FINAL REPORT

on evaluation and accreditation of the study programme
«System Ecology and Modelling»
of the field of study
«Ecology and Natural Management» (05.04.06),

delivered by the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University"

accredited 06/2017-06/2023

Kazan, 2017

Final Report
and Conclusions of the Peer Group

on evaluation and accreditation of the study programme

«System Ecology and Modelling»

of the field of study

«Ecology and Natural Management» (05.04.06),

delivered by the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University"

The Chair
of the review panel

Vinokhodov
Dmitry Olegovich

Kazan, 2017

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INTRODUCTION

The peer review of study programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06), which is delivered by the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University" (hereinafter - KFU), was conducted on March 14-15th, 2017 and included the analysis of the self-evaluation report, site visit and preparation of the present report.

The main goal of the peer review is to determine the correspondence of the reviewed study programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06), which is delivered by KFU, to standards and criteria of public accreditation, which are developed by the National Centre for Public Accreditation (hereinafter - NCPA) in cooperation with evalag Accreditation Agency and determined in compliance with the European Standards and Guidelines for Quality Assurance ESG-ENQA (hereinafter – standards of joint international accreditation).

The final report is the reason for the decision of the National Accreditation Board and evalag Accreditation Board on international public accreditation of the study programme.

1. CONTEXT AND MAIN STAGES OF THE REVIEW

1.1 Reasons for peer review

According to item 1, 3 article 96 of the Federal Law of the Russian Federation of December 29, 20123 N.273-FZ "On Education in the Russian Federation" organizations, which implement educational activities, may apply for public accreditation in various national, foreign and international institutions; employers, employer associations and designated organisations have the right to conduct public accreditation of professional educational programmes, which are delivered by an educational institution.

The Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University" (KFU) and "National Centre for Public Accreditation" signed Agreement № 0.1.1.59-08/318/16 of July 04, 2016 on providing services of supporting international accreditation of six study programmes of higher education, which include "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06).

1.2 Composition of the Review Panel

The international expert was nominated by evalag Accreditation Agency (Germany).

The representative of the academic community of the Russian Federation was nominated by the Guild of Experts in Professional Education (Russia).

The representative of international employers was nominated by evalag Accreditation Agency (Germany).

The representative of students was nominated offered by Kazan National Research Technological University (Russia).

The composition of the International Review Panel was approved by NCPA and evalag.

The review panel included four experts:

- **Vinokhodov Dmitry Olegovich,** Doctor of Biological Sciences, associate professor, chairman of the Department of Molecular Biotechnology, St. Petersburg State Technological Institute (technical University) — Russian expert, Chairman of the review panel;
- **Natascha Oppelt,** Doctor of Sciences, Professor, Dean of the Faculty of Mathematics and Natural Sciences, Christian-Albrechts-Universitaet zu Kiel (Kiel, Germany), member of the board of Deutsches Zentrum für Luft - und Raumfahrt e.V., member of research board of European Association "Precision Agriculture" – international expert, deputy-chair of the review panel;
- **Sabine Huck,** employee of the Federal office for environmental protection (Dessau, Germany), member of Federal Association for Study of Soils – international expert, representative of foreign employers' community, member of the review panel;
- **Sadykov Lenar Rafisovich,** 4th year student of the Forestry and Ecology Faculty of Kazan State Agricultural University — Russian expert, representative of students' community, member of the review panel.

The focused expert knowledge of the Panel members, long-term experience of working in the system of higher education and profession, active position of students and employers became the basis for effective consideration of issues and problems within the framework of evaluation.

The participation of German and Russian representatives of higher education system gave an opportunity to analyze the activity of the programmes under evaluation in the context of world trends in quality assurance and within the scope of the national educational system.

1.3 Purposes and objectives of the review

The purpose of the international public accreditation is improving quality of education and forming quality culture in educational institutions, discovering best practices in continuous enhancing educational quality and public information on educational institutions in accordance with European educational quality standards.

The main objective of the review is to determine the correspondence of the reviewed study programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06), which is delivered by KFU, to standards and criteria of public accreditation, which are developed by

National Centre for Public Accreditation (hereinafter - NCPA) in cooperation with evalag Accreditation Agency and determined in compliance with European

Standards and Guidelines for Quality Assurance ESG-ENQA; design of guidelines for the study programme with the purpose of improving the contents and structure of the study process.

1.4 Stages of the review

The review included three main stages:

1.4.1 Study of the self-evaluation report

The Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University" was responsible for conducting the self-evaluation procedure, developing and timely submitting of the self-evaluation report to NCPA and evalag.

According to the "Guidelines on Self-evaluation of Educational Programmes", which were developed by NCPA and evalag, the self-evaluation report is written on 50 pages and includes: introduction, findings, conclusions and annexes. The self-evaluation procedure was conducted on the basis of SWOT-analysis according to every standard of NCPA and evalag.

According to the review schedule, the self-evaluation report of the educational programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06) was submitted to NCPA and evalag and mailed to the members of the review panel 30 days before the site-visit.

While studying the self-evaluation report, the panel members formed a preliminary opinion on compliance with the joint standards of international accreditation of NCPA and evalag based on European standards of quality assurance.

The members of the review panel assessed the quality of preparation of the self-evaluation report with regards to its text structuring, compliance of information with the report's sections; quality of perception; sufficiency of analytical data; availability of references to supporting documents; completeness of information.

The review panel members pointed out some weaknesses of the self-evaluation report:

– Information on requirements for the educational programme applicants is incomplete;

– The process of designing individual educational paths is described insufficiently.

According to the preliminary findings of the review panel, the following conclusions were drawn:

– the self-evaluation report substantially corresponds to the Guidelines on international external reviews of NCPA and evalag.

– the presented information gives an opportunity for the preliminary evaluation of a number of criteria of compliance of the programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06) with the standards of international accreditation of educational programmes.

– The final evaluation of the compliance criteria of the programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06) with the standards of international accreditation of educational programmes may be performed only on site-visit of the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University".

According to NCPA's and evalag's joint standards of international accreditation, the preliminary evaluation of the educational programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06) may be defined as substantial compliance.

Issues, which need detailed analyses:

– Compliance of the content of the educational programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06) with international standards and good practices of teaching analogous educational programmes in European Universities.

– Correspondence of the defined goal of the educational programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06) to the goals and mission of the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University" and the development programme of the region.

– Correspondence of the defined goal of the educational programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06) to the basic type of activity, which was chosen at the stage of developing the educational programme.

At the preliminary meeting, the review panel members formulated proposals, which defined the main strategy of the site-visit.

1.4.2 Site-visit

The review panel visited the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University" on March 14-15th, 2017 with the purpose of confirming the authenticity of the information, which was presented in the self-evaluation report, collecting extra information on the implementation of the accredited programme and checking its compliance with the standards of international accreditation of NCPA and evalag.

The timeline and the agenda of the site-visit were determined by NCPA and evalag, and approved by KFU.

During the site-visit the review board members met with the managerial and administrative staff of the University, heads of departments, teaching staff and students. The review board studied the presented information and requested additional documents.

The Chair supervised the review panel's activity.

The panel considers that the self-evaluation report, which was presented by KFU, provided the experts with an opportunity to form an integral view on specific features of the educational programme's implementation.

The studied documents and the interviewed persons, visits to research and academic laboratories provided the review panel members with sufficient information for objective and complete evaluation of the quality of implemented educational programmes.

The review panel considers it necessary to highlight effective cooperation of the experts and NCPA and evalag staff during the site-visit and its preparation.

The review panel notes the highest level of organizational provision and constructive work.

KFU's executive staff provided administrative support, which included arrangement of meetings and interviews, provision with working space, computers with the Internet access, necessary research, academic and methodological documents.

On the last day of the site-visit, the Chair of the review panel presented an oral report on general conclusions to KFU's executive staff, Institutes' Directors, teaching staff and students.

The agenda of the site-visit can be found in the Annex.

1.4.3 Conclusion on the findings of the external review

Based on the results of the external review the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University" submitted the report on the results of the external review of the educational programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06) delivered by the educational institution.

The draft report of 27 pages excluding Annexes was developed by the Chairperson of the review panel, approved by the other review panel members and submitted to NCPA and evalag. Then the report was mailed to KFU's administration for making factual amendments.

2. DESCRIPTION OF THE STUDY PROGRAMME

Kazan University is one of the oldest Universities of Russia. It was founded in 1804 as the Emperor's Kazan University.

Upon an initiative of the Professor of Kazan University, Honored Worker of Science of the Russian Federation, Doctor of Biological Sciences Viktor Alekseevich Popov in 1969, the first in the USSR department of environmental protection and biogeocoenology was founded at the Faculty of Biology and Soil. The first Faculty of Ecology in Russia, which was founded in 1989, included three departments: Department of Landscape Ecology, Department of Environmental Modeling, and Department of Applied Ecology. The Department of General Ecology was founded in 2003. In August of 2014, the basic depart-

ments of former Ecological Faculty became the basis for the Institute of Environmental Sciences.

Training students in the field of study "Ecology and Use of Natural Resources" and master's programme "System Ecology and Modelling" started in KFU in 2012 followed by specialties of the field "Environmental Control and Rational Use of Natural resources" (from 1989 to 2002), "Ecology" (from 1996) and "Ecology and Use of Natural Resources" (from 2011). In 2012, the educational programme of training field 020801.65 "Ecology" successfully passed public accreditation by the Agency for Quality Assurance in Higher Education and Career Development "AKKORK"; the bachelor's programme of training field 022000.62 "Ecology and Use of Natural Resources" was recognized as the Best Educational Programme of Innovative Russia of 2012-2013 academic year.

The major departments of the educational programme "System Ecology and Modelling" are the Department of General Ecology and the Department of Ecological Systems Modeling; heads of the programme are the two leading Professors of the departments. This ensures interdisciplinary character of the designed programme and allows using highly-qualified specialists, who work in different areas of natural science.

At the moment, the Institute is well connected to Russian and foreign Universities and research institutions. The Institute maintains partner relations with a number of foreign Universities. In order to provide academic process (conducting lectures, master-classes, consultations) and research work the Institute implements a teacher exchange programme. Due to the established partner relations KFU's students have an opportunity to take short-term (semester) and long-term (academic year) special courses, study in joint summer schools.

The major departments cooperate with research departments of a number of protected areas and conduct joint research projects (Volzhsko-Kamsky National Nature Biosphere Reserve, National Parks "Nizhniaya Kama", "Mariy Chodra", "Cavash varmane" and other). The teaching staff of both departments cooperates with independent environmental and non-governmental institutions (WWF, IUCN).

The teachers of the Institute's major departments are members of professional associations: Russian Botanical Society; International Association for Vegetation Science (IAVS); international Association for Aerosol Research (GAeF); Russian National Committee for Theoretical and Applied Mechanics; work groups of European Vegetation Survey (EVS) and Eurasian Dry Grassland Group (EDGG); enrolled as independent ecology experts, experts for technical regulations, members of research and development boards of environmental bodies, various committees and Academic Councils.

FINDINGS

3.1 Standard 1. Programme profile

*Compliance with the standard**: Good***

Table 1 – Criteria for Standard 1

№	Aspects of review	Grade
1.	Correspondence of the objectives of the study programme to the profile and strategic goals of the HEI	**very good**
2.	Definition of the intended learning outcomes of the programme and their accessibility	**good**
3.	Correspondence of the intended learning outcomes to the level of awarded qualification	**very good**
4.	Consideration of academic and professional requirements (standards), public needs and the demands of the labor market in the intended learning outcomes	**good**
5.	Relation of the study programme to research (provision of scientific methods in theory and practice, research based teaching)	**very good**
6.	Compliance of the programme's profile with internationally accepted standards	**good**
7.	The international dimension of the programme	**satisfactory**
8.	Correspondence (adequacy) of the teaching staff's qualifications to the profile and objectives of the programme	**very good**

The educational programme "System Ecology and Modelling" takes an important place in the process of training highly-qualified specialists with the purpose of meeting the region's need in ecologists. Formation and development of the educational programme are based on the semicentennial tradition and vast experience of training ecologists within the framework of numerous scientific schools, which have prominent achievements and recognized influence. The educational programme is based on the principle of fundamental training in the field of biology, mathematics and statistics, which provides an opportunity to train graduates, who are ready to implement routine functions and fundamental research.

A due account for foreign good practices of training ecologists provided an opportunity to form the content of the educational programme in accordance with national and international professional standards.

The research part of the educational programme is implemented within the framework of famous research schools.

Achievements:

- Conducting international summer schools for potential applicants from diverse regions of the Russian Federation and other countries.
- The educational programme is based on fundamental (classical University) training in the field of biology, mathematics and statistics.

– Organisation of the research part of the educational programme in the form of hierarchical research and academic micro-groups "head of the research school – postgraduate – Master students – Bachelor student".
– Cooperation of the educational programme with republican research projects.
– Participation in compiling the "Red Data Book of the Republic of Tatarstan".
– Correspondence of the programme's content and the expected learning outcomes to international good practice and standards.
– High proficiency of the teaching staff.

Areas for improvement:

– The determined goal of the educational programme does not fully comply with the chosen basic activity type (research activity).
– The planned implementation of the English version of the educational programme requires enhancing the foreign language skills of the teaching staff.
– Enrollment of students in international internship programmes requires improvement of the students' foreign language skills.

The review panel recommends:

– to bring into compliance the determined goal of the educational programme with the chosen research activity type according to the Federal State Educational Standard.
– to develop a local document, which determines the sequence of achieving the expected learning outcomes and the goal of the programme.
– to develop and implement a compulsory module, which provides training in the spirit of the conception of sustainable development.
– to update the pedagogical component of further education and training courses for the teaching staff and focus on improving foreign language skills.
– to enhance the component of the educational programme, which provides language training with the purpose of promoting students' participating in programmes of international academic mobility.
– to consider students' desire to implement only a part of the disciplines in the English language.

3.2 Standard 2. Curriculum

*Compliance with the standard**: Good***

Table 2 – Criteria for standard 2

№	Aspects of review	Grade
1.	Structuring of the programme and ways of achieving intended learning outcomes	**good**
2.	Mechanisms for providing knowledge in the corresponding discipline in the framework of the delivered programme. Application of scientific methods in the delivery of the programme	**very good**
3.	Organization of learning experience with the account of the diversity of students and their needs and appropriate student-centered teaching. Encouraging students to take an active role in creating the learning process	**good**

The educational programme provides a harmonious combination of theoretical training and research work. However, the programme is designed for students with profound knowledge in mathematics and statistics. This is why students, who are awarded a Bachelor degree in other HEIs or in other training fields, experience difficulties adapting to new conditions and fully engage in work from the beginning. Yet, the teaching staff provides such students with extra options for compensation of the basic knowledge deficiency.

Achievements:

- The designed curriculum allows combining the study of disciplines with research activity of the students.
- Tight connections between the structural units of the Institute of Ecology and Natural Management provide high efficiency of implementing the research part of the educational programme.
- Availability of the Institute's research laboratories for all the programme's students provides the highest level of accessibility of the research equipment.
- Availability of the system of individual advising for students, who got the Bachelor degree in other training fields with the purpose of compensation of the basic knowledge deficiency.

Areas for improvement:

- Structuring of the programme in terms of logical continuity of achieving the expected learning outcomes and the goal of the educational programme.
- Provision of wider opportunities for students in selecting individual educational paths.
- Conditions for training students with special needs.

The review panel recommends:

- to develop a detailed scheme, which defines the sequence of achieving the expected learning outcomes and the goal of the educational programme.
- the mode of elective modules has to be revised to provide opportunities for students in selecting individual educational paths in order to internationalize the educational programme.
- to boost the integration of KFU's structural units, which deal with ecological research, in order to provide access to laboratory equipment.
- to improve conditions for training students with special needs.

3.3 Standard 3. Student assessment

*Compliance with the standard**: Very good***

Table 3 - Criteria for standard 3

№	Aspects of review	Grade
1.	Organization of assessment of intended learning outcomes	**very good**
2.	The adequacy of the amount and requirements of assessments with regard to the intended learning outcomes	**very good**
3.	The correspondence of the requirements of the thesis to the level of the degree	**very good**
4.	Transparency and consistency of assessment criteria	**very good**
5.	Adequacy of the qualifications of the staff undertaking assessments	**very good**
6.	Availability of examination regulations	**very good**
7.	Availability of clear and objective regulations for student absence, illness and other mitigating circumstances	**very good**

The procedure of student assessment combines the traditional examinational approach and the credit system, which encourages students to work systematically during the semester and revise the studied materials at the end of the semester.

The interviewed students of the educational programme "System Ecology and Modelling" made a very good impression on the panel members. Their active attitude to the content of the programme, deep knowledge, diversity of practices, sincere interest in the conducted research works, participation in numerous research conferences, publications, voluntary ecological activity, enthusiasm, corporate spirit and respect to *alma mater* testify to high-quality education and training.

The quality of graduation theses is high. However, there are some theses of satisfactory quality; and their fair assessment add to credibility and objectiveness of the evaluation procedure.

Achievements:

- High quality of the teaching staff.
- Use of external evaluation systems, such as the Federal Internet Examination.
- Active participation in research conferences, significant number of students' publications.
- High quality of graduation theses, which fully corresponds to the Master's level.
- Objectiveness and thoroughness of the teaching staff in assessing graduation theses, depth, critical approach and credibility of analyses.

Areas for improvement:

- Provision of wider opportunities for students and teaching staff for internships in leading Russian HEIs and international programmes of academic exchange.

– Development of the system of competency-based approach and correspondent educational technologies.

The review panel recommends:

– to provide students and teaching staff with the opportunity to improve their foreign language skills.
– to develop a strategic programme of internships for the teaching staff in the leading HEIs and institutions of Russia and Europe.
– to involve more students in international e-Olympiads and internships.
– to improve the system of competency assessment as the final learning outcome.

3.4 Standard 4. Organization of the study programme

*Compliance with the standard**: Very good***

Table 4 – Criteria for standard 4

№	Aspects of review	Grade
1.	Appropriateness of entry qualifications	**very good**
2.	Regulations for the recognition of qualifications (i.e. Lisbon Convention)	**very good**
3.	Organisation of the study process and achievement of intended learning outcomes. Consideration of the diversity of students and their needs	**good**
4.	Management of the study programme (roles and responsibilities)	**very good**
5.	Adequacy of the workload of the programme with respect to the necessity to reach the intended learning outcomes in the scheduled time frame	**very good**
6.	Organization of the student life cycle (i. e. all (organisational) relationships between the student and the institution from enrolment to graduation)	**very good**
7.	Student support system (care services and student advisory services)	**very good**
8.	Cooperation with internal and external partners	**good**

The composition of the student body shows that all those interested in the programme have a chance to study it successfully. The transition of students from other HEIs within the framework of student mobility is also possible.

The management of the educational programme is executed by qualified specialists. The continuous cooperation of the students with their research advisors indicate the highest level of individual training.

The academic load is equally distributed and complies with the expected learning outcomes.

Achievements:

- Consistency of admission requirements for applicants.
- Participation of students in ecological olympiads.
- Systematic support of students, who take part in research conferences.
- Regular survey "The academic process as viewed by a student".

Areas for improvement:

- Significant academic load of the teaching staff, which does not allow for doing research work.
- Insufficient information for applicants on the specific character of mathematical and statistical components of the educational programme and consequent potential difficulties in studying the programme.

The review panel recommends:

- to reduce the academic workload of the teaching staff at the expense of reducing the number of classroom hours and freeing time for research work and development of research publications.

- to develop the system of incentives for Bachelor students encouraging their research work and participation in Masters' research groups, which execute research projects (with the opportunity of co-supervision of Bachelor graduation theses).
- to develop a guidebook for applicants of the educational programme, which includes the programme's advantages, basic knowledge and skills, which are necessary for admission and studying the programme.
- To improve the cooperation with external partners from foreign HEIs.

3.5 Standard 5. Ressources

*Compliance with the standard**: Very good***

Table 5 - Criteria for standard 5

№	Aspects of review	Grade
1.	Sustainability of funding and financial management	**very good**
2.	Adequacy of the number and qualification of academic staff (full-time and part-time) to ensure intended learning outcomes	**very good**
3.	Availability of strategies and processes for the staff recruiting and staff development	**good**
4.	Availability, sufficiency and quality of facilities and equipment for the provision of the programme (library, laboratories, teaching rooms, IT equipment)	**very good**
5.	Sufficiency and quality of the resources provided to reach the objectives of the programme	**very good**

Resource provision is one of the main aspects, which ensures high efficiency of the educational programme. The level of financial resourcing, sufficient material and technical resources, qualified employees are the necessary components of success; the Institute of Ecology and Natural Management has in place all the components.

The students study and live in comfortable conditions; modern equipment, up-to-date software are available; students conduct interesting research work; the research advisors are themselves involved in active research.

However, the classrooms do not fully correspond to contemporary requirements in respect of accessibility to people with special needs.

Achievements:

- The educational programme is included in the list of KFU's priority programmes.
- The microbiological laboratory, molecular biological laboratory, biotesting laboratory, laboratory of chemical analysis and laboratory of food security, laboratory of Modelling of aerosol systems, which are used in the academic process and research part of the educational programme, are supplied with modern equipment, up-to-date software.
- Species of unique laboratory equipment are used in the academic process and research work.
- Training is conducted with the help of a significant number of practice bases.
- KFU's hostels are conveniently located and comfortably designed; overall condition of facilities is good.

Areas for improvement:

– The teachers, who participate in implementing the educational programme represent KFU's scientific schools, the share of graduates of other HEIs is insignificant.

The review panel recommends:

– to create the system of active involvement of teachers from other HEIs and foreign countries for the purpose of effective internationalization of the educational programme.
– to increase the number of support staff for quality and timely maintenance of complex laboratory equipment, which is used in the educational process and research work.

3.6 Standard 6. Quality assurance

*Compliance with the standard**: Good***

Table 6 - Criteria for standard 6

№	Aspects of review	Grade
1.	Design, approval and implementation of the programme; monitoring procedures	**good**
2.	Availability of a quality assurance concept of the programme and how it is connected to the quality assurance system of the institution	**very good**
3.	Quality assurance processes and instruments of the programme	**very good**
4.	Effectiveness, regularity and systematic character of the quality assurance system	**very good**
5.	Availability of mechanisms for closing quality feedback loops	**good**
6.	Collecting, analysis and use of data by the persons responsible for implementing the programme	**good**
7.	Involvement of stakeholders (students, teachers, administration, external experts, alumni, employers) in quality assurance	**good**
8.	Availability of procedures and relevant information for informing current and prospective students about the programme	**very good**

KFU's internal quality assurance system is developed and implemented centrally and systematically. At present, KFU's quality assurance system is still at the stage of inception.

GOST ISO 9001:2011, ENQA standards and guidelines are the basis for developing KFU's quality assurance system, which illustrates aspiration for high quality of activity and internationalization of the educational process.

The implementation of the integrated automated system "Digital University", which improves the mechanisms of the HEI management, is also significant for enhancing the quality assurance system.

Achievements:

- Regular surveys "A teacher as viewed by a student" and "Academic process as viewed by a student".
- Compliance of the concept of the educational programme's quality system with KFU's quality system.

Areas for improvement:

- Participation of the graduates of the University and employers in the monitoring system of the study programme and the procedures of its improvement is not sufficient.

The review panel recommends:

- to introduce paragraphs in the local document, which regulate the development of graduation theses, limitations for involving industrial companies, which may harm the environment, in determining themes for graduation theses.

– to create the system of periodical surveys of the programme’s graduates on strengths and weaknesses of the study programme, its applicability and correspondence to their working functions.

4. STATEMENT OF THE UNIVERSITY

Ministry of Education and Science of the Russian Federation
Federal State Autonomous Educational Institution of Higher Education

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№ 01.81-11/122-17 Date 12.05.2017

Statement of the University

Statement of the University

The Institute of Environmental Sciences expresses its gratitude to the expert group for their expert report on the international accreditation of the study programme "System Ecology and Modelling", delivered by the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University".

No factual errors have been revealed in the report.

We would like to express once again our gratitude to the expert group, German accreditation agency evalag and national accreditation agency NCPA for the large scope of highly professional work on preparing and drawing up the expert report on evaluation and accreditation of the study programme "System Ecology and Modelling" of the field of study "Ecology and Natural Management" (05.04.06).

Khalilova Alina
Head of the Department of Education

ДЕПАРТАМЕНТ ОБРАЗОВАНИЯ (ДО КФУ)

5. RECOMMENDATIONS FOR IMPROVEMENT (SUMMARISED)

Thus, based on the analyses of the presented documents, meetings and interviews, conducted during the site-visit, with the purpose of enhancing the quality of implementing the educational programme under accreditation the review panel recommends:

Programme Profile

R1 to bring into compliance the determined goal of the educational programme with the chosen research activity type according to the Federal State Educational Standard.

R2 to develop a local document, which determines the sequence of achieving the expected learning outcomes and the goal of the programme.

R3 to develop and implement a compulsory module, which provides training in the spirit of the conception of sustainable development.

R4 to update the pedagogical component of further education and training courses for the teaching staff and focus on improving foreign language skills.

R5 to enhance the component of the educational programme, which provides language training with the purpose of promoting students' participating in programmes of international academic mobility.

R6 to consider the students' desire to implement only a part of the disciplines in the English language.

Curriculum

R7 to develop a detailed scheme, which defines the sequence of achieving the expected learning outcomes and the goal of the educational programme.

R8 to provide wider opportunities for students in selecting individual educational paths in order to internationalize the educational programme.

R9 to boost the integration of KFU's structural units, which deal with ecological research, in order to provide access to the laboratory equipment.

R10 to improve conditions for training students with special needs.

Student Assessment

R11 to provide students and teaching staff with the opportunity to improve their foreign language skills.

R12 to develop a strategic programme of internships for the teaching staff in the leading HEIs and institutions of Russia and Europe.

R13 to enroll more students to international e-Olympiads and internships.

R14 to improve the system of competency assessment as the final learning outcome.

Organisation of the study programme

R15 to reduce the academic workload of the teaching staff at the expense of reducing the number of classroom hours and freeing time for research work and development of research publications.

R16 to develop an incentive system for Bachelor students to encourage their research work and participation in Masters' research groups, which execute research projects (with the opportunity of co-supervision of Bachelor graduation theses).

R17 to develop a brief guidebook for applicants of the educational programme, which includes the programmes advantages, basic knowledge and skills, which are necessary for admission and studying the programme.

R18 to improve the cooperation with external partners from foreign HEIs.

Resources

R19 to create the system of active involvement of teachers from other HEIs and foreign countries for the purpose of effective internationalization of the educational programme.

R20 to increase the number of support staff for quality and timely maintenance of complex laboratory equipment, which is used in the educational process and research work.

Quality Assurance

R21 to introduce paragraphs in the local documents, which regulate the development of graduation theses, limitations for involving industrial companies, which may harm the environment, in determining themes for graduation theses.

R22 to create the system of periodical surveys of the programme's graduates on strengths and weaknesses of the study programme, its applicability and correspondence to the working functions.

CONCLUSION

Based on the analysis of the presented documents, information and oral evidence the review panel comes to the conclusion that the educational programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06), which is delivered by the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University" substantially complies with the standards of joint international accreditation of NCPA and evalag.

The review panel recommends the National Accreditation Board and evalag Accreditation Council to accredit the educational programme "System Ecology and Modelling" of the training field "Ecology and Natural Management" (05.04.06), which is delivered by the Federal State Autonomous Institution of Higher Professional Education "Kazan (Volga Region) Federal University" **for the period of 6 years**.

On behalf of the review panel:

Vinokhodov Dmitry Olegovich
The Chair of the review panel

ANNEX A

SITE VISIT SCHEDULE

Time	Event	Participants	Venue
13 March, Monday			
During the day	Arrival of expert teams at Kazan Airport		
12.00 — 15.00	Excursion around the city (for foreign experts)		
15.30	Lunch (for foreign experts)		Café, Hayal Hotel
17.00	**Internal preparatory meeting of expert teams. Training**		Conference hall, Hayal Hotel
20.00	Dinner (for foreign experts)		Café, Hayal Hotel
14 March, Tuesday			
08.40	Transfer to the University. Meeting in the hotel lobby (for external experts)		
08.45	Arrival at Kazan Federal University		Main building, KFU Kremlyovskaya st., 18
09.00 — 11.00	**Internal preparatory meeting of expert teams**	Expert teams	Room 336
11.00 — 12.00	**Meeting of expert teams with University Administration and heads of structural subdivisions**	Vice Rector for Academic Affairs, Director for International Cooperation department, Director of department of methodological support and monitoring of process in training, Directors of institutes, Expert teams	Room 335
12.10 — 12.30	**Visiting library**	Expert teams	Library
12.30 — 14.00	Lunch		Café, Hayal Hotel
14.00 — 14.50	Guided tour on the labs of Institute of Environmental Sciences in the main building of KFU		
14.50 — 15.00	Transfer to building №32: Tovarischeskaya st., 5		
15.10 — 16.00	**Meeting with Institute Director, Deputy Directors**	Expert team, Institute Director, Deputy Directors	Room 212
16.00 — 16.15	Coffee-break		Room 222
16.15 — 17.15	**Meeting with programme management (academic and administrative staff)**	Deputy Director for Academic Affairs, master programme Coordinator, Head of department of General Ecology, Head of department	Room 212

Time	Event	Participants	Venue
		of Ecosystem Modelling, Expert team	
17.15 — 17.45	Review of exam materials and thesis	Expert team	Room 222
17.45 — 18.15	Guided tour on the University premises (visiting lecture rooms, labs, equipment)		
18.15 — 18.30	Internal meeting of expert team	Expert team	Room 222
20.00	Dinner at the hotel (for the external experts)		Café, Hayal Hotel
15 March, Wednesday			
08.30	Meeting in the hotel lobby. Transfer		
09.00	Arriving at the campus № 32		Tovarischeskaya st., 5
09.00 — 09.15	**Internal meeting of expert team**	Expert team	Room 222
09.15 — 10.15	**Meeting with students**	Students, Expert team	Room 212
10.15 — 10.30	Coffee break	Expert team	Room 222
10.30 — 12.00	**Meeting with teaching staff**	Teaching staff, Expert team	Room 212
12.00 — 12.30	Additional meeting on request	Expert team	Room 212
12.30 — 12.45	Transfer		
12.45 — 14.00	Lunch		Café, Hayal Hotel
14.00 — 14.10	Transfer to the main building of KFU: Kremlyovskaya st., 18		
14.10 — 16.00	**Internal meeting of expert team. Filling out the assessment forms**	Expert teams	Room 336
16.00 — 17.00	Feedback to programme management (Final meeting of Expert teams with Kazan University representatives)	Representatives of the University, expert teams	Room 335
17.00 — 17.30	Free communication with experts		
20.00	Dinner at the hotel (for the external experts)		

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ANNEX B

THE SCALE OF ASSESSMENT PARAMETERS

№ п/п	Стандарты	Assessment of the study programme			
		Very good	Good	Satisfactory	Unsatisfactory
1.	**Programme profile**		√		
2.	**Curriculum**		√		
3.	**Student assessment**	√			
4.	**Organisation of the study programme**	√			
5.	**Resources**	√			
6.	**Quality assurance**		√		