduates of study programmes; feedback from external partners out of university, monitoring the level of success of candidates in admission procedure, the level of study failure of students in the programme, the level of	The quality of education in the doctoral school is subject to evaluation carried out by the National Education Commission (at least every six years).	Forms, the assessment system, the procedure for intermediate and state final evaluation are defined by local regulations of educational organizations. The quality assessment regulations specify and describe the continuous assessment of postgraduate students' academic performance, intermediate and final state evaluation. The University Chairs elaborate the pools of assessment tools (FOS) which include evaluation questions and standard tasks for seminars, laboratory works, credits and examinations; tests and computer testing programs, as well as other forms of control, which allow to assess the extent of postgraduate students' expertise. The requirements for the dissertation for the degree of are regulated by the Order of	Kazakhstan universities are subject to regular external quality assessment. Accreditation agencies included in Register 1 operate on the basis of the European Quality Assurance Manual (ESG) and are registered with the European Higher Education Quality Assurance Association (EQAR). In 2018, Register 1 includes 8 accreditation agencies: 5 Kazakhstani (IQAA, IAAR, KAZSEE, ARQA, ECA) and 3 foreign agencies from Europe (ASIIN, FIBAA, MusiQuE). The student community is actively involved in the process of external quality assurance.		





Bologna/ EHEA	EU (case of Czech Rep.)	EU (case of Poland)	Russia	Kazakhstan
sensitive to disciplinary differences.	full completion of studies by students in the programme, the level of international activities among students at the in the programme, the number of foreign students in the programme and the involvement of graduates of the relevant study programme on the labour market; evaluation of the activities of individual students of doctorate study programmes as part of the annual attestation of students, in the case of doctorate study programmes also monitoring the creative activities of students of doctorate study programmes (research and publications – best students with best publications are awarded by scholarship 2,000 EUR).		the Ministry of Education and Science "On approval of the Regulation on the Council for the defense of dissertations for the degree of candidate of science, for the degree of doctor of science". Before March 2022, Aspirantura programs were subject to mandatory state accreditation for compliance with federal state educational standards. Since March 1, 2022 the state accreditation was cancelled due to introducing and applying new Federal State Requirements to PhD-studies. At the same time, PhD-programmes can voluntarily undergo professional and public or international accreditation for compliance with European standards and ESG recommendations.	





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21. Which influence ha	21. Which influence have the individual institutions?							
Further Salzburg recommendations Legal framework: The national and European legal frameworks must give institutions the possibility to engage in innovative doctoral programmes and take the necessary institutional responsibilities. Institutions must be able to develop their systems for quality assurance and enhancement independently within their national frameworks. They must have the freedom to develop their own indicators for quality that correspond with the standards of the individual disciplines as well as with the overall institutional strategy.	The university has its own system of Internal Quality Assurance https://www.czu.cz/en/r- 9186-about-university/r- 9196-official-documents/r- 13754-quality-of-educational- and-creative-activities There are quality standards set by the government. The universities have the right to make the standards sticker. The government standards are of general recommendations in terms of PhD student programmes. The most important for quality assurance is the research performance (quality of research outputs – papers and grants). Study programmes do not have defined number of study programmes (or defined names of study programmes). The courses must fit to the area of study	Universities have possibilities concerning these matters. At WULS-SGGW the respective regulations are fixed in the statute. For example, the senate adopts doctoral school regulations and establishes doctoral education programs. The school's program board acts as auxiliary and consultative body of the head of the doctoral.	Basically, the rules are strictly regulated by the Federal State Requirements, which are approved by the Ministry of Science and Education of Russia	Regulatory framework: Regulatory documents of the Ministry of Education and Science of the Republic of Kazakhstan, specialized ministries and departments. The republic provides targeted training for doctors of philosophy (PhD) - a system of measures implemented at the expense of the state educational order or on a paid basis by order of the university and scientific organizations for the preparation of highly qualified scientific and scientific-pedagogical personnel on the basis of an agreement of interested parties. Universities are given more and more academic freedom in training. Universities develop and implement their own academic policies. State participation takes on a framework. Universities have the right to establish the names of disciplines, to form their own quality assurance system. Universities also free to choose an accreditation agency to work with.				