SKVC

STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

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ECOLOGY FIELD OF STUDY

Vilnius University

EXTERNAL EVALUATION REPORT

Expert panel:
1. Panel chair: prof. dr. Michał Grabowski ……………………….. (signature)
2. Academic member: assoc. Prof. Mirela Sertić Perić
3. Academic member: prof. dr. Tiiu Kull
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5. Student representative: Karolis Gritėnas

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CONTENTS

I. INTRODUCTION

1.1. OUTLINE OF THE EVALUATION PROCESS

The field of study evaluations in Lithuanian higher education institutions (HEIs) are based on the following:

- Procedure for the External Evaluation and Accreditation of Studies, Evaluation Areas and Indicators, approved by the Minister of Education, Science, and Sport;
- Methodology of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (SKVC);
- Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

The evaluation is intended to support HEIs in continuous enhancement of their study process and to inform the public about the quality of programmes within the field of study.

The object of the evaluation is all programmes within a specific field of study. A separate assessment is given for each study cycle.

The evaluation process consists of the following main steps: 1) Self-evaluation and production of a self-evaluation report (SER) prepared by an HEI; 2) A site visit by the review panel to the HEI; 3) The external evaluation report (EER) production by the review panel; 4) EER review by the HEI; 5) EER review by the Study Evaluation Committee; 6) Accreditation decision taken by SKVC; 7) Appeal procedure (if initiated by the HEI); 8) Follow-up activities, which include the production of a Progress Report on Recommendations Implementation by the HEI.

The main outcome of the evaluation process is the EER prepared by the review panel. The HEI is forwarded the draft EER for feedback on any factual mistakes. The draft report is then subject to approval by the external Study Evaluation Committee, operating under SKVC. Once approved, the EER serves as the basis for an accreditation decision. If an HEI disagrees with the outcome of the evaluation, it can file an appeal.On the basis of the approved EER, SKVC takes one of the following accreditation decisions:

- **Accreditation granted for 7 years** if all evaluation areas are evaluated as exceptional (5 points), very good (4 points), or good (3 points).
- **Accreditation granted for 3 years** if at least one evaluation area is evaluated as satisfactory (2 points).
- **Not accredited** if at least one evaluation area is evaluated as unsatisfactory (1 point).

If the field of study and cycle were **previously accredited for 3 years**, the re-evaluation of the field of study and cycle is initiated no earlier than after 2 years. After the re-evaluation of the field of study and cycle, SKVC takes one of the following decisions regarding the accreditation of the field of study and cycle:

- To be accredited for the remaining term until the next evaluation of the field of study and cycle, but no longer than 4 years, if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points).
- To not be accredited, if at least one evaluation area is evaluated as satisfactory (2 points) or unsatisfactory (1 point).

1.2. REVIEW PANEL

The review panel was appointed in accordance with the Reviewer Selection Procedure as approved by the Director of SKVC.

The composition of the review panel was as follows:

1. Panel chair: prof. dr. Michał Grabowski
2. Academic member: assoc. Prof. Mirela Sertić Perić
3. Academic member: prof. dr. Tiiu Kull
4. Academic member: prof. dr. Linas Kliučininkas
5. Student representative: Karolis Gritėnas

1.3. SITE VISIT

The site visit was organised on 12 February 2025 onsite.

Meetings with the following members of the staff and stakeholders took place during the site visit:

- Senior management and administrative staff of the faculty(ies);
- Team responsible for preparation of the SER;
- Teaching staff;
- Students;
- Alumni and social stakeholders including employers.

There was a need for translation during the meeting with during the meetings with alumni and social stakeholders, including employers.

1.4. BACKGROUND OF THE REVIEW

Overview of the HEI

Vilnius University (VU) is a public comprehensive research university. As a state university, VU is committed to providing high-quality education and conducting research that benefits society. Vilnius University is a member of several international university associations, including the Coimbra Group and the Network of Universities from the Capitals of Europe (UNICA). Vilnius University has partnerships with employers, public sector, and NGO's, in Lithuania and abroad, that contribute to the study programme development and implementation, research and innovation, and employability of students. The university was established in 1579, making it one of the oldest universities in Europe. Vilnius University has 12 faculties and 7 institutes, offering over 100 study programs in the humanities, social sciences, natural sciences, and technology. The University has a student population of over 20,000, including over 1,000 international students. Vilnius University employs over 3,000 teachers and researchers, including many internationally renowned experts. Vilnius University is governed by the University Council, which is responsible for the overall strategic direction of the University. The Rector is the chief executive officer of the University and is responsible for the day-to-day management of the University. The Senate is the academic body of the University and is responsible for academic policy and quality assurance. The University Administration is responsible for the administrative and financial management of the University. Vilnius University is committed to providing a world-class education for its students. It is also committed to conducting research that addresses the challenges facing society. Šiauliai Academy is a branch of Vilnius University in Šiauliai. It was established in 1997 as Šiauliai University and became a branch of Vilnius University in 2021. Šiauliai Academy has 4 faculties and 2 institutes, offering over 30 study programmes in the humanities, social sciences, natural sciences, and technology. The Academy has a student population of over 2,000, including over 100 international students. Šiauliai Academy employs over 300 teachers and researchers. The Academy is governed by the Šiauliai Academy Council, which is responsible for the overall strategic direction of the Academy. The Director is the chief executive officer of the Academy and is responsible for the day-to-day management of the Academy. The Academic Council is the academic body of the Academy and is responsible for academic policy and quality assurance. The Administration is responsible for the administrative and financial management of the Academy. Šiauliai Academy is committed to providing high-quality education for its students. It is also committed to conducting research that benefits the region of Šiauliai.

Overview of the study field

The study field of ecology at Vilnius University Šiauliai Academy is positioned within the broader context of studies, research, and artistic activities implemented through alignment with strategic objectives, engagement in partnerships, and involvement in various projects. The study field is closely linked to the strategic objectives of Vilnius University, which include promoting interdisciplinary research, addressing societal challenges, and fostering sustainable development. The faculty members actively participate in research projects that contribute to these objectives, particularly in areas such as biodiversity conservation, ecosystem management, and climate change. Moreover, the study field benefits from partnerships with other institutions and organizations, both locally and internationally. These collaborations provide opportunities for students and faculty to engage in joint research, exchange knowledge, and access resources. For instance, partnerships with national parks, environmental agencies, and research centers facilitate fieldwork, data collection, and access to specialized expertise. The involvement of the study field in various projects further enhances its positioning within the VU Šiauliai Academy activities. Faculty and students collaborate on projects funded by national and international agencies, addressing

pressing environmental issues and contributing to the development of sustainable solutions. The positioning of the ecology study field within the VU activities is also reflected in its integration with other disciplines. Interdisciplinary collaborations with fields such as geography, biology, and social sciences enable a holistic approach to addressing complex environmental problems. This interdisciplinary perspective enriches the curriculum, broadens students' understanding, and prepares them for diverse career paths. In summary, the ecology study field at Šiauliai Academy is well-positioned within the VU broader context through its alignment with strategic objectives, engagement in partnerships, and involvement in various projects. This positioning enhances the quality of education, promotes research excellence, and contributes to addressing societal and environmental challenges.

Previous external evaluations

The study programs in the field of ecology at Vilnius University Šiauliai Academy have undergone previous external evaluations; the most recent one of the ecology study programs took place in 2018. The main outcomes of the 2018 evaluation were positive, with the experts commending the programs for their strong academic content, dedicated faculty, and supportive learning environment. The evaluation report highlighted the programs' alignment with the latest developments in the field of ecology, their emphasis on practical skills development, and their contribution to addressing regional environmental challenges. The experts also acknowledged the programs' strong research component, noting the faculty's active involvement in research projects and the opportunities provided for students to participate in research activities. Overall, the 2018 evaluation confirmed the high quality of the ecology study programs at Vilnius University Šiauliai Academy and their compliance with international quality assurance standards. In addition to the 2018 evaluation, the study programs have also undergone internal evaluations and reviews. These internal assessments, conducted by faculty and students, provide ongoing feedback and contribute to the continuous improvement of the programs. The findings from these internal evaluations are used to refine the curriculum, enhance teaching practices, and strengthen student support services. The university also takes into account feedback from employers and alumni to ensure that the programs remain relevant and meet the evolving needs of the labor market. The positive outcomes of previous external evaluations, coupled with ongoing internal assessments and feedback mechanisms, demonstrate the university's commitment to maintaining and enhancing the quality of its ecology study programs.

Documents and information used in the review

The following documents and information have been requested/provided by the HEI before the site visit:

- *Self-evaluation report and its annexes;*
- *Final theses.*

II. STUDY PROGRAMMES IN THE FIELD

Second cycle/LTQF 7

Title of the study programme	**Natural Systems Management**
State code	6213DX002
Type of study (college/university)	University studies
Mode of study (full time/part time) and nominal duration (in years)	Full-time, 2 years
Workload in ECTS	120
Award (degree and/or professional qualification)	Master of Life Sciences
Language of instruction	Lithuanian / English
Admission requirements	
First registration date	25th April 2012
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)	

III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The **second cycle** of the ecology field of study is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points[1*]
1.	Study aims, learning outcomes and curriculum	3
2.	Links between scientific (or artistic) research and higher education	3
3.	Student admission and support	4
4.	Teaching and learning, student assessment, and graduate employment	4
5.	Teaching staff	3
6.	Learning facilities and resources	4
7.	Quality assurance and public information	3
	Total:	24

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[1]

IV. STUDY FIELD ANALYSIS

AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM

1.1.	Programmes are aligned with the country's economic and societal needs and the strategy of the HEI

FACTUAL SITUATION

1.1.1. Programme aims and learning outcomes are aligned with the needs of the society and/or the labour market

The study programme *Natural Systems Management* at Vilnius University (VU) addresses significant societal and environmental needs, providing specialized knowledge to manage ecological challenges such as climate change, biodiversity loss, and sustainable resource management. This programme is the only master's level offering in the field of ecology at VU, targeting students who have completed studies in biology or related fields and wish to deepen their expertise in ecology. It is designed to equip graduates with the skills necessary for leadership roles in environmental management, both in the public (governmental) and private (non-governmental) sectors. The programme is aligned with national and global labour market demands, particularly with the EU's increasing focus on environmental protection and sustainable development. The need for qualified ecologists is growing, as evidenced by both the shortage of specialists in Lithuania and the projected increase in demand for environmental professionals across Europe and the USA. The Self-Evaluation Report (SER) provides a thorough comparison of various ecology study programmes in Lithuania, offering a justification for the existence of the *Natural Systems Management* programme.

1.1.2. Programme aims and learning outcomes are aligned with the HEI's mission, goals, and strategy

The Self-Evaluation Report (SER) outlines the alignment of the *Natural Systems Management* study programme with the mission and strategic priorities of Vilnius University (VU). The programme aims to strengthen students' cognitive and creative potential while preparing them to address societal challenges and global issues, aligning with VU's mission of fostering active and responsible citizens. Key objectives of the programme are to improve the quality of studies, enhance research activities, invest in faculty development, and increase the university's impact on society. The programme's objectives align with VU's strategic focus on societal impact, international collaboration, and sustainability. It supports the long-term goal of producing graduates capable of solving societal problems, focusing on the development of social, personal, and subject-based competencies, such as communication, creativity, and the ability to solve complex ecological issues. Additionally, the programme integrates interdisciplinary knowledge and international perspectives, with course offerings like *Environmental Project Preparation* and *Management and Impact Evaluation of Climate Change*.

ANALYSIS AND CONCLUSION (regarding 1.1.)

Ad. 1.1.1. Although the Self-Evaluation Report (SER) offers a comprehensive comparison of various ecology study programmes in Lithuania and justifies the existence of the *Natural Systems Management* programme by comparing it to those at institutions such as Klaipėda University and Vytautas Magnus University (VMU), it highlights the unique competencies of each. However, it is important to note that VMU's *Ecology and Climate Change* programme, which closely parallels the VU *Natural Systems Management* programme, was not included in the comparison. Including this programme would provide a more well-rounded and thorough understanding of the ecology studies

landscape in Lithuania. Based on the SER and interviews with various stakeholders during the visit, the VU programme distinguishes itself through its holistic approach to ecology, integrating scientific research with practical solutions to address complex ecological challenges. The programme is regularly updated in close collaboration with social partners, ensuring it aligns with both the latest scientific advancements and the evolving demands of the job market. Graduates of this programme are well-prepared to work across various sectors, including government agencies, non-governmental organizations, and private industry. They pursue careers in ecological research, environmental policy, and management, demonstrating the programme's relevance to the current and future needs of the labour market. While the SER does a commendable job of establishing the need and relevance of the *Natural Systems Management* programme – supported by data on environmental challenges, societal needs, and labour market trends – the report could benefit from being more concise. A focused summary would strengthen the argument without sacrificing essential information. The growing number of interested students in this second-cycle study programme highlights the programme's popularity. While larger groups could provide an opportunity to attract more talent, the institution also values the approach of nurturing potential talents in smaller cohorts. Social partners play a crucial role in the development of the study programme, having met multiple times during the preparation of the report, and they continue to contribute to shaping the programme to meet the needs of the society and industry. The relationship between the university and its alumni remains strong, with graduates actively involved in national agencies and continuing collaborations with lecturers. Feedback from alumni emphasizes the practical value of the programme, particularly the hands-on experience gained during weekends spent at the university, which they are able to apply in their professional roles. Furthermore, alumni appreciate the programme's focus on ecosystem management and ecological research, which has positively impacted their work in both the public and private sectors.

Ad. 1.1.2. The Self-Evaluation Report (SER) provides a solid foundation for demonstrating how the *Natural Systems Management* programme aligns with the strategic goals and mission of Vilnius University (VU). However, the text could be more concise, as certain sections are somewhat lengthy and could be streamlined to focus on the most relevant points. To enhance clarity, the report could provide more specific information on the concrete actions taken to ensure that the programme's aims and outcomes are regularly evaluated and updated in line with the university's evolving strategy. While the report adequately outlines the alignment of the programme with VU's mission and strategic objectives, there is a need for clearer emphasis on how the programme undergoes systematic reviews and adjustments based on the university's strategic direction. For instance, the scientific supervision of the programme is firmly anchored within the university, with support from colleagues at VU located in Vilnius, especially for areas where additional expertise is needed. This collaboration is important to ensure the programme remains comprehensive and up-to-date. A particularly notable aspect is the regular quarterly meetings with study programme coordinators, where alumni and social partners discuss key issues, including potential improvements to the study programme. These meetings provide valuable insights for continuously refining the programme's structure and content, ensuring it remains aligned with both societal needs and the university's strategic goals. In terms of future developments, the ŠA (Šiauliai Academy) plans to maintain its unique identity while strengthening its integration with the larger VU system. Two institutes within ŠA - regional development and educational research – are particularly recognized for their distinctiveness and are expected to be developed further. Additionally, the integration of sustainability management with ecology is an important focus, which aligns well with both ŠA's strategic vision and VU's broader objectives. There are also plans to expand ŠA's academic offerings, with new programmes being introduced in areas such as medical studies, regional development, and new technologies. This expansion will continue to be in alignment with VU's broader strategy, providing students with access to a diverse range of disciplines. Furthermore, ŠA attracts students from across Lithuania, with 60%

of its student body coming from the local region and the remainder from other parts of the country, as well as 10-15% international students from countries such as Germany, Romania, Pakistan, and India. The involvement of VU's chemistry, geochemistry, and life sciences faculty members in ŠA's teaching will help further integrate ŠA's programmes with the broader academic community at VU. Lastly, the role of the Director at ŠA, who participates in monthly meetings with VU's vice-deans and maintains physical meetings in Vilnius, facilitates strong communication and collaboration between ŠA and the wider VU leadership, ensuring alignment with the university's goals and strategic priorities.

1.2.	Programmes comply with legal requirements, while curriculum design, curriculum, teaching/learning and assessment methods enable students to achieve study aims and learning outcomes

FACTUAL SITUATION

1.2.1. Programmes comply with legal requirements

According to SER, the study programme is designed and operated in compliance with several legal acts, including the Lithuanian Qualifications Framework, the Description of General Requirements for the Provision of Studies, the Descriptor of Study Cycles, the Description of the Ecology Study Field, and the Vilnius University Study Programme Regulations. These legal requirements are reflected in Table 1 of the SER, which provides the necessary details about the curriculum's conformity with legal provisions.

1.2.2. Programme aims, learning outcomes, teaching/learning and assessment methods are aligned

The SER description includes essential points regarding how the aims and learning outcomes align with the second-cycle (Master's) level requirements and the professional needs of the students. For instance, the programme is intended to prepare students for careers in ecology by providing a mix of theoretical knowledge and practical skills for tackling complex ecological challenges, as evidenced by the course units in areas like *Wildlife Resource Management* and *Impact Evaluation of Climate Change*. The programme does provide ample evidence of its alignment with legal and academic standards, but this section of SER would benefit from a clearer focus on each aspect (aims, learning outcomes, teaching methods, assessment methods) to make it easier to assess their compatibility.

1.2.3. Curriculum ensures consistent development of student competences

The study programme in *Natural Systems Management* offers a comprehensive structure that integrates essential knowledge and skills needed for MSc-level professionals. The curriculum includes courses focused on core ecological topics such as *Atmospheric Bioaerosols*, *Wildlife Resource Management*, *Mathematical Models in Ecology, Ecological Restoration*, and *Impact Evaluation of Climate Change*, ensuring a strong foundation in ecological science. Additionally, the inclusion of interdisciplinary subjects like *Machine Learning in Nature Conservation* and *Aquaculture and Blue Biotechnology* broadens students' skill sets, enabling them to tackle diverse environmental challenges. The programme promotes practical application through *Scientific Research Work* and *Environmental Project Preparation and Management*, fostering the development of independent research and project management competencies.

1.2.4. Opportunities for students to personalise curriculum according to their personal learning goals and intended learning outcomes are ensured

SER states that the study programme offers several opportunities for students to personalise their studies, aligning with their individual learning objectives and career goals. One primary method is through individual study plans, allowing students to include new or alternative course units that meet their specific interests, subject to approval by the Study Programme Committee. This flexibility ensures that students can tailor their education to their personal and professional development

needs. Additionally, students have the option to participate in academic exchanges or internships, which further enrich their learning experiences by exposing them to international perspectives and real-world applications of ecological principles. The opportunity to study foreign languages as non-credit course units also adds a layer of personalisation, enabling students to develop linguistic skills that are increasingly important in global environmental management contexts. The study programme includes 15 credits dedicated to optional course units, distributed across the second and third semesters. These optional courses allow students to deepen or broaden their competences in ecological subjects. Moreover, Vilnius University's procedure for recognising non-formal education or self-education allows students to expand their learning opportunities by incorporating independent study or external qualifications into their academic progress. This reinforces the university's commitment to lifelong learning and supporting students in their pursuit of personal and professional development throughout their careers.

1.2.5. Final theses (applied projects) comply with the requirements for the field and cycle

The final thesis preparation and defence for the Master's programme in *Natural Systems Management* follow Vilnius University's established guidelines, ensuring alignment with field and study cycle requirements. The thesis aims to develop students' abilities to conduct independent scientific research, analyse ecological theories, and address environmental issues. The evaluation focuses on the depth of understanding, the scientific validity of methods, and the originality of the work, with input from social partners to ensure real-world relevance. Students begin thesis work early in their studies, with guidance from research supervisors. The first semester involves literature review and method selection, while the second semester focuses on refining hypotheses and methodology. Regular supervisor meetings ensure progress, and in the final semester, students complete their research with continued support. Final theses are reviewed for quality and compliance, with plagiarism checks and public presentations before defence. Theses are assessed by a committee of experts, and exceptional work is recognised with Cum Laude honours. This process ensures that the final thesis meets academic and professional standards, though earlier involvement of external experts could strengthen industry connections. Students can choose whether they will write thesis in English or Lithuanian.

ANALYSIS AND CONCLUSION (regarding 1.2.)

Ad. 1.2.1. It should be noted that Annexes 3.1 and 3.2, which are referenced in the SER text, are not directly relevant to criterion 1.3. (*Evaluation of the compliance of the field and cycle study programme with legal requirements*), as they pertain to criterion 1.4 (*Evaluation of compatibility of aims, learning outcomes, teaching/learning, and assessment methods*).

Ad. 1.2.2. The Self-Evaluation Report (SER) provides valuable insight into the alignment of the *Natural Systems Management* study programme's aims, learning outcomes, teaching methods, and assessment methods, but the structure of the section presents certain challenges. The information is spread across different sections and sometimes overlaps, leading to repetition and a lack of clarity. As a result, it can be difficult to assess whether the programme fully adheres to the prescribed format for this criterion. A more concise and streamlined presentation would improve the overall readability of the report and enhance the coherence between the various components of the programme. One area that could be improved is the clarity of how the programme's aims and learning outcomes are effectively integrated with the teaching and assessment methods. The SER does mention the integration of theoretical knowledge into practical applications, but these details are somewhat dispersed and repetitive. For example, the integration of practical experience through research is a key strength of the programme. Students are encouraged to participate in lab work, attend conferences, and apply for research scholarships, all of which enhance their learning and prepare them for professional careers. However, these points could be consolidated and better connected to the overall learning outcomes to present a clearer picture of the programme's structure. Alumni feedback suggests that the programme prepares graduates well for their careers, particularly through its emphasis on practical work and the application of scientific literature. Alumni have noted that the programme's hands-on approach, including weekend practical sessions and fieldwork, significantly contributes to their professional development. Furthermore, the collaboration with social partners,

such as municipalities and natural parks, allows students to engage with real-world challenges, which reinforces the programme's relevance and helps bridge the gap between academic knowledge and practical application. The programme has recently been updated to better meet the needs of students and social partners, with new courses introduced and additional teaching staff incorporated to enrich the curriculum. These updates, based on feedback from students and stakeholders, ensure that the programme remains relevant and aligned with the latest trends and demands in ecology and environmental management. However, the approach to curriculum development could be explained more clearly in the report, particularly how decisions are made regarding course content and updates. In terms of teaching methods, the programme employs a mix of traditional lectures, labwork, and innovative methods such as problem-based learning, case study analysis, and the use of real data. While exams are mentioned as a primary assessment method, other forms of evaluation are also utilized, such as project proposals, seminars, research papers, and tasks that contribute to a cumulative grade. These diverse assessment methods help measure not only theoretical knowledge but also practical skills, promoting a more comprehensive evaluation of students' abilities. Despite these strengths, there are some concerns about the balance of course content and teaching staff workload. Some courses, such as *R Statistics* and *Mathematical Models in Ecology*, are given fewer ECTS points than other courses, which raises questions about the distribution of time and content. However, as explained by the teachers, statistics is considered foundational knowledge, and its principles are built upon in other courses. Additionally, some of the more advanced courses have integrated modelling approaches, which help to address and expand upon the statistical concepts, ensuring comprehensive coverage of the material across the programme. Additionally, there is a need for more in-depth coverage of animal ecology, as this area appears to be underrepresented in the programme. Although ŠA relies on VU for expertise in animal ecology, there is potential to enhance this aspect of the curriculum to better align with job market demands and student interests. The assessment methods and the overall approach to teaching in the programme are well-aligned with the university's mission to foster both scientific inquiry and practical, real-world problem-solving. However, there is room for further clarity and efficiency in the presentation of how these components work together. By refining the structure of the SER and ensuring a more cohesive alignment between aims, learning outcomes, teaching methods, and assessment approaches, the programme would better demonstrate its effectiveness and relevance to both academic and professional needs.

Ad. 1.2.3. While the current study programme structure ensures consistent development of competences, it could benefit from additional focus in certain areas. Notably, there is limited emphasis on management and leadership skills, which are essential for professionals in natural systems management. Including courses on *Environmental Policy*, *Project Management*, and *Sustainable Development* would enhance students' ability to navigate complex professional environments. Furthermore, while ecological knowledge is well-covered, the integration of animal ecology, ethical principles and sustainability could be strengthened. Lastly, while the curriculum incorporates advanced ecological tools like *Remote Sensing* and *Machine Learning*, expanding training in big data and genomics would keep students at the forefront of emerging technologies in the field. Including courses that strengthen communication and collaboration skills would also help students succeed in multidisciplinary teams and diverse professional settings.

Ad. 1.2.4. The study programme offers several opportunities for students to personalise their educational experience, allowing them to select optional courses and tailor their learning path to align with their personal objectives and intended outcomes. Students are required to choose three optional courses, totalling 15 ECTS during the programme, as outlined in the SER. While this structure provides a foundation for personalisation, it would be beneficial to clarify whether students are permitted to enrol in more than the required number of optional courses without additional costs. Currently, students can take extra courses through an individual study plan, but this requires payment. Removing this financial barrier would further encourage students to take full advantage of the available opportunities for personalisation. Moreover, students have the option to engage in courses as "free listeners" if they wish to gain additional knowledge or experience in specific subjects. While this option is available across the university, it is not yet widely utilised within this specific programme. Expanding awareness of this opportunity could further enrich the personalisation of the learning experience. However, there are some areas in which the current

structure could be improved. For example, it is concerning that optional courses are not offered if fewer than 15 students enrol. Given the relatively small number of students in the programme, this policy might limit students' ability to fully personalise their study plan. Revising this policy to allow smaller classes could provide more flexibility and ensure that students have access to a broader range of courses. Additionally, while the programme offers opportunities for international integration and personal support - such as for students with disabilities - it would be helpful to provide more structured guidance or mentorship on personalisation options. This would ensure that all students are aware of the various pathways they can pursue to meet their individual learning objectives and intended outcomes. Lastly, the programme's reliance on online learning for much of the theoretical content raises questions about the balance between practical and theoretical learning. While the programme includes practical components, such as face-to-face courses every other Saturday, there is concern that students may not gain as much practical knowledge from online instruction.

Ad. 1.2.5. The Master's programme in *Natural Systems Management* ensures final theses align with academic and professional standards through a structured process that includes literature reviews, methodology selection, and regular supervisor meetings. Students confirmed to receive guidance from early stages, ensuring research quality and relevance to real-world ecological challenges. Social partner involvement strengthens the practical application of research, while thesis evaluations, including plagiarism checks and expert committee reviews, uphold academic integrity. The option to write theses in either English or Lithuanian adds flexibility. Though earlier industry expert involvement could further strengthen connections, the current process effectively prepares students for professional success in the ecological field.

AREA 1: CONCLUSIONS

AREA 1	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Second cycle			x		

COMMENDATIONS

1. Holistic approach to ecology: The programme's holistic approach, integrating scientific research with practical solutions to ecological challenges, is a clear strength. This enables students to gain a comprehensive understanding of both the theory and practical aspects of ecology, making them well-equipped to address complex environmental issues.
2. Regular updates and collaboration with social partners: The programme is frequently updated in close collaboration with social partners, ensuring it remains aligned with scientific advancements and the evolving demands of the job market. This ongoing engagement with external stakeholders enhances the relevance and real-world applicability of the programme.
3. Strong alumni connections: The programme maintains strong ties with its alumni, who remain actively involved in national agencies and continue to collaborate with faculty. This highlights the practical value of the education provided, with graduates demonstrating success in their professional careers. The positive feedback from alumni underlines the programme's effectiveness in preparing students for real-world ecological and environmental work.
4. Practical experience: The integration of practical experience, particularly through research and hands-on work, is a major strength of the programme. This approach helps students

develop the skills necessary to tackle ecological challenges in real-world contexts and enhances their employability.

RECOMMENDATIONS

For further improvement

1. Conciseness and streamlining of the report: The SER could benefit from being more concise. A more focused summary of key points would strengthen the argument and improve the readability of the report. Reducing repetition and unnecessary detail would allow the programme's strengths to be communicated more clearly and effectively.
2. Clarify programme review and adjustment process: While the programme is regularly updated, the process through which systematic reviews and adjustments are made based on the university's strategic direction could be more clearly articulated. This would provide a better understanding of how the programme stays in alignment with the university's (VU's) broader goals and ensures its continued relevance in the field of ecology.
3. Streamline integration of practical experience: The integration of theoretical knowledge into practical applications, such as research, is a key strength of the programme. However, the details regarding this integration are somewhat dispersed and repetitive within the report. A more structured presentation of how practical experiences are incorporated into the curriculum would help clarify this aspect of the programme and highlight its importance.
4. Enhance curriculum development transparency: While the programme adapts to student and stakeholder feedback, the process by which course content and curriculum updates are made could be more clearly explained in the report. Outlining the decision-making process for curriculum development would give stakeholders a clearer understanding of how the programme evolves and how it stays aligned with emerging trends in ecology and environmental management.
5. Review policy on optional courses: The current policy that optional courses are not offered if fewer than 15 students enrol might limit students' ability to personalise their study plans. Given the small cohort size, revising this policy to allow smaller classes could provide more flexibility, ensuring that students have access to a wider range of courses. This would enhance the ability for students to tailor their education to their individual learning goals.
6. Structured guidance on personalisation: While the programme offers opportunities for personalisation, it would be beneficial to provide more structured guidance or mentorship to help students navigate these options. Offering clearer advice on how to personalise their study plans and ensuring that students are fully aware of the opportunities available would further support their academic and career aspirations.
7. Improvement in programme flexibility: Providing more flexible options, such as allowing students to take more than three optional courses without extra fees, could further enhance the programme's adaptability to individual needs. This would help students explore a broader range of subjects and develop a deeper expertise in areas of personal interest.

AREA 2: LINKS BETWEEN SCIENTIFIC (OR ARTISTIC) RESEARCH AND
HIGHER EDUCATION

2.1.	Higher education integrates the latest developments in scientific (or artistic) research and technology and enables students to develop skills for scientific (or artistic) research

FACTUAL SITUATION

2.1.1. Research within the field of study is at a sufficient level

The field of ecology studies, specifically the "Natural Systems Management" master's program at Vilnius University Šiauliai Academy, demonstrates a robust integration of research and studies, fostering an environment where students can actively develop their research competencies. The program is implemented by 15 teachers, all holding scientific degrees in the respective disciplines, ensuring that students are taught by specialists engaged in active research. These teachers integrate their latest research findings into the curriculum, providing students with up-to-date knowledge and practical skills. Šiauliai Academy has a strong scientific base in ecology and environmental science. The faculty actively participates in research, contributing to scientific discourse through publications and conferences. The program incorporates research from various fields, including atmospheric bioaerosols, bioactive compounds in plants, and ecosystem services. This interdisciplinary approach allows students to tackle complex ecological problems from multiple perspectives. The curriculum emphasizes the development of research skills through hands-on experience. Students participate in research projects, conduct fieldwork, and analyze data, preparing them for careers in research or related fields.

2.1.2. Curriculum is linked to the latest developments in science, art, and technology

The curriculum is regularly updated to reflect the latest advancements in ecological science and technology. In addition to incorporating emerging technologies, the curriculum also emphasizes an interdisciplinary approach. This ensures that students are learning the most relevant and current information. The program incorporates emerging technologies like machine learning and remote sensing, equipping students with the skills needed for modern ecological research and practice. The curriculum also emphasizes the development of practical skills. Students have the opportunity to participate in research projects, conduct fieldwork, and analyze data. This hands-on experience allows them to apply their knowledge and develop the skills necessary for success in their careers.

2.1.3. Opportunities for students to engage in research are consistent with the cycle

The program provides numerous opportunities for students to engage in research, including dedicated courses like "Scientific Research Work" that allow students to conduct independent research projects. The master's thesis requirement allows students to delve deeper into a specific research area and contribute original research. Students can also collaborate with faculty members on ongoing research projects, gaining valuable experience and mentorship. Examples of student research opportunities include participation in research projects related to climate change, biodiversity conservation, or ecosystem management, conducting fieldwork in various ecosystems, and presenting research findings at conferences. Extracurricular activities like the Student Research Society further enhance research skills and engagement with the scientific community.

ANALYSIS AND CONCLUSION (regarding 2.1.)

Ad. 2.1.1. The Šiauliai Academy provides a robust scientific infrastructure in ecology and environmental science, supporting faculty research endeavors. The program embraces an interdisciplinary approach, incorporating research from diverse fields such as atmospheric bioaerosols, bioactive plant compounds, and ecosystem services. This approach equips students to tackle complex ecological problems from multiple perspectives. The teachers bring their latest

research findings into the classroom, providing students with up-to-date knowledge and practical skills. The curriculum emphasizes the development of practical research skills through hands-on experience. Students participate in research projects, conduct fieldwork, and analyze data, preparing them for careers in research or related fields. Examples of research integration include courses like "Atmospheric Bioaerosols," which incorporates the latest research on the impact of bioaerosols on ecosystems and human health, and "Assessment of Anthropogenic Load in Ecosystems," which integrates knowledge of bioactive compounds in plants based on recent research findings. The "Ecosystem Services" course focuses on assessing ecosystem services and integrating them into conservation decisions, while the "Wildlife Resource Management" course introduces students to modern monitoring methods used in both scientific research and practical applications. It has to be mentioned that although Šiauliai Academy's programs and master's theses are primarily guided by its resident faculty, the expertise in ecology (including zoology and animal ecology) is predominantly found at Vilnius University's main campus. Teachers from the main campus provide usually online classes with occasional visits to Šiauliai. Importantly, to meet the needs of cooperating stakeholders and potential employers, the program requires additional courses in zoology and animal ecology, an area currently lacking. The program already has teachers specializing in animal ecology research who could address this gap.

Ad. 2.1.2. The curriculum of the "Natural Systems Management" master's program is regularly updated to reflect the latest advancements in ecological science and technology, ensuring students receive the most relevant and current information. It incorporates emerging technologies like machine learning and remote sensing, equipping students with the skills needed for modern ecological research and practice. Examples of curriculum updates include the "Machine Learning in Nature Conservation" course, which introduces students to the application of machine learning in ecological research, and the "Application of Remote Sensing in Natural Systems" course, which teaches students how to use remote sensing data for ecological analysis. The curriculum fosters an interdisciplinary approach, recognizing that ecological challenges often require knowledge from various fields. Examples of interdisciplinary courses include "Statistical Evaluation and Modelling of Ecological Data," which combines ecological data with statistical methods, and "Environmental Project Preparation and Management," which integrates ecological knowledge with project management skills.

Ad. 2.1.3. The "Natural Systems Management" master's program at Vilnius University Šiauliai Academy offers various opportunities for student research, which is a crucial aspect of any graduate program. These opportunities allow students to apply their knowledge, develop critical thinking skills, and contribute to the field of ecology. The program includes dedicated courses like "Scientific Research Work" that provide students with structured opportunities to conduct independent research projects. This allows students to delve deeper into specific areas of interest and develop their research skills under the guidance of experienced faculty. The program allows students to engage in in-depth research, often contributing original findings to the field. This process fosters critical thinking, problem-solving, and independent research skills, all of which are essential for a successful career in ecology. Students have the opportunity to collaborate with faculty members on ongoing research projects. This provides invaluable mentorship and hands-on experience in real-world research settings. Working alongside experienced researchers allows students to learn advanced techniques, contribute to meaningful projects, and potentially publish their work in scientific journals. The Student Research Society and similar extracurricular activities provide additional avenues for students to engage in research. These platforms often host seminars, workshops, and field trips, fostering a research community and encouraging students to explore their interests beyond the curriculum. Vilnius University provides access to necessary resources such as laboratories, field equipment, and data analysis tools, supporting students in their research endeavors.

AREA 2: CONCLUSIONS

AREA 2	Unsatisfactory - 1	Satisfactory - 2	Good - 3	Very good - 4	Exceptional - 5

	Does not meet the requirements	Meets the requirements, but there are substantial shortcomings to be eliminated	Meets the requirements, but there are shortcomings to be eliminated	Very well nationally and internationally without any shortcomings	Exceptionally well nationally and internationally without any shortcomings
Second cycle			x		

COMMENDATIONS

1. The program is implemented by teachers who are renowned specialists actively engaged in research. They integrate their latest research findings into the curriculum, providing students with up-to-date knowledge and practical skills.
2. The curriculum is regularly updated to reflect the latest advancements in ecological science and technology. This ensures that students are learning the most relevant and current information. The program also incorporates emerging technologies like machine learning and remote sensing, equipping students with the skills needed for modern ecological research and practice.
3. Students participate in research projects, conduct fieldwork, and analyze data, preparing them for careers in research or related fields.
4. The program incorporates research from various fields, including atmospheric bioaerosols, bioactive compounds in plants, and ecosystem services. This interdisciplinary holistic approach allows students to tackle complex ecological problems from multiple perspectives.

RECOMMENDATIONS

For further improvement

1. The program should be supplemented by classes focusing on zoology and animal ecology as at the moment this is lacking. The stakeholders that co-operate with students and are also potential employers see this gap, while among the teachers there are specialists involved in the animal ecology research.
2. The classes and also master thesis is predominantly based on the teacher working in the Siauliai Academy, while the expertise related to ecology (including animal ecology, zoology) is held mainly in the Vilnius University main campus. There should be more co-operation between the two campuses and better involvement of the teacher from VU main campus in the program of the academy.

AREA 3: STUDENT ADMISSION AND SUPPORT

3.1.	Student selection and admission is in line with the learning outcomes

FACTUAL SITUATION

3.1.1. Student selection and admission criteria and procedures are adequate and transparent

The student selection and admission criteria for the program are transparent and well-structured, with clear and fair guidelines for potential applicants. Marketing efforts, including webinars, VU-based promotions, and outreach by international recruiters, have been effective in attracting a diverse student body, including more international applicants. However, while there has been an increase in the number of applicants, the number of students accepted remains stable (approximately seven students per year), possibly due to few fixed state-funded spots, challenges such as visa issues or applicants not following through with the process. The admission scores for state-funded positions are generally average, indicating accessibility. A few dropouts are typically linked to personal reasons rather than to any inherent issues within the program itself. The inclusion of students from diverse educational backgrounds is a strength, though there is an opportunity to enhance lab skills as part of preparatory studies for incoming students.

3.1.2. Recognition of foreign qualifications, periods of study, and prior learning (established provisions and procedures)

The recognition of foreign qualifications, periods of study, and prior learning follows a well-defined and systematic process that ensures alignment with Lithuanian educational standards. Beyond formal qualifications, prior learning, including work experience or informal self-directed study, is also considered for recognition, with specific limits on how much can be credited towards a program. For international students, the process involves additional steps, including review by a special committee, which examines the diplomas and evaluates motivation, ensuring that all qualifications meet the required criteria for admission. Foreign qualifications are assessed individually to determine their equivalence to local secondary or higher education levels, in accordance with the Lisbon Recognition Convention and national guidelines

ANALYSIS AND CONCLUSION (regarding 3.1.)

The application procedure is clear, standardized, and effectively communicated, ensuring a smooth and transparent process for all candidates. Despite a slight increase in the number of applicants, the number of students admitted has remained stable. Last year, there was a notable increase in the number of international students compared to national applicants, which reflects the program's success in attracting a more diverse cohort, but retaining the interested students to enrol remains a challenge. The recognition of foreign qualifications and prior learning is carried out according to established guidelines, ensuring fairness and alignment with Lithuanian educational standards. It seems pre-master studies for incoming students lacks a lab skills module to ensure students are prepared for lab classes during the studies. Overall, the program sees steady interest with an extra challenge of managing more international students.

3.2.	There is an effective student support system enabling students to maximise their learning progress

FACTUAL SITUATION

3.2.1. Opportunities for student academic mobility are ensured
Opportunities for student academic mobility are actively supported and facilitated through various international exchange programs, including Erasmus, Erasmus+, ARQUS, ISEP, Nordplus, and

bilateral agreements with partner universities. Students are encouraged to spend up to half of their academic program abroad, with some programs offering up to 12 months of study opportunities. While the university provides a range of mobility options, participation is often limited by barriers such as work commitments and financial constraints, particularly for master's students. To mitigate these challenges, the university is focusing on enhancing its informational campaigns and exploring blended mobility options that combine virtual and in-person experiences. It has shown great interest from students' side. A notable success has been the blended intensive program held at Daugavpils University in Latvia, which attracted the attention of five students, showcasing a growing interest in more flexible mobility options. Additionally, there are opportunities for internships and graduate practices abroad under Erasmus+ and other programs, although participation remains low due to students' work-related obligations.

3.2.2. Academic, financial, social, psychological, and personal support provided to students is relevant, adequate, and effective

Vilnius University offers a comprehensive and effective support system for students, addressing academic, financial, social, psychological, and personal needs. Academic support is provided through workshops and other resources, although it is unclear how accessible the university's career center (SACO) is to students in this particular program in Šiauliai. It was explained that usually students express their issues to professors and they address them. Financial support comes in the form of performance-based scholarships but many students already have full-time work. The university also offers reduced fees for students returning after suspending their studies and provides accommodation discounts for students with disabilities or from disadvantaged backgrounds. In terms of psychological and social support, students have access to up to three free counseling sessions during times of crisis, although these services have never been used by interviewed students. The university also offers comprehensive health and wellness services, cultural activities, and continuous communication through websites and electronic platforms to ensure students' needs are met throughout their academic journey. Students with disabilities are cared for, as confirmed by a student with a disability during the visit, who shared their positive experience with the university's support services

3.2.3. Higher education information and student counselling are sufficient

Higher education information and student counseling at Vilnius University are generally sufficient, with the university utilizing tools like Microsoft Teams to facilitate communication. Each study course has a dedicated Teams group where relevant information, memos, and updates are shared, and where professors and students can engage in joint meetings and respond to inquiries. Also, students have an introduction week where students are familiarized with the study programme and available support. Given the small size of the student cohort, professors are able to maintain close contact with students, allowing for more personalized support. For this reason students have mentioned that they do not frequently use the available official support channels.

ANALYSIS AND CONCLUSION (regarding 3.2.)

Vilnius University offers a wide range of academic mobility opportunities through programs like Erasmus+ and bilateral agreements, which are designed to enhance students' international experiences. However, participation in these programs has been somewhat limited, primarily due to work commitments and financial constraints faced by master students BIPs have become a successful alternative to long-stay exchanges. While the university provides significant support, including academic workshops, performance-based financial aid, and psychological counseling, the actual utilization of these services appears to be lower than expected. The career center (SACO) and communication tools like Microsoft Teams are in place to ensure students have access to essential academic and career information, yet students tend to rely more on direct communication with professors rather than formal support channels. This preference for informal support may be due to the small cohort size, which allows for closer relationships between students and faculty.

AREA 3: CONCLUSIONS

AREA 3	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Second cycle				x	

COMMENDATIONS

1. VU student selection and admission process is transparent and aligns with program learning outcomes, ensuring applicants are well-prepared. The process effectively attracts motivated students, with stable admission numbers and a low dropout rate.
2. VU provides a comprehensive student support system, offering academic, financial, social, and personal resources.
3. VU's continued efforts to expand partner universities and improve program accessibility contributes to higher engagement of students.

RECOMMENDATIONS

For further improvement

1. VU should encourage utilization of official resources, such as academic support platforms and career counseling services, to ensure that students fully benefit from available support and social partners can communicate skills needed for the current job market.
2. VU should enhance student feedback mechanisms having higher participation in surveys during studies as well as after studies.
3. For incoming students taking supplementary studies,more lab skills modules should be included to ensure students are prepared for lab classes during the studies.

AREA 4: TEACHING AND LEARNING, STUDENT ASSESSMENT, AND GRADUATE EMPLOYMENT

4.1.	Students are prepared for independent professional activity

FACTUAL SITUATION

4.1.1.

The targeted competencies and learning outcomes emphasize not only acquiring knowledge in ecology and related disciplines but also developing essential general skills for self-directed learning, adapting to the ecologist job market, and pursuing an independent professional career. Social partners, employers, and graduates actively contribute to shaping these competencies. The teaching methods, and assessment strategies are carefully designed to support these objectives. Novel teaching methods as Escape room and inventing Board games are applied. Students frequently use AI for information retrieval, completing assignments, and academic writing. Vilnius University has established guidelines to promote the responsible and ethical use of AI. Furthermore, the university provides support and regularly organizes professional development events on AI for both students and lecturers.

4.1.2. Access to higher education for socially vulnerable groups and students with individual needs is ensured.

The Vilnius University has adopted a strategy to enhance the accessibility of the study process for socially vulnerable groups by investing in improvements to the university environment, providing compensatory technology, offering guidance to students and faculty on accessibility issues, and enabling students to pursue their studies through individualized study plans. It also establishes key objectives related to disability inclusion, gender equality, cultural diversity, social integration, balancing study, work, and personal commitments, and preventing discrimination. A Gender Equality Coordinator has been hired. University gives possibilities for Belarussian students discriminated in Belarussia to carry on their studies and Ukrainian students have been admitted free of charge after the outbreak of the war.

ANALYSIS AND CONCLUSION (regarding 4.1.)

VU has put into practice important measures to secure the quality of teaching and learning, and also to ensure access to higher education for socially vulnerable groups and students with individual needs. A student-centred approach is clearly visible, and a variety of novel teaching methods are applied that maximize the achievement of learning outcomes. Small student groups enable active student participation and regular feedback is an everyday habit.

The university has adopted a comprehensive strategy to promote diversity and equality, with specific objectives related to disability, gender equality, social exclusion, and cultural diversity. Concrete measures have been implemented to adapt the physical environment of the university and provide access to compensatory equipment, for example in the library. Furthermore, students with special reasons not being able to study temporarily, can get prolongation of study period for one year.

The commitment of VU to enhance teaching and learning, as well as the dedication to ensure equal access to higher education, reflects its focus on excellence and equity.

4.2.	There is an effective and transparent system for student assessment, progress monitoring, and assuring academic integrity

FACTUAL SITUATION

4.2.1. Monitoring of learning progress and feedback to students to promote self-assessment and learning progress planning is systematic

The assessment of achievements is designed to be professional, transparent, fair, objective, and reliable, adhering to the principles of respect and goodwill. The student-centred study model in VU

utilizes a cumulative assessment system that fosters active student engagement, ensures comprehensive evaluation, tracks progress, and balances workload as well collects data on students' feed-back. Continuous feedback supports in-depth learning, maximizing progress while nurturing individual talents. MS Teams and/or the Moodle systems are used for organising the study progress. Students' progress at the course level as well at the end of exams is constantly monitored.

4.2.2. Graduate employability and career are monitored

Career Tracking Information System shows that the graduates of this study program of VU are all employed during the year after graduation.

4.2.3. Policies to ensure academic integrity, tolerance, and non-discrimination are implemented

The University has adopted important documents and strategies to ensure diversity of opinions, openness to different ideas, mutual respect, trust, and tolerance in academic life.
Cases of violation of the principles of academic integrity, tolerance and non-discrimination are dealt with in all seriousness in accordance with the adopted specific documents and regulations of the university.

4.2.4. Procedures for submitting and processing appeals and complaints are effective

Students who disagree with the final evaluations have the right to submit a reasoned appeal to the Dispute Resolution Committee. VU has a special Helpline, to which any member of the VU community can apply for a violation of the principles of academic ethics, tolerance and non-discrimination.

ANALYSIS AND CONCLUSION (regarding 4.2.)

Student assessment is clear and cumulative. The progress of students is monitored constantly and on several levels. This enables high level teaching-learning process and produces high level graduates who are quickly hired at the job market. All graduates find easily jobs. Documents and procedures have been adopted to ensure academic integrity, tolerance, and non-discrimination as well appeals and complaints are seriously handled.

AREA 4: CONCLUSIONS

AREA 4	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Second cycle				x	

COMMENDATIONS

1. High and quick employment of graduates shows the good quality of graduates.
2. Concrete measures have been implemented to adapt the physical environment of the university and provide access to compensatory equipment and enable study possibilities for students with special needs.

RECOMMENDATIONS

For further improvement

1. Integration of foreign students could be enhanced in communication with social partners that seems to be excellent with Lithuanian students.
2. Gathering feedback from graduates and social partners will provide valuable insights into the demand for professional knowledge. Additionally, organizing annual meetings can bring people together to discuss these needs.

AREA 5: TEACHING STAFF

5.1.	Teaching staff is adequate to achieve learning outcomes

FACTUAL SITUATION

5.1.1. The number, qualification, and competence (scientific, didactic, professional) of teaching staff is sufficient to achieve learning outcomes

Vilnius University Siauliai Academy demonstrates an adequate teaching staff for the ecology field of study, fulfilling the requirements for achieving learning outcomes. The institution adheres to rigorous selection and evaluation procedures, ensuring the competence and qualifications of its faculty. The study program is delivered by 15 permanent faculty members what makes the student/teacher ratio optimal. All the teachers hold doctoral degrees, indicating a high level of academic qualification. These educators are distributed across various academic units, including Siauliai Academy, Life Sciences Centre, and Faculty of Chemistry and Geosciences, fostering an interdisciplinary approach to ecological studies. This diversity aims to equip students with comprehensive competencies for addressing sustainability and ecological challenges. The faculty members also possess practical experience, contributing to the applied knowledge transfer within the program. For example, faculty members engage in commissioned research, projects, and activities outside of direct pedagogical work, enriching the learning experience with real-world applications. The majority of the teachers publish scientific works in the field of ecology and environmental science, and the remaining staff participate in relevant projects, such as the Horizon project SYLVA and project LIRGIA. The composition of the teaching staff evolves, with changes in faculty positions and the introduction of new members. The institution also emphasizes the importance of pedagogical competence, with examples of faculty members completing pedagogical studies and language courses to enhance their teaching effectiveness, particularly for English-taught courses. In summary, the number, qualifications, and competence of the teaching staff at Vilnius University Siauliai Academy are sufficient to support the ecology field of study and achieve its learning outcomes.

ANALYSIS AND CONCLUSION (regarding 5.1.)

The teaching staff at VU Šiauliai Academy is suitable to ensure the achievement of the learning outcomes of the field study programs. The teachers undergo evaluation every five years, with student representatives and international experts participating in the certification committee. The evaluation criteria include research publications, conference attendance, research supervision, teaching, teaching materials, participation in doctoral studies, student research supervision, expert activity, and student feedback. Since spring 2020, each teacher has an annual interview with the institute head. At the time of SER preparation, 15 teachers taught in the academy, all permanent members of the VU academic community and having a doctoral degree. 100% of the teachers had a doctorate degree. Practical experience of the teachers is valued. The university has a system for developing teachers' competences. The VU Educational Competence Centre organizes programs for developing pedagogical competence, and a training program for new teachers.
In conclusion, the aim is fully met with the number, qualifications, and competence (scientific, didactic, professional) of the teaching staff being sufficient to achieve learning outcomes.

5.2.	Teaching staff is ensured opportunities to develop competences, and they are periodically evaluated

FACTUAL SITUATION

5.2.1. Opportunities for academic mobility of teaching staff are ensured

The VU has established processes to support the academic mobility of its teaching staff. The university's International Relations Office (IRO) and the staff responsible for international

cooperation at the Core Academic Units (CAUs) work together to provide opportunities for teachers to engage in international activities. The CAU staff, in cooperation with the IRO, collect information and analyze the possibilities of international relations with foreign universities, consult with academic staff on the expediency of their implementation and submit proposals to the University to establish contacts, administers international agreements on academic and non-academic staff and student exchange; coordinates the implementation of exchange at CAU level, informs and advises its academic and non-academic staff and students on international exchange issues, and organises international exchange information seminars and distribution of handouts. Opportunities for teachers to improve their pedagogical skills are also provided in international settings, for example, through the ARQUS Alliance. During the evaluated period, ca. half of the teaching staff participated in Erasmus+ activities. The teachers also applied to Šiauliai Academy Foundation to cover the costs of international business trips.

5.2.2. Opportunities for the development of the teaching staff are ensured

The VU has a system to ensure ongoing development of its teaching staff. This system operates at multiple levels. For example, the VU Educational Competence Centre plays a crucial role in organizing programs aimed at developing pedagogical competencies. These include workshops on active learning methods, integrating technology into teaching, managing student group work, and addressing cultural diversity in the classroom. There are also programs for new teachers and specific training for various teaching skills, such as communication, guiding written works, and using visual aids. The university also supports teachers' professional development through participation in international initiatives. For example, teachers are involved in the ARQUS Alliance, which provides opportunities for training and collaboration with international partners. Individual development is also emphasized, with teachers taking the initiative to enhance their skills through various programs and workshops, both within the university and externally. Finally, VU evaluates and certifies the teaching staff. This process includes assessing pedagogical competencies, among other criteria. The university also conducts annual interviews with teachers to discuss their performance, achievements, and goals.

ANALYSIS AND CONCLUSION (regarding 5.2.)

The VU has established mechanisms to support the ongoing development and evaluation of its teaching staff at various levels. Such comprehensive approach maintains and enhances the quality of educators. VU provides numerous opportunities for its teaching staff to develop their competencies in several key areas, such as pedagogical competencies (e.g. workshops on active learning, technology integration, student group work management, and addressing diversity in the classroom), international exposure (including staf mobility programs) and individual development. Teachers are strongly encouraged to attend conferences, seminars, and training courses, and to participate in national and international networks and projects. Every five years, the permanent staff undergoes certification every five years to assess their qualifications and competence development and every year the development of competences and future development plans are discussed with the teachers. Thus, it can be concluded that Vilnius University demonstrates a strong commitment to ensuring that teaching staff have ample opportunities to develop their competencies and are subject to periodic evaluation. The university provides a multi-faceted approach that includes structured pedagogical training, support for international engagement, and emphasis on individual development. The evaluation processes, such as certification and annual interviews, contribute to maintaining quality and promoting continuous improvement. Therefore, the aim is fully met.

AREA 5: CONCLUSIONS

AREA 5	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally	Exceptional - 5 Exceptionally well nationally and

		substantial shortcomings to be eliminated		without any shortcomings	internationally without any shortcomings
Second cycle			x		

COMMENDATIONS

1. VU employs rigorous selection and evaluation procedures to ensure the competence and qualifications of its faculty.
2. A high standard of academic qualification is maintained, with all permanent teaching staff holding doctoral degrees.
3. The teachers possess practical experience through commissioned research and projects, enriching the learning experience with real-world applications.
4. VU provides numerous opportunities for teachers to develop their competencies.
5. The institution implements means to discuss development plans and ensure continuous improvement.

RECOMMENDATIONS

For further improvement

1. More intensified involvement of teachers from other institutions (guest professors e.g. from the Nature Research Center but also from research centers and universities abroad) would be required to broaden the perspective of both, the students and the local teachers.
2. Intensified involvement in the international teaching activities (such as Erasmus+ BIP) help the teachers to develop their skills and also keep them up to date with the latest trends in teaching techniques.

AREA 6: LEARNING FACILITIES AND RESOURCES

6.1.	Facilities, informational and financial resources are sufficient and enable achieving learning outcomes

FACTUAL SITUATION

6.1.1. Facilities, informational and financial resources are adequate and sufficient for an effective learning process

Šiauliai Academy (ŠA) of Vilnius University (VU) shares infrastructural resources available at Šiauliai campus. The studies within the field of ecology at ŠA dispose of the following premises for learning: 17-seat classroom, 34-seat classroom, Botanical garden, Information Centre, S. Gliaudys Nature Museum. The practical skills of students developed at four specialised laboratories: Laboratory of Environmental Research, Laboratory of Chemical Research, Laboratory of Plant Biotechnology and Laboratory of Aerobiology. The detail description of laboratory equipment is presented in the Annex no. 6. Also, students have the possibility to use resources of Kurtuvėnai Regional Park. In total, 17 reserves are dedicated to the preservation of the park's natural complexes, in which students analyse forest habits, species to be protected, etc. Šiauliai city serves as a polygon for analysis of urbanized territories. The practical training of students is also performed in close cooperation with following public and private enterprises: hazardous waste incineration JSC "Toksika",JSC "Šiaulių vandenys", State Food and Veterinary Service Šiauliai, JSC "Geomina", JSC "Ekologas", JSC "Žemaitijos pienas". In addition, facilities at VU Vilnius campus Centre for Physical Sciences and Technology, Nature Research Centre are available for the students in the study programme *Natural Systems Management*.

VU library (VUL) consists of the Central Library, Scientific Communication and Information Centre (hereinafter – SCIC) and remote academic units. Currently, Vilnius University has subscriptions to 94 scientific databases, which contain about 52,000 e-journals, about 562,000 e-books and over 108,000 other objects (about 723,000 e-documents in total). For the ecology field, relevant databases are subscribed, such as ACS Publications, Animal Diversity Web (ADW), Biodiversity Heritage Library, Springer Journal,Science Direct, GreenFILE (EBSCO), PubChem, PubMed, Taylor & Francis, Wiley Online Library, Sage Journals Online and others. VU Virtual Library is an important information resource for students and teachers. It is a big advantage that for the academic community relevant and reliable e-resources of scientific information are also available from home using VU Virtual Private Network (hereinafter – VPN) service. Table 19 of the Self Evaluation Report (SER) presents funds allocated to updating VU methodological resources in the last three years.

ŠA teachers and students use the VU library branch – Šiauliai Academy Information Centre (VUL ŠAIC). The access to all scientific databases subscribed by VU is possible via VUL ŠAIC. The staff from VUL ŠAIC organizes and conducts information literacy training related to scientific information search, use of scientific information search systems, ethical use of information (citation, preparation of copyright and bibliographic description, and scientific information management tools).

VU installed general use software has licenses for unlimited use for students. At the same time SP students have access to specialized georeferenced databases, statistical packages, including STATISTICA, US Air Quality Laboratory (ARL) Lagrangian integrated trajectory model HYSPLIT and the air particle and gas dispersion model SILAM developed by the Finnish Meteorological Institute, ArcInfo package.

Vilnius University adopted the Open University for Persons with Disabilities strategy back in 2017, which is a university-wide, long-term commitment to systematically work towards equal opportunities for persons with disabilities. Students have access to a range of compensatory equipment to help them tailor their studies to their individual needs. VU ŠAIC and ŠA premises are accessible for visitors with reduced mobility.

6.1.2. There is continuous planning for and upgrading of resources.

The planning of the resources needed for the studies is carried out by drawing up an annual estimate of ŠA's income and expenditure, which are planned taking into account the state budget appropriations, the planned own funds (funds received as tuition fees, as well as funds from scientific, economic, creative, educational and commercial activities), and assignations (funds from the state budget of the Republic of Lithuania received for the execution of assignments, funds granted by international and foreign foundations and organisations for the execution of scientific, study or other projects, funds received in the form of competitive research funding, donations).

The investment project "Modernisation of the Infrastructure of Educational Sciences and Social Welfare Studies at VU Šiauliai Academy, P. Višinskio st. 25" is underway. Phase I in 2019–2023 has already been completed. In total, 1.36 million EUR was spent on its implementation. Phase II is planned to be implemented in 2026–2029, 2.2 million EUR investments are planned. The project "Optimisation of the network of higher education institutions and improvement of the quality of studies in Šiauliai University by merging Šiauliai University with Vilnius University" has been used to equip two classrooms, each with 21 workplaces and HP ProBook 455 computers. Hybrid distance learning equipment and interactive screens have been installed in these classrooms. The total amount allocated for the equipment is 60,000 EUR. In 2021–2024 study programme from various funding sources raised 79,500 EUR for scientific and laboratory equipment purchase. The budget for the development of library funds is planned centrally by VU library.

ANALYSIS AND CONCLUSION (regarding 6.1.)

Šiauliai Academy (ŠA) of Vilnius University (VU) provides students of *Natural Systems Management* with various learning and research facilities at the Šiauliai campus, including classrooms, a botanical garden, an information centre, and S. Gliaudys Nature Museum. Practical skills are developed in four specialized laboratories. For field studies students also utilize resources from Kurtuvėnai Regional Park and Šiauliai city. Practical training is conducted in collaboration with public and private enterprises. Additional facilities at VU Vilnius campus are also accessible to students.

Vilnius University Library (VUL) comprises the Central Library, the Scientific Communication and Information Centre (SCIC), and remote academic units. Students benefit from subscriptions to key databases and VU Virtual Library services.

Šiauliai Academy (ŠA) teachers and students use the Šiauliai Academy Information Centre (VUL ŠAIC), which provides access to all scientific databases subscribed by Vilnius University. VUL ŠAIC staff offer training on information literacy, scientific research tools, citation, copyright, and information management. Students have access to licensed general-use software and specialized tools. VUL ŠAIC and ŠA premises offer compensatory equipment for individuals with reduced mobility and other disabilities. Nevertheless, there is still a room for improvement regarding the students' hands-on experience in specialized scientific disciplines by joint educational and research activities involving Šiauliai Academy, VU Vilnius campus and Nature Research Centre. While theoretical knowledge is foundational, practical application in laboratory and field settings is crucial for developing competent and confident professionals.

AREA 6: CONCLUSIONS

AREA 6	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Second cycle				x	

COMMENDATIONS

1. Facilities, informational and financial resources are adequate to meet the needs of MSc study programme *Natural Systems Management*.
2. Continuous planning for and upgrading of resources at Šiauliai Academy of VU is well established.

RECOMMENDATIONS

For further improvement

1. More combined financial sources could be allocated for further laboratory equipment and specialised software acquisition.
2. Promote joint educational and research activities/projects among Šiauliai Academy and VU Vilnius campus Centre for Physical Sciences and Technology as well as Nature Research Centre.
3. Strengthen hands-on experience of students by maximizing the use of specialized laboratories and field study resources.

AREA 7: QUALITY ASSURANCE AND PUBLIC INFORMATION

7.1.	The development of the field of study is based on an internal quality assurance system involving all stakeholders and continuous monitoring, transparency and public information

FACTUAL SITUATION

7.1.1. Internal quality assurance system for the programmes is effective

Vilnius University (VU) has implemented an internal study quality assurance system regulated by the normative documents issued by the VU Senate and the Councils of the Core Academic Units (CAUs). VU Study Programme Regulation states that the key body assuring the quality and constant improvements of the study programme is Study Programme Committees (SPC). The Committees base their activity on the Regulations of the Study Programme Committee of VU. The supervision and monitoring of study quality assurance is carried out by the VU Department for the Quality and Development of Studies.

The SPC of the study programme *Natural Systems Management* at ŠA is composed of the teachers implementing the programme, the social partners and the student representative. The SPC reports development of the study programme at least once a year to the ŠA Council. The aims of the study programme should be in line with the strategy and mission of VU and Šiauliai Academy. The main areas of SPC activities cover: assurance of study programme relevance, integrity and consistency; implementation of innovative teaching/learning methods; and assessment of study programme performance. The SPC collects opinions of students, alumni, academic staff and social partners and uses them for the development of the study process. The principal changes of the study programme should be coordinated and approved by the ŠA Council. The Study Department at ŠA provides administrative support to the programme.

7.1.2. Involvement of stakeholders (students and others) in internal quality assurance is effective

The social partners play an important role in the process of internal study quality assurance. They are involved in the process via participation at SPC, by joining the final thesis defence committee, or by organising and carrying out student's internships. Also, social partners often contribute with the topics for individual tasks or final thesis (Annex no.4 of the SER provides the list of topics for final thesis). The interaction between students, academic staff and social partners assist in better understanding of labour market needs and adjust them to the study programme.

Student representatives play an active role in an internal study quality assurance via various governing bodies and committees. They are members of the ŠA Council, SP committees, the Board of Studies, the Academic Ethics and Disputes Committees, and the Teachers' Certification Committee. If needed, Student Representation can initiate meetings with ŠA administration.

7.1.3. Information on the programmes, their external evaluation, improvement processes, and outcomes is collected, used and made publicly available

The University Study Information System (VUSIS) is a central platform for managing study programs and student information. It integrates multiple applications, including Study Programme Administration, which allows authorized staff to create, view, and edit study plans. The Student Administration application helps manage student records, course grades, elective registrations, thesis topics, and official certificates. All student-related information is recorded in VUSIS. The system also generates diploma annexes and provides statistics on admissions and study programs. Teachers use VUSIS to enter exam results, update course descriptions, track student lists, ensuring efficient information management and study administration.

VU collects information on study quality and stakeholder feedback following its established procedure, aligning with the indicators of the VU Strategic Plan. Periodic surveys gather feedback

from students and alumni. Several types of student surveys are conducted at VU to assess study quality and improve internal processes. First-year student survey evaluates the admission process, study choices, and expectations. Course/Module assessment survey is conducted after completion of each individual course. Final-year student survey is aimed to collect student opinions about the study programme and obtain competences. Starting from the a. y. 2023/24 VU conducts a standardized student survey on the quality of internships. Graduates are also contacted to express their opinions; however, low activity of respondents makes it difficult to gather representative data for statistical analysis. VU is actively seeking ways to increase graduate involvement.

The results of the targeted surveys are shared and analysed by teachers, SPC and administration. While feedback is shared with faculty and administration, it's unclear how consistently and effectively this leads to concrete improvements, especially in areas where student concerns are recurring.

7.1.4. Student feedback is collected and analysed

The results of the surveys conducted at VU from 2021 to 2023 indicate high satisfaction of students. On a scale of 5.00, the course content was rated 4.96, teaching quality – 4.89, the overall satisfaction of studies at VU – 4.93. Students highlighted several positive aspects of their studies, including dedicated time for final thesis preparation, support from teachers and research supervisors, well-structured lectures, practical work, and the integration of theory with practice.

Vilnius University actively collects and analyzes student feedback through various surveys conducted throughout their studies, including course-specific, semester-end, and alumni surveys. This feedback is used to assess and improve the quality of education, teaching methods, and student services. There are some setbacks. For example, alumni participation in surveys is low, limiting the ability to draw meaningful conclusions from post-graduation data. More attention to systematically addressing feedback and ensuring follow-through on student suggestions could strengthen the impact of these efforts.

The SER provides descriptive text on how student opinions are collected at VU, however does not present factual data from surveys related to MSc study programme *Natural Systems Management*. Meeting with the students revealed that students have a positive attitude towards the study programme.

ANALYSIS AND CONCLUSION (regarding 7.1.)

VU actively collects student feedback through multiple surveys, using the insights to enhance education quality, teaching methods, and student services. Low participation in alumni surveys limits post-graduation analysis and the ability to draw meaningful conclusions. Systematic response to student feedback and better implementation of suggested improvements could enhance the impact of VU's quality assurance efforts.

The SER does not provide specific survey data on the MSc study programme *Natural Systems Management*. This raises the question of whether there is a sufficient system for opinion expression, collection and analysis on the study programme level. Despite that meeting with the students, social partners and alumni revealed satisfaction and responsiveness, a more proactive approach for regular feedback from different stakeholder groups is required.

AREA 7: CONCLUSIONS

AREA 7	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings

Second cycle			x		

COMMENDATIONS

1. Vilnius University (VU) has implemented an effective internal system for study quality assurance.
2. VU actively collects student feedback through multiple surveys, using the insights to enhance education quality, teaching methods, and student services.
3. Involvement of stakeholders in an internal study quality assurance system of MSc Study programme *Natural Systems Management* is well organised.
4. Meeting with students, social partners and alumni revealed a positive attitude toward MSc study programme *Natural Systems Management.*

RECOMMENDATIONS

To address shortcomings

1. The results of surveys on MSc study programme *Natural Systems Management* should be available for internal and external evaluation.
2. Systematic response to student feedback and better implementation of suggested improvements is needed.

For further improvement

1. The process of collection, use and publication of information on MSc study programme *Natural Systems Management* requires improvement.

V. SUMMARY

The MSc programme in Natural Systems Management at Vilnius University Šiauliai Academy (VU) is highly regarded for its holistic approach that combines scientific research with practical ecological solutions. The Review Panel has identified several key strengths of the programme that prepare students to tackle complex ecological challenges.

One of the main strengths of the programme is combining theoretical knowledge with practical experience through research-based learning. This enables students to gain a comprehensive understanding of ecological concepts while developing the practical skills needed to apply these concepts in science and real world. The regular updating of the curriculum in collaboration with the social partners helps to ensure that the programme is always in line with the latest scientific knowledge and the evolving demands of the job market.

Another commendable aspect is the programme's strong alumni network, which continues to actively engage in national agencies and collaborate with the faculty. This underscores not only the programme's effectiveness in preparing students for professional success, but also its relevance to the environmental and ecological sector. In addition, the integration of practical experiences, such as laboratory research and fieldwork, allows students to enhance their employability and develop practical skills essential for addressing environmental challenges.

The curriculum, which incorporates new technologies such as evolving laboratory and remote sensing methodologies, ensures that students are well equipped for modern ecological research and practise. In addition, VU's transparent selection process, stable admissions numbers and comprehensive student support systems contribute to the programme's success by attracting motivated students and fostering their academic and personal development.

Despite these strengths, the review panel identified several areas for improvement. First, the self-evaluation report (SER) could be more concise. Reducing repetition and unnecessary detail would make the report more focused and highlight the programme's key strengths more clearly. In addition, the process by which the programme is reviewed and updated could be more clearly articulated to create a better understanding of how it aligns with the University's broader strategic goals.

While the integration of practical experience is a key strength, the report would benefit from a more structured presentation of the combination of research, fieldwork and theoretical knowledge within the curriculum. This would help to clarify the importance of the practical experience and better communicate its role in the degree programme. In addition, the curriculum development process could be made more transparent and provide stakeholders with a better insight into the updating of course content in response to student and external feedback.

The Review Panel also recommended a review of the policy on electives. Currently, electives are not offered if fewer than 15 students enrol, which can limit students' ability to customise their curriculum. Allowing smaller cohorts for these courses would provide more flexibility and allow students to tailor their education to their individual goals. In addition, more structured advising or mentoring to customise curricula could further support students' academic and career goals.

Further improvements could be made in the use of VU's academic support platforms and career counselling services. Encouraging students to take full advantage of these resources would enhance their academic experience and better prepare them for the job market. In addition, greater

participation in feedback surveys and systematic implementation of suggestions for improvement would help the programme better meet the needs of students.

The teaching staff at VU is highly qualified and all faculty members are actively engaged in research. The university's commitment to faculty development through pedagogical trainings, international outreach and professional growth is also commendable. Regular evaluations and annual development plans help to ensure that faculty remain competent and up-to-date in their fields.

The Review Panel also noted that while the University's facilities and resources are generally adequate, there is room for improvement. In particular, additional funding for laboratory equipment and specialised software would enhance the programme's ability to support cutting-edge research and hands-on training.

In summary, the MSc programme in Natural Systems Management at VUsuccessfully provides a comprehensive and practical education that prepares students for careers in ecological and environmental fields. However, addressing the identified areas for improvement will further strengthen the impact and relevance of the programme. The Review Panel would like to thank VU for its efforts in preparing the self-evaluation report and organising the site visit, as well as for the fruitful discussions with the panel team.

VI. EXAMPLES OF EXCELLENCE