



CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT
STUDY FIELD of ECOLOGY
at Vytautas Magnus University

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Study Field Data

Title of the study programme	<i>Applied Ecology</i>	<i>Applied Ecology</i>	<i>Agroecosystems</i>
State code	6121DX012	6211DX013	6213DX001
Type of studies	University Studies	University Studies	University Studies
Cycle of studies	First	Second	Second
Mode of study and duration (in years)	Full-time (4 years), part-time (6 years)*	Full-time/Part-time	Part-time
Credit volume	240	120	120
Qualification degree and (or) professional qualification	Bachelor of Life Sciences	Master of life Sciences	Master of Life Sciences
Language of instruction	Lithuanian	Lithuanian	Lithuanian
Minimum education required	Secondary Education	Bachelor's degree	Bachelor's degree
Registration date of the study programme	May 19, 1997	May 19, 1997	November 9, 2007

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I. INTRODUCTION

1.1. BACKGROUND OF THE EVALUATION PROCESS

The evaluation of study fields is based on the Methodology of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC) 31 December 2019 Order [No. V-149](#).

The evaluation is intended to help higher education institutions to constantly improve their study process and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: 1) *self-evaluation and self-evaluation report prepared by Higher Education Institution (hereafter – HEI); 2) site visit of the expert panel to the higher education institution; 3) production of the external evaluation report (EER) by the expert panel and its publication; 4) follow-up activities.*

On the basis of this external evaluation report of the study field, SKVC takes a decision to accredit the study field either for 7 years or for 3 years. If the field evaluation is negative then the study field is not accredited.

The study field and cycle are **accredited for 7 years** if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points).

The study field and cycle are **accredited for 3 years** if one of the evaluation areas was evaluated as satisfactory (2 points).

The study field and cycle are **not accredited** if at least one of the evaluation areas was evaluated as unsatisfactory (1 point).

1.2. EXPERT PANEL

The expert panel was assigned according to the Experts Selection Procedure (hereinafter referred to as the Procedure) as approved by the Director of Centre for Quality Assessment in Higher Education on 31 December 2019 [Order No. V-149](#). The site visit to the HEI was conducted by the panel on *3 December 2021*.

Prof. Dr. Judit Padisák (panel chairperson), academic;
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Mr. Kęstutis Skrupskelis, representative of social partners;
Mr. Mindaugas Rutalė, students' representative.

1.3. GENERAL INFORMATION

The documentation submitted by the HEI follows the outline recommended by SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site visit:

No.	Name of the document
1.	Links to the master theses at MSc level
2.	Other information was obtained from external sources (e.g. Web of Science)

1.4. BACKGROUND OF THE STUDY FIELD/STUDY FIELD POSITION/STATUS AND SIGNIFICANCE IN THE HEI

General information about the significance of the study field

The current threat of climate change and the different kinds of anthropogenic pollution and disturbances mean that the importance of ecological research and education is unquestionable. These threats have impacts on the carrying capacity of our Planet and its biodiversity which in turn have a cascading effect on human well-being at the societal level. Producing as many students as possible with qualifications in Ecology and Environmental Science is a key task to ensure the life support systems of our subsequent generations.

Information about the role of the HEI

The VMU is one of the most highly thought of HEIs in Lithuania with a special excellence in the field of Agriculture and with strong motivation to educate students in environmentally sustainable methods (e.g., organic production). However, and by the simplest definition, ecology is a science that deals with distribution and abundance of species and the environmental drivers acting as driving forces. Few master theses meet this definition, but the programme content does have the potential for advancing the definition. Social partners and employers acknowledge and utilise the knowledge of graduates of both cycles, thereby identifying the importance of this HEI in Lithuania.

II. GENERAL ASSESSMENT

Ecology study field and *first cycle* at Vytautas Magnus University is given a **positive** evaluation.

Study field and cycle assessment in points by evaluation areas

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	3
2.	Links between science (art) and studies	3
3.	Student admission and support	3
4.	Teaching and learning, student performance and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	3
7.	Study quality management and public information	4
	Total:	22

*1 (unsatisfactory) - there are essential shortcomings that must be eliminated/the area does not meet the minimum requirements, there are fundamental shortcomings that prevent the implementation of the field studies.

2 (satisfactory) - meets the established minimum requirements, needs improvement/the area meets the minimum requirements, and there are fundamental shortcomings that need to be eliminated.

3 (good) - the field is being developed systematically, has distinctive features/the area is being developed systematically, without any fundamental shortcomings.

4 (very good) - the field is evaluated very well in the national and international context, without any deficiencies/the area is evaluated very well in the national context and internationally, without any shortcomings.;

5 (excellent) - the field is exceptionally good in the national and international context (environment)/ The area is evaluated exceptionally well in the national context and internationally.

Ecology study field and *second cycle* at Vytautas Magnus University is given a **positive** evaluation.

Study field and cycle assessment in points by evaluation areas

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	3
2.	Links between science (art) and studies	2
3.	Student admission and support	3
4.	Teaching and learning, student performance and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	4
7.	Study quality management and public information	4
	Total:	22

*1 (unsatisfactory) - there are essential shortcomings that must be eliminated/the area does not meet the minimum requirements, there are fundamental shortcomings that prevent the implementation of the field studies.

2 (satisfactory) - meets the established minimum requirements, needs improvement/the area meets the minimum requirements, and there are fundamental shortcomings that need to be eliminated.

3 (good) - the field is being developed systematically, has distinctive features/the area is being developed systematically, without any fundamental shortcomings.

4 (very good) - the field is evaluated very well in the national and international context, without any deficiencies/the area is evaluated very well in the national context and internationally, without any shortcomings;

5 (excellent) - the field is exceptionally good in the national and international context (environment)/ The area is evaluated exceptionally well in the national context and internationally.

III. STUDY FIELD ANALYSIS

3.1. INTENDED AND ACHIEVED LEARNING OUTCOMES AND CURRICULUM

Study aims, outcomes and content shall be assessed in accordance with the following indicators:

3.1.1. Evaluation of the conformity of the aims and outcomes of the field and cycle study programmes to the needs of the society and/or the labour market (not applicable to HEIs operating in exile conditions)

(1) Factual situation

It would have been helpful in the SER to have included the aims and outcomes of the programmes in a table and linked them by their codes (e.g., Knowledge and Understanding 16.1, Research 16.2, etc.) to the official guidance for ecology programmes in Lithuania (V-1863 30th November 2020). The table could then have been used to support the statements within the document and reduced some of the word count.

First cycle:

While the aims and outcomes for the first cycle Applied Ecology degree do conform to the requirements of the society and the labour market, the question to ask is whether specialising in Applied Ecology at first cycle level is appropriate? The meeting with the students on the programme confirmed that they felt there was very limited ecology taught in High School Biology - a more general degree in ecology may therefore be required instead. This would be a unique selling point for the degree as the only first cycle Ecology programme currently offered in Lithuania which could give students the knowledge and understanding, and practical skills required for a career in the subject. On graduation, students could then specialise in Applied Ecology or Agroecosystems at the University, or in one of the other second cycle ecology focused degrees offered in Lithuania; alternatively, with a background in ecology, graduates could apply to international programmes e.g., Applied Ecology and Conservation, Environmental Sustainability, Biodiversity Conservation, Environmental Management, etc.

Second cycle:

The aims and outcomes of the second cycle programmes are provided to demonstrate how the aims and outcomes relate to the needs of society and the workplace. The requirement for trained ecologists to help solve environmental problems is supported through the EU Green Deal and the assessment of relevant organisations within Lithuania by the University (as detailed in the SER).

(2) Expert judgement/indicator analysis

The aims and outcomes meet the requirements of society and the labour market; however, consideration should be given as to whether specialising so soon in a first cycle degree is helpful, considering that little ecology is covered in High School. A more general degree which develops their knowledge and understanding of ecology and enhances their practical ecological skills, may be more appropriate, and provide them with the baseline required for specialising in a second cycle programme.

Second cycle:

The aims and outcomes of the Applied Ecology and Agroecosystems degrees satisfy the needs of society and the workplace.

3.1.2. Evaluation of the conformity of the field and cycle study programme aims and outcomes with the mission, objectives of activities and strategy of the HEI

(1) Factual situation

The conformity of the aims and outcomes to the mission, objectives of activities and strategy of the institution is very well documented within the SER. Specific mention is made to the Strategic Plan and where the programmes comply with the role of the University in the development of society.

(2) Expert judgement/indicator analysis

From the information provided in the SER, and through the feedback from staff and students at the meetings, the aims and outcomes of the programmes clearly conform to the strategy and mission of the University.

3.1.3. Evaluation of the compliance of the field and cycle study programme with legal requirements

(1) Factual situation

The degrees comply with the legal requirements in terms of the credits for the programme in the two SERs. A lot of text in the SER is devoted to explaining how the courses meet the study cycle and fields in the official documents – this could be better presented in future SERs in a matrix/tabular form showing e.g., how the courses (compulsory courses, optional courses, and research methods and final thesis) map to the study results and then how these study results map to the study methods (teaching, practical work, group work, etc.). Nevertheless, the detailed information provided does show that the programmes comply with the legal requirements.

(2) Expert judgement/indicator analysis

Although the information could be better presented in a visual form (e.g., table/matrix), the compliance of the field and cycle study programme with the legal requirements is achieved.

3.1.4. Evaluation of compatibility of aims, learning outcomes, teaching/learning and assessment methods of the field and cycle study programmes

(1) Factual situation

The aims, learning outcomes, and teaching and learning on the programmes is compatible with other programmes within and external to Lithuania. However, there is concern regarding the assessments on the courses for all programmes. On all three programmes the predominant method of assessment on the courses is by exam, with very few (2) having a report, and others (3) having a defence/public defence. Exams are not meaningful or authentic forms of assessment i.e., they cannot be transferred to the workplace, whereas a scientific report for example could be a requirement of the future workplace. Similarly, social partners and employers value group work and this could be incorporated into the assessments in the form of group presentations, group reports, etc.

(2) Expert judgement/indicator analysis

The aims and learning outcomes considered map well to the learning and teaching on the programmes. However, the predominant use of exams as the method of assessment in most courses should be reviewed for the next academic year to ensure that students are exposed to a variety of authentic assessments which could be a requirement of the workplace.

3.1.5. Evaluation of the totality of the field and cycle study programme subjects/modules, which ensures consistent development of competences of students

(1) Factual situation

First cycle:

The first cycle programme contains a variety of ecology courses, environmental science courses, applied ecology courses and general study courses; all of these contribute to the competency of the graduate as an applied ecologist. An important part of the programme is the opportunity to undertake 15 credits of Professional Practice which provides students with experience of the workplace through a work-related learning opportunity. The previous evaluation suggested that the programme include 'all major courses in ecology', and while some effort has been made to include more courses the focus is more to applied ecology rather than ecology (animal and plant biology, physiology, evolution, ecosystems, conserving biodiversity). This recommendation supports the suggestion in 3.1.1 above that the programme staff consider whether a more general first cycle degree in ecology would be more suitable.

Second cycle:

Both second cycle programmes provide a variety of relevant compulsory, optional and research focused courses which will ensure their graduates have a range of knowledge and skills relevant to the workplace.

(2) Expert judgement/indicator analysis

First cycle:

While the current programme of courses does develop the knowledge and understanding and practical abilities of the students to become applied ecologists, as stated before, consideration should be given as to whether the students have enough prior knowledge of ecology from High School and the programme to be specialising in Applied Ecology.

Second cycle:

The programme content is commensurate with the development of the competences of the students.

3.1.6. Evaluation of opportunities for students to personalise the structure of field study programmes according to their personal learning objectives and intended learning outcomes

(1) Factual situation

First cycle:

The first cycle programme has a wealth of optional courses from within and outside the department which supports a broad education of the students under a Liberal Arts ethos. This therefore enables students to personalise their graduating curriculum according to their interests.

Second cycle:

Students can choose their optional courses from an extensive list, although this is only from the fourth semester onwards. They also have input into the topic of their thesis, and this commences early in the programme structure with supporting research courses to inform their methodology.

(2) Expert judgement/indicator analysis

First cycle:

Students on the first cycle programme have a large selection of optional courses to choose from, as well as general university courses and languages – all in addition to their compulsory courses. The inclusion of a professional practice opportunity as well means that this field is evaluated very well in the national and international context.

Second cycle:

The opportunity of students to personalise their graduating curriculum through optional choices and thesis topics means that this field performs well in the national and international context.

3.1.7. Evaluation of compliance of final theses with the field and cycle requirements

(1) Factual situation

First cycle:

Students undertaking a bachelor thesis are governed by the VMU Study Regulations and General Order on the Final Theses Preparation and Defence and supported by the Description of the Procedure for the Preparation and Defence of First Cycle Final Thesis in Applied Ecology. Forty-six bachelor thesis titles were submitted with the SER on an extensive list of topics within applied ecology.

Second cycle:

As with the first cycle information above, students undertaking the masters thesis are governed by University level Regulations. Students are encouraged to publish their findings and present at external conferences and these have been successful. A substantial list of thesis titles was available and these were on a variety of topics within applied ecology and agroecosystems.

(2) Expert judgement/indicator analysis

The programmes are in compliance with the field and cycle requirements.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The opportunity for first cycle students to undertake professional practice as part of their programme is a unique selling point of the degree and should be advertised widely as work-related learning which should improve the employability of a graduate of the programme.

(2) Weaknesses:

1. This section would benefit from a mapping of the course with the study fields and the study fields with the study methods to provide an easy to understand visual of how they all meet the legal requirements. Future SERs would benefit from reducing the text in some sections and replacing them with these kinds of visuals instead.

2. There is a reliance on examinations as a method of assessments and this should be addressed to include more meaningful or authentic assessments which the students could use in their future workplace. Examples could include scientific reports, scientific posters, group work, oral presentations, scientific articles, annotated reference lists, websites, blogs, etc. Experience in the creation of these alternatives to the exam would enhance the students' employability.

3.2. LINKS BETWEEN SCIENCE (ART) AND STUDIES

Links between science (art) and study activities shall be assessed in accordance with the following indicators:

3.2.1. Evaluation of the sufficiency of the science (applied science, art) activities implemented by the HEI for the field of research (art) related to the field of study

(1) Factual situation

First cycle:

The number of the teachers delivering the programme is 29; their qualifications fulfil the legal requirements in Lithuania. According to the SER the VMU, in terms of science, operates in research clusters. The number of clusters and their scope/competence is appropriate for the first cycle students to select topics they feel motivated to deepen their knowledge. Most teachers published papers but in many cases it is restricted to co-authorship in local journals and conference materials

Second cycle:

The SER lists 13 teachers for the Applied Ecology and 20 for the Agroecosystems programmes; their qualifications fulfil the legal requirements in Lithuania. Of the Applied Ecology teachers 7 did not publish first authored papers (one did not publish at all or did not provide data) in WoS or Scopus registered journals in the period 2017-2020. The similar data for the Agroecosystems programme: of the 20 teachers 13 did not publish such papers as first author. Topics of the papers fit rather to the contents of Agroecosystems than to Applied Ecology.

(2) Expert judgement/indicator analysis

The quality of publications by the teaching staff can be considered as sufficient for first cycle studies but insufficient for the second cycle programmes. Intensive motivation of teachers to publish first authored papers in WoS/Scopus registered journals would substantially increase scientific sufficiency related in both Applied Ecology and Agroecosystems study fields. Lack of uniformity in the publication list of teachers reflects little care on technical proficiency; in some cases, bibliographic records are incomplete. Additionally, as judged from interviews with the SER preparation team, English proficiency of the staff needs improvement.

3.2.2. Evaluation of the link between the content of studies and the latest developments in science, art and technology

(1) Factual situation

First cycle:

In the absence of having a view of first cycle bachelor theses („The first cycle study program Applied Ecology final works are uploaded to the electronic repository from 2020. Until 2020, final theses were submitted and stored in paper form only”.) it is impossible to judge how much these reflect consistency with their works and with the study cycle. Additionally, the listed 6 bachelor theses are not accessible from outside and at least two of them, by title (“The Environmental Protection Development Analysis of the Growth of Electric Cars Transport in

Lithuania”; “The Influence of Repeated Boiling on the Quality of Drinking Water”), cannot be considered as Applied Ecology.. Therefore, no indicator analysis can be performed.

Second cycle:

Master thesis topics of the second cycle programmes in the Agroecosystems study field with no exception correspond to the content of the studies. Some master theses of the Applied Ecology programme would better fit to the scope of the Agroecosystems study field than to Applied Ecology. In both study fields the master theses are technically correct, well structured, except that the chapter „Discussion” is missing with no exception.

(2) Expert judgement/indicator analysis

As most master theses in the Agroecosystems study field investigate the effect of different organic farming methods on crop production, it can be concluded that they are in line with the trends of modern agronomy which is fulfilled only partly in the Applied Ecology study field. In both, the chapter „Discussion” is missing from the master theses that prevents the students from comparing their results to other works. Statistical analysis of the results is either very simple or missing. This is especially serious in the Applied Ecology study field. More care should be taken to the English translation of the titles and abstracts.

3.2.3. Evaluation of conditions for students to get involved in scientific (applied science, art) activities consistent with their study cycle

(1) Factual situation

Conditions for master theses’ research are apparently good. Number of experimental works is sufficient though laboratory experiments are rare. The VMU regularly organises student conferences that allow for developing competence in dissemination of students’ research. Most students use both local and international literature in their master theses. The VMU has a well-developed network system with other institutions/user organisations. No data in the SER is provided by students’ publication activity.

(2) Expert judgement/indicator analysis

The VMU’s cooperation network helps the students to integrate to the local research, either academic or applied. Inserting a „Discussion” chapter in the master theses would increase the students’ ability to better cope with the international standards. Application of more sophisticated statistical methods are needed especially in the Applied Ecology study field.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Organisation of student conferences;
2. Good conditions for preparing final theses;
3. Good communication with other research or applied units.

(2) Weaknesses:

1. Even though the first cycle's theses are electronically available only from 2020 and only for users with internal access, there are methods to electronize previous ones. Bachelor theses and their contents are untransparent.

2. English communication proficiency of the staff has to be improved (experience from discussions with a translator).
3. Comparing productions and salary/FTE few credits are given to scientific production, additionally, conditions are not transparent for the staff as communicated during the discussions.
4. Publication activity of the teachers is quite low on average.
5. Master theses lack the chapter „Discussion“; more care is needed to introduce the students to modern statistical methods.

3.3. STUDENT ADMISSION AND SUPPORT

Student admission and support shall be evaluated according to the following indicators:

3.3.1. Evaluation of the suitability and publicity of student selection and admission criteria and process

(1) Factual situation

First cycle:

Students who have acquired at least a secondary education are admitted to the first cycle study programme in the field of Ecology through a competition. The competitive score structure includes state matriculation and/or school examinations in Lithuanian language and literature (0.2), biology (0.4), chemistry or mathematics (0.2) and any subject that does not coincide with other subjects.

Second cycle:

Applicable requirements for applicants to the second cycle study programme of Applied Ecology include: completion of the first cycle studies in the field of ecology; completion of the first cycle studies in the field of biomedical sciences and completion of the 30-credit programme in ecology; completion of undergraduate studies in other fields of science and completion of a 60-credit ecology programme; completion of a professional bachelor studies and additional studies under the Applied Ecology programme. Those wishing to study the second cycle studies of agroecosystems must meet the following requirements: completed the first cycle (bachelor's) studies in agronomy, ecology and environmental science; completed the first cycle (bachelor) studies in the field of biomedical sciences and completed 30 credits in agronomy and ecology; completed studies in other fields of science and completed 60 credits in agronomy, ecology and environmental studies; completed professional bachelor studies and completed compensatory studies in agronomy or applied ecology.

(2) Expert judgement/indicator analysis

For both:

Admission requirements for first cycle (bachelor) studies meet the minimum requirements for applicants approved by the Ministry of Education, Science and Sports of the Republic of Lithuania. The requirements for admission to second cycle (master's) study programmes are set out in a clear and logical order.

3.3.2. Evaluation of the procedure of recognition of foreign qualifications, partial studies and prior non-formal and informal learning and its application

(1) Factual situation

First and second cycle:

Recognition of foreign qualifications at Vytautas Magnus University is carried out centrally in the International Relations Department in accordance with the resolutions of the Republic of Lithuania, procedures and information of SKVC, as well as general or individual (when there are no general) recommendations and consulting SKVC responsible employees. The recognition of partial study results is regulated by the description of the procedure for crediting study results at Vytautas Magnus University. Recognition of part-time studies at the University is decentralised and carried out by the faculties or the initial assessment at the Department of International Relations. Recognition of international qualifications at Vytautas Magnus University is carried out centrally in the International Relations Department in accordance with the resolutions of the Republic of Lithuania, procedures and information of SKVC, as well as general or individual (when there are no general) recommendations and consulting SKVC responsible employees. The principles and processes of recognition of non-formal and informal learning competencies are regulated by the VMU Study Regulations; Description of the Procedure for Assessment and Recognition of Non-formal and Informal Acquired Competences at Vytautas Magnus University and Description of the Procedure for Organising Non-Formal Adult Education at Vytautas Magnus University.

(2) Expert judgement/indicator analysis

For both

The rules for the crediting and recognition of international qualifications, part-time studies and non-formal and informal learning are clearly and explicitly defined and established both at the university and in the study programmes under assessment.

3.3.3. Evaluation of conditions for ensuring academic mobility of students.

(1) Factual situation

First and second cycle:

Both bachelor's and master's students have the opportunity to study and/or practice abroad. Information on eligibility for the ERASMUS program selection is published in a way that is accessible to students. Students who intend to take advantage of the opportunities of mobility projects participate in the selection in the prescribed manner, where the main criteria are learning outcomes, language skills, motivation, etc. During the period under review, students

made little use of the mobility package. One of the reasons mentioned is that it is difficult for students to combine ERASMUS opportunities and work.

(2) Expert judgement/indicator analysis

For both

It is recommended that opportunities are provided for distance learning internships at international universities, rather than just experiencing individual study subjects. This would reconcile the high level of student employment with the problem of internationalisation. The self evaluation study also mentioned that one of the reasons why students do not use the ERASMUS program is poor English language skills. During the interview with the students, it was discovered that they have to achieve a C1 proficiency in English. The contradiction in these two claims is therefore confusing.

3.3.4. Assessment of the suitability, adequacy and effectiveness of the academic, financial, social, psychological and personal support provided to the students of the field

(1) Factual situation

First and second cycle:

Teachers are happy to advise students and share advice. Regular surveys of student satisfaction with their studies are performed including the subject studied; analysis of the data provided enables the enhancement of the study programme by the relevant committees. Students have a favourable financial environment in which to study - students who participated in the discussion are supported by state funds and have the opportunity to apply for a reduction in the amount paid for tuition or to pay in instalments. Scholarships are paid to students with good academic achievements and student activities. If necessary, psychological help can be sought by those students who need it. During the meeting with the students, they said that they enjoyed the warm business communication with the faculty administration and the lecturers. The psychological and emotional environment is also motivating to achieve high academic results. Students also have the opportunity to take part in a non-academic university environment.

(2) Expert judgement/indicator analysis

For both:

The current student satisfaction with the study processes should be maintained.

3.3.5 Evaluation of the sufficiency of study information and student counselling

(1) Factual situation

First and second cycle:

An introductory week is prepared for students admitted to the undergraduate programme. This facilitates their integration into a new, academic environment. Students can follow the

studies and the study process in a virtual environment of the university. During the visit, both students and lecturers indicated that the first lecture provides basic information about assessment methods, criteria, information sources, and assessment methods. The Study Centre and the Department of Student Affairs work on students' academic, financial and social welfare issues. Teachers also devote time to counselling both full-time and part-time students. It is noted that students willingly participate in international scientific conferences organised in Lithuania, but do not attend conferences organised abroad.

(2) Expert judgement/indicator analysis

For both:

Students on the Bachelor's study programme in Applied Ecology and students on the Master's study programme in Applied Ecology and Agroecosystems have the opportunity to have an international experience by participating in international conferences in other countries, regardless of their format - contact or distance.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The Bachelor's study programme in Applied Ecology is unique and not currently offered by any other university in Lithuania;
2. Students in the study programmes feel satisfied with the quality of their studies and are motivated to pursue excellent academic grades.

(2) Weaknesses:

1. Students study a unique study programmes in Lithuania, but do not have an internship at the international level;
2. In order to increase the number of students, especially in the undergraduate programme, preferential treatment for international students, such as students from Belarus, should be considered.

**3.4. TEACHING AND LEARNING, STUDENT PERFORMANCE AND GRADUATE
EMPLOYMENT**

Studying, student performance and graduate employment shall be evaluated according to the following indicators:

3.4.1. Evaluation of the teaching and learning process that enables to take into account the needs of the students and enable them to achieve the intended learning outcomes

(1) Factual situation

Some different, but also mainly traditional, study methods are used for the students' theoretical and practical learning; however the accumulative system for the assessment of learning outcomes is acceptable and ensures continuous learning during all study periods.

(2) Expert judgement/indicator analysis

New, interactive, and up to date teaching and learning methods should be applied to the study programmes.

3.4.2. Evaluation of conditions ensuring access to study for socially vulnerable groups and students with special needs

(1) Factual situation

Socially vulnerable groups and students with special needs have the opportunity to create individual study plans. The study process is organised according to the individual needs of students: individual study schedule, distance learning etc.

(2) Expert judgement/indicator analysis

The University meets all the special needs for students with disabilities.

3.4.3. Evaluation of the systematic nature of the monitoring of student study progress and feedback to students to promote self-assessment and subsequent planning of study progress

(1) Factual situation

The monitoring of student learning progress is regulated by the VMU Study Regulations and the Description of Procedure for Student Learning Outcomes Monitoring and Assistance. Analysis of student enrolment in the study process is the method used in managing student failure and improving the organisation of studies. Students can submit suggestions to improve the learning and assessment systems.

Study information systems (Studis) and the distance study environment (Moodle) are used for student performance monitoring.

(2) Expert judgement/indicator analysis

Monitoring methods for students' study progress are adequate and valuable for evaluation of the study programme success; however any publicly available display of students' achievements must meet GDPR requirements.

3.4.4. Evaluation of employability of graduates and graduate career tracking in the study field.

(1) Factual situation

Evaluation of the employability of graduates and graduate career tracking in the study field is fully transferred to the VMU Alumni club, whose interests may not reflect the needs of all study programmes.

Statistical data collected from the Employment Service do not reflect the labour market needs or the employment of graduates in their study field. More than half (from 50 to 85%) of graduates from 2018-2020 work in other areas. However employment of graduates is slightly higher in first cycle studies; this may be because most second cycle students already work in the study field.

(2) Expert judgement/indicator analysis

The contribution of graduates to the study evaluation process and improvement of it should be amended to include social partners, teaching staff and recent graduates, and should not be based just on Alumni club insights.

3.4.5. Evaluation of the implementation of policies to ensure academic integrity, tolerance and non-discrimination

(1) Factual situation

The principles of academic integrity are defined in the VMU Statute, the Code of Ethics of VMU, the Plagiarism Prevention Procedures of VMU, VMU Study Regulations. Non-discrimination measures at VMU are regulated by the Code of Ethics. According to the given information (SER) no cases of breaches of the principles of academic integrity, tolerance and non-discrimination in the study field occurred over the last 3 years.

(2) Expert judgement/indicator analysis

Teachers and students have the right to appeal to the University's Academic Ethics Commission in terms of academic integrity, tolerance and non-discrimination which makes the system balanced.

3.4.6. Evaluation of the effectiveness of the application of procedures for the submission and examination of appeals and complaints regarding the study process within the field studies

(1) Factual situation

Procedures for appeals and complaints of the study process are regulated by the VMU Description of Procedure for Appeal Investigation, the Plagiarism Prevention Procedures of VMU and VMU Study Regulations. Students have the right to make appeals if they disagree with the teacher's assessment or assessment procedures. Students confirm the actual use of the procedures.

(2) Expert judgement/indicator analysis

There were no cases of exclusions from examinations due to dishonesty during the period 2017-2020. Moreover, during the external evaluation carried out in 2014, the experts did not provide any recommendations in this area, also according to interviewed students (during the evaluation process) no special needs have been expressed.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. None particular strengths were found.

(2) Weaknesses:

1. Most second cycle graduates already work in the study field area, so the employment of this group should not be used for evaluation of students' employment.
2. International partners/teachers from universities abroad should take part in students' thesis evaluation. It could be useful for student work assessment in

an international field, and would be useful in improving foreign language skills as well.

3.5. TEACHING STAFF

Study field teaching staff shall be evaluated in accordance with the following indicators:

3.5.1. Evaluation of the adequacy of the number, qualification and competence (scientific, didactic, professional) of teaching staff within a field study programme(s) at the HEI in order to achieve the learning outcomes

(1) Factual situation

The qualification of the teaching staff sufficient to achieve the position and study outcomes is determined during employment and periodic evaluations. The Description of the Minimum Qualification Requirements for Positions of VMU Teachers and Researchers Working in the Fields of Nature, Technology and Agricultural Sciences was approved by Resolution No. 2–6 of VMU Senate on March 13, 2019. The structure of teachers' pedagogical, scientific, methodological and organisational working time is planned every academic year.

Compliance of programme teachers with the general requirements for the implementation of studies is confirmed and provided in Table 27 (2nd cycle Self-Evaluation Report) and Table 32 (1st cycle Self-Evaluation Report). In the first cycle study programme the workload ratio is equally distributed for teaching, research and methodological work. In the second cycle study programmes, the time for research comprises more than 50%. Of the teachers, 90% have English language proficiency at levels of B1–C2.

The substitutability of teachers completing their careers is ensured by graduates from doctoral studies in the fields of Ecology and Environmental Science, Forestry and Environmental Engineering.

(2) Expert judgement/indicator analysis

Insufficient English proficiency was observed when reading SER and meeting with teachers. Teachers have sufficient time dedicated for research and teaching. There should be more discussions between the SER group and teachers to communicate strategic goals, vision and implementation of the study programmes (especially Applied Ecology). Annual discussions on the achievements of professional goals could be organised to provide the early-warnings on the direction and efficiency of their performance. Award of the best teacher or effective teaching methods could be organised to provide more motivation for teachers in improving their pedagogical/didactic competencies.

3.5.2. Evaluation of conditions for ensuring teaching staffs' academic mobility (not applicable to studies carried out by HEIs operating under the conditions of exile)

(1) Factual situation

The Erasmus+ mobility program as a main basis for ensuring the mobility of the teaching staff is being provided for teachers' benefits. VMU has Erasmus+ partnership agreements with 516

partner institutions in the EU and 99 of those outside the EU. Number of mobility visits have increased within the evaluation period before the pandemic period in both first and second cycle studies (Table 33 of the first year SER, Table 28 in the second cycle SER). Portugal, Germany, Sweden, Latvia, Serbia, Croatia, Italy, Kazakhstan were the countries chosen for mobility visits. Teachers prefer teaching visits over research visits because of the shorter period which enables them to combine it with the intensive teaching activities.

(2) Expert judgement/indicator analysis

Many contracts with Erasmus+ program countries indicate wide opportunities for mobility. Funding provided by Erasmus+ is sufficient to cover mobility visits. Taking into account intensive teaching work, short research visits are also possible via participation in EU COST actions and other EU programs. Possibilities for the research visits are also provided by the Lithuanian Research Council. More teachers could benefit from the mobility visits.

3.5.3. Evaluation of the conditions to improve the competences of the teaching staff

(1) Factual situation

The competence development of the teachers at VMU are regulated by the VMU Description on Professional Development Procedure (2018) under 8 groups of competences: higher education didactics competences, digital competences, research competences, management competences, foreign language competences, intercultural competences, subject-related competences and personal competences.

Training is organised several times every year, using VMU internal resources. Teachers are also invited to conduct training, share useful recommendations, professional insights and their experiences.

In 2020 and 2021 VMU teachers were involved in the training organised by VMU Institute of Innovative Studies. The topics varied from the organisation of online teaching and learning to cooperation and assessment tools in distance studies and responsible use of technology. Teachers also took part in English language skill improvement training.

In SER (2nd cycle, page 41) it was indicated that due to the relatively low funding of studies, there are limited opportunities to go on short-term or long-term internships to research institutions abroad with university funding, but teachers attempt to use other funding opportunities (e.g. provided by Research Council of Lithuania).

For recommendations to improve English language skills, courses for the development of foreign language skills were organised at VMU. To provide more research time for teachers, the teaching load was reduced by inviting guest lectures from partner universities. An aim to increase the research results of the teachers, new qualification requirements for posts of teachers and researchers were approved by the ASU Senate resolution protocol.

(2) Expert judgement/indicator analysis

Sharing experience, professional insights and organising some of training by colleagues is a very positive feature to increase pedagogical/didactic experience within the study field, to

strengthen emotional atmosphere and contribute to openness and cooperation. Discussion in meetings showed that English language skills must be further improved. Opportunities of research visits should be used.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Active cooperation with social partners keeps the teachers focused on up-to-date needs.
2. Active and motivated students, and the growing need of graduates indicate that teachers put much effort in their professional activities.

(2) Weaknesses:

1. English language skills of teachers must be improved as it might reduce the progress of the study programmes towards international level.
2. Research visits should be more actively used.
3. Awards for the teaching performance could be even more motivating for improving pedagogical/didactic competencies.
4. Annual discussion on the teacher's professional performance could guide the teacher's professional development and alignment of his/her activity to the institutional goals.
5. There should be more discussions between the SER group and teachers to communicate strategic goals, vision and implementation of the study programmes (especially Applied Ecology).

3.6. LEARNING FACILITIES AND RESOURCES

Study field learning facilities and resources should be evaluated according to the following criteria:

3.6.1. Evaluation of the suitability and adequacy of the physical, informational and financial resources of the field studies to ensure an effective learning process

(1) Factual situation

Facilities and learning resources are adequate in their size and quality for both study programmes. There is a practical base for agroecosystems which includes opportunities with social partners which are well organised and equipped with the newest technologies.

Laboratories are equipped with a new and modern material base. However practical bases for Applied Ecology studies should be reviewed in cooperation with social partners or local state owned enterprises (e.g., Tadas Ivanauskas museum, Kaunas Zoo etc.)

(2) Expert judgement/indicator analysis

Learning facilities and resources are based on the needs of the agriculture programmes and therefore only just meet the minimum requirement for the applied ecology study field.

3.6.2. Evaluation of the planning and upgrading of resources needed to carry out the field studies

(1) Factual situation

Establishing an Environmental Research Laboratory equipped with the newest equipment and hardware is the “right direction”, however students need to know at least basics of data collection in the field. University should find a way to fulfil those needs.

Renovation and modernization projects have mostly improved the base for Agroecosystems but not for Applied ecology studies. The opportunity for students to complete an internship with the Ministry of Environment is welcome, but it only covers a narrow field of applied ecology.

(2) Expert judgement/indicator analysis

Interactions with social partners involving them in the study process upgrading to the Agriculture study programme is amazing. The same scheme should be used for planning and upgrading resources in the Applied ecology study field. Cooperation with nature monitoring program implementers may ensure practical skills of the study programme needs.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Commendable cooperation with social partners in the Agroecosystem field which reflects the needs of this study programme.

(2) Weaknesses:

1. Learning resources and bases for practical skills learning for Applied Ecology studies are weak and should be improved with cooperation from social partners or other faculties of the university.

3.7. STUDY QUALITY MANAGEMENT AND PUBLIC INFORMATION

Study quality management and publicity shall be evaluated according to the following indicators:

3.7.1. Evaluation of the effectiveness of the internal quality assurance system of the studies

(1) Factual situation

The SER describes in detail the different parts of the University which are involved with internal quality assurance; these range from the Academy Council through to the Study Programme Committee (which includes representatives from the programme, students, and social partners). Information was also provided on the roles of the members of the Study Programme Committee, and key senior staff regarding their input into quality assurance. The University follows the guidelines of the Standards and Guidelines for Quality Assurance in the

European Higher Education Area (2015) and outlines the internal policies and procedures within the institution e.g., Description of Procedure for Study Quality Assurance at VNU (2019). These documents are freely available on the VMU website.

(2) Expert judgement/indicator analysis

The information provided on internal quality assurance suggests that it is efficient and functional, and this was supported by feedback in some of the meetings. The internal quality assurance system is therefore comparable with other institutions, internally and externally.

3.7.2. Evaluation of the effectiveness of the involvement of stakeholders (students and other stakeholders) in internal quality assurance

(1) Factual situation

All stakeholders provide input into the internal quality assurance, mainly through survey questionnaires. These evaluations are utilised in the annual analysis of the programmes and to identify any best practice or areas for further development. Findings are presented to students in meetings which are then used to implement any improvements to the programme – this is monitored twice a year by the Study Programme Committee. Dissemination of the findings are shared across various channels including directly with those who took part, and through social media and public folders.

(2) Expert judgement/indicator analysis

Stakeholders are involved in the internal quality assurance system at VMU and their input shapes the programme. Findings from the analysis of the evaluations completed by the stakeholders feeds into the programme development which is shared directly with the stakeholders and the public through various networks. This compares positively with stakeholder input in institutions within and outside of Lithuania.

3.7.3. Evaluation of the collection, use and publication of information on studies, their evaluation and improvement processes and outcomes

(1) Factual situation

The annual analysis of the studies is scheduled to ensure that significant issues can be mitigated in time for the next cohort. Survey questions are focused on specific areas and enable contributors to provide detail within their feedback. A recent area is that of student mobility and plans are in place to address this once Covid restrictions are over. In addition, Agroecosystems focused on teaching and learning and specifically teaching methods which encouraged student participation. The outcome was to encourage teachers to undertake training in active learning methods and facilitate more discussions with students regarding the link between their studies and business. Although limited information is provided in this SER section on the integration of the social partners' views, it was clear in their meeting that social partners had a very strong relationship with all programmes.

(2) Expert judgement/indicator analysis

Information on the programmes, their evaluation and any improvements incorporated are shared internally and externally.

3.7.4. Evaluation of the opinion of the field students (collected in the ways and by the means chosen by the SKVC or the HEI) about the quality of the studies at the HEI

(1) Factual situation

Information was provided in both SERs on scores students provided for some evaluation criteria on graduation from the Applied Ecology programmes. The lowest value (first cycle) was for 'study practice' and this can possibly be related to the impacts of Covid. Other scores shared were from 3.6-4/4 which does not specifically raise any concerns. Scores from the Agroecosystem programme would have been welcome within this section to make a full judgement, however, the meetings with staff and students did not raise any issues regarding this programme.

(2) Expert judgement/indicator analysis

Students rate the Applied Ecology programmes well, although these were based on exceedingly small cohorts (<10). The previous evaluation for Agroecosystems (2016) recommended that the 'quality assurance system contributed to the improvement of the programme'; from the information provided, this recommendation has been met.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The internal quality assurance systems have been developed and improved since the previous evaluation in 2016 for Agroecosystems and are now fully functional in seeking input from the stakeholder. Dissemination of the findings of these systems is multifaceted and involves all stakeholders and the general public.

(2) Weaknesses:

1. None were found.

IV. EXAMPLES OF EXCELLENCE

Core definition: Excellence means exhibiting exceptional characteristics that are, implicitly, not achievable by all.

If, according to the expert panel, there are no such exceptional characteristics demonstrated by the HEI in this particular study field, this section should be skipped / left empty.

1. The opportunity for first cycle students to undertake professional practice as part of their programme is a unique selling point of the degree and should be advertised widely as work-related learning which should improve the employability of a graduate of the programme.

2. The internal quality assurance systems have been developed and improved since the previous evaluation in 2016 for Agroecosystems and are now fully functional in seeking input from the stakeholder. Dissemination of the findings of these systems is multifaceted and involves all stakeholders and the general public.

V. RECOMMENDATIONS

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Intended and achieved learning outcomes and curriculum	There is a reliance on examinations as a method of assessments and this should be addressed to include more meaningful or authentic assessments which the students could use in their future workplace.
Links between science (art) and studies	Publication activity of the teaching staff needs to be increased especially in WoS/Scopus registered journals. In accordance with the international practice, master theses must include a chapter "Discussion". Courses introducing students to modern statistical methods are needed along with use of these methods in analysing research data in the master theses.
Student admission and support	Make every effort and resources to promote and raise awareness of the undergraduate programme in Applied Ecology at the national and international levels.
Teaching and learning, student performance and graduate employment	Social partners, teaching staff, and graduates should be included in the evaluation of the study processes and improvement of it.
Teaching staff	English language skills of teachers must be improved as it might reduce the progress of the study programmes towards international level. Research visits should be more actively used. Awards for the teaching performance could be even more motivating for improving pedagogical/didactic competencies. Annual discussion on the teacher's professional performance could guide the teacher's professional development and alignment of his/her activity to the institutional goals. There should be more discussions between the SER group and teachers to communicate strategic goals, vision and implementation ways of the study programmes (especially Applied Ecology)
Learning facilities and resources	Huge possibilities to take advantage of social partners' resources (for Agroecosystems students); theoretical and practical resources should be advertised to attract more students.
Study quality management and public information	Inclusion of student scores for Agroecosystems in 3.7.4 would have been helpful to make a full judgement on this section and future SERs should provide this information.

VI. SUMMARY

Main positive and negative quality aspects of each evaluation area of the study field ECOLOGY at VYTAUTAS MAGNUS UNIVERSITY

The VMU is one of the most highly appreciated HEI in Lithuania with a special excellence in the field of Agriculture and with strong motivation to educate students in environmentally sustainable methods (e.g., organic production). Social partners and employers acknowledge and utilise the knowledge of graduates of both cycles, thereby identifying the importance of this HEI in Lithuania.

The aims, learning outcomes, and teaching and learning of the programmes are compatible with other programmes within and external to Lithuania. Predominant use of exams as the method of assessment in most courses should be reviewed to ensure that students are exposed to a variety of authentic assessments which could be a requirement of the future workplace. The opportunity for first cycle students to undertake professional practice as part of their programme is a unique selling point of the degree along with (both first and second cycles) the options to personalise their curricula through elective courses and choice of thesis topics..

The externally available theses are technically correct, well structured, apart that the chapter „Discussion” is missing, with no exception. Most master theses in the Agroecosystems study field are in line with the trends of modern agronomy which is fulfilled only partly in the Applied Ecology study field. Inserting a „Discussion” chapter in the master thesis would increase the students’ ability to better cope with the international standards. Application of statistical methods widely used at international level are needed, especially in the Applied Ecology study field.

Many contracts with Erasmus+ program countries indicate wide opportunities for mobility, however, more active use of these opportunities would increase scientific proficiency, language skills and advance pedagogical/didactic skills of the teaching staff.

In general, facilities and learning resources are adequate in their size and quality especially for the Agroecosystems study programme. The information provided on internal quality assurance supports that it is efficient and functional, in agreement with the feedback of the social partners. The internal quality assurance system is comparable with other institutions, internally and externally. Information on the programmes are sufficiently shared internally and externally. Students are satisfied with the friendly, liberal atmosphere of the VMU.

Expert panel chairperson signature:

Prof. Dr Judit Padisák (panel chairperson), academic;