CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

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# EVALUATION REPORT

## STUDY FIELD of ENVIRONMENTAL SCIENCE

at Vytautas Magnus University

**Expert panel:**

1. **Prof. Dr. (panel chairperson), Kalev Sepp,** academic;
2. **Prof. Dr. Linas Kliucininkas,** academic;
3. **Prof. Dr.habil.chem. Maris Klavins,** academic;
4. **Mr., Pedro Torralbo Munõz,** *students'* representative;
5. **Dr. Saulius Urbanas,** representative of social partners.

**Evaluation coordinator – Ms Ona Charževskytė**

Report language – English



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## Study Field Data

| Title of the study programme | **Environmental Science** | **Environmental Management** |
|---|---|---|
| State code | 6121CX013 | 6211CX016 |
| Type of studies | University studies | University studies |
| Cycle of studies | First | Second |
| Mode of study and duration (in years) | Full time (4 years) | Full time (2 years), part time (3 years) |
| Credit volume | 240 | 120 |
| Qualification degree and (or) professional qualification | Bachelor of Physical Sciences | Master of Physical Sciences |
| Language of instruction | Lithuania, English | Lithuania, English |
| Minimum education required | Secondary education | Bachelor degree |
| Registration date of the study programme | 1997-05-19 | 1997-05-19 |

# CONTENTS

# I. INTRODUCTION

## 1.1. BACKGROUND OF THE EVALUATION PROCESS

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

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

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

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

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

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

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

## 1.2. EXPERT PANEL

The expert panel was assigned according to the Experts Selection Procedure (hereinafter referred to as the Procedure) as approved by the Director of Centre for Quality Assessment in Higher Education on 31 December 2019 Order No. V-149. The site visit to the HEI was conducted by the panel on 4th November, 2021.

**Expert panel:**

1. Prof. Dr. (panel chairperson), Kalev Sepp, academic;
2. Prof. Dr. Linas Kliucininkas, academic;
3. Prof. Dr.habil.chem. Maris Klavins, academic;
4. Mr., Pedro Torralbo Munõz, students' representative;
5. Dr. Saulius Urbanas, representative of social partners.

## 1.3. GENERAL INFORMATION

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

| No. | Name of the document |
|---|---|
| 1. | List of the participants |
| 2. | The H-Index of academic staff VMU |
| 3. | Number of excluded students VMU |
| 4. | Learning facilities and resources VMU |
| 5. | VMU infrastructure |
| 6. | BSc thesis |
| 7. | MSc thesis |

## 1.4. BACKGROUND OF THE STUDY FIELD OF ENVIRONMENTAL SCIENCE AND SIGNIFICANCE IN THE HEI

The Faculty of Natural Sciences, which is one of 15 academic divisions at Vytautas Magnus University (further – VMU), offers two study programmes in the field of Environmental Studies: the BSc programme – Environmental Science and the MSc programme – Environmental Management. Studies in the field of Environmental Studies at the Faculty of Natural Sciences, VMU have been carried out since 1997.

The first-level studies prepare graduates of the field of environmental studies who acquire knowledge not only in the specific study field of their choice, but also the basics of physics and biomedicine concerning origins and evolution of the universe, the genetic basics of life, the interplay between people and natural environment, the effect of various technologies on the development of society, trends of sustainable development, etc.

The second-level studies prepare graduates of the field of environmental studies who acquire interdisciplinary knowledge and skills necessary for a qualified environmental professional to carry out a modern scientific research on anthropogenic environmental and climate changes and their impact on the wildlife and human health, analyse and summarise results about the state and changes in the natural environment, and make decisions, solving complex environmental problems according to the sustainability principles and Lithuanian and the EU legal acts.

Both, BSc and MSc study programmes aims and learning outcomes correspond well with the previous VMU's strategy for 2012-2020 and a new strategy for 2021-2027. Programmes' aim and outcomes match the VMU Mission stated in new strategy for 2021-2027: VMU is a community-based research, art and study institution, creates liberal learning conditions for an

individual, develops partnerships, takes active part in the life of Lithuania, advances the future of the country, and contributes to the global cultural and academic development.

Both the aim and learning outcomes of the programmes follow VMU's strategy.

## II. GENERAL ASSESSMENT

*Environmental Science* study field and first cycle at VMU is given **positive** evaluation.

*Study field and cycle assessment in points by evaluation areas*

| No. | Evaluation Area | Evaluation of an Area in points* |
|---|---|---|
| 1. | Intended and achieved learning outcomes and curriculum | 4 |
| 2. | Links between science (art) and studies | 4 |
| 3. | Student admission and support | 4 |
| 4. | Teaching and learning, student performance and graduate employment | 5 |
| 5. | Teaching staff | 5 |
| 6. | Learning facilities and resources | 4 |
| 7. | Study quality management and public information | 4 |
| | Total: | 30 |

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

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

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

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

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

**Environmental Science** study field and second cycle at VMU is given **positive** evaluation.

*Study field and cycle assessment in points by evaluation areas*

| No. | Evaluation Area | Evaluation of an Area in points* |
|---|---|---|
| 1. | Intended and achieved learning outcomes and curriculum | 4 |
| 2. | Links between science (art) and studies | 4 |
| 3. | Student admission and support | 4 |
| 4. | Teaching and learning, student performance and graduate employment | 5 |
| 5. | Teaching staff | 5 |
| 6. | Learning facilities and resources | 4 |
| 7. | Study quality management and public information | 4 |
| | Total: | 30 |

*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field is being developed systematically, has distinctive features;

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

5 (excellent) - the field is exceptionally good in the national and international context/environment.

# III. STUDY FIELD ANALYSIS

## 3.1. INTENDED AND ACHIEVED LEARNING OUTCOMES AND CURRICULUM

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

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

*(1) Factual situation*

Political drivers for the study programmes are the action and strategy plans of Vytautas Magnus University, Lithuanian Ministry of Education, Science and Sports of the Republic of Lithuania (MESS), the Government of the Republic of Lithuania, and the European Commission (EC).

The demand for specialists in the environmental protection and green sector of economy have increased during the last years and are growing quite rapidly in coming years.

The BSc and MSc programmes prepare graduates to enter the labour market as research-minded professionals who are able to advance their career or begin a new one by gaining the requisite skills and knowledge to develop sustainable solutions that balance environmental, health, business and social interests.

According to the SER the BSc programme is aimed at preparing highly qualified environmental specialists who have theoretical knowledge and practical skills to perform environmental monitoring and assessment, analyse natural and anthropogenic environmental and climate changes, their impact on living organisms and ecosystems, and to select solutions for environmental impact mitigation according to the principles of sustainable development and environmental policy.

The MSc programme is aimed at preparing highly qualified environmental professionals who have the multidisciplinary, innovative knowledge and skills to carry out scientific research and professional activity on environmental issues and challenges, to study the impact on natural and socio-economic environments, to make decisions, solving and managing complex and emerging environmental problems according to sustainability principles and policy and law at the national and international level. However, as many environmental problems require knowledge of technologies, it would be valuable to increase the volume of studies allocated for environmental technologies.

In Lithuania, there are a total of 4 study programs in the field of Environmental Science. Strengths and uniqueness of the VMU study programmes are related to *Artes liberales* general university study subject groups, which aim at the development of generic skills, including foreign languages, a wider list of elective courses, and a few research papers, which provide students with the opportunity to deepen their knowledge in selected research topics in the field of Environmental Sciences. Both Programmes include a strong component of research.

*(2) Expert judgement/indicator analysis*

The design, development and revision of the Environmental Science programme (MSc) and Environmental Management programme (BSc) consider the needs of the society and the labour market as evidenced in SER and during oral online testimonies. However, as many environmental problems require knowledge of technologies, it would be valuable to increase the volume of studies allocated for environmental technologies.

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

*(1) Factual situation*

The VMUs strategy for 2012-2020 was based on five fields with more detailed objectives: 1) Socially active and responsible community; 2) Reliable international partner; 3) Studies favourable for talents and personalities; 4) The highest level of science and arts; 5) Harmonious and creative environment.

The main cornerstone elements of the new strategy for 2021-2027, approved by VMU Senate and VMU Council on November 25, 2020 are: student involvement in activities related to strengthening the well-being, strengthening inter-institutional and interdisciplinary cooperation, effective student engagement in research, greater interdisciplinary collaboration between professionals, cooperation with the public and stakeholders and contribution to the European Green Course.

Both BSc and MSc study programmes are focused on a broad field of study related to environmental aspects, interdisciplinarity, practical skills, research and professional activities related to environmental issues and their management.

(1) Expert judgement/indicator analysis

Both, BSc and MSc study programmes aims and learning outcomes correspond well with the previous VMU's strategy for 2012-2020 and a new strategy for 2021-2027. Programmes' aim and outcomes match the VMU Mission stated in new strategy for 2021-2027: VMU is a community-based research, art and study institution, creates liberal learning conditions for an individual, develops partnerships, takes active part in the life of Lithuania, advances the future of the country, and contributes to the global cultural and academic development.

Both the aim and learning outcomes of the programmes follow VMU's strategy.

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

*(1) Factual situation*

Programme “Environmental Sciences” consists of two parts: general university education part (study courses of Group A and Group B; of total 56 ECTS) and study programme part (study courses of Group C). Group A and B courses allow students to acquire a broad basic education due to VMU unique system of liberal studies (*Artes liberales*). The courses of Group A and Group B are divided into five groups: Nature Science, Technological and Agricultural Sciences, The Humanities, Social Sciences, Arts, and Foreign Languages. The study programme part includes theoretical and practical courses specifically related to the study programme (Group C) as well as final thesis (15 ECTS) and practice (16 ECTS). Programme “Environmental Management” structure also fulfils national and VMU requirements. It consists of the courses of the study field (114 ECTS), optional courses (6 ECTS), internship (6 ECTS) and final thesis (30 ECTS).

The calculation of student workload and ECTS allocation is systematically revised.

*(2)Expert judgement/indicator analysis*

The composition of the study programmes is in conformance with general requirements of studies and the descriptor of the study field. Both study programmes (“Environmental Sciences” and "Environmental management”) fully match the requirements of VMU Study regulations.

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

*(1) Factual situation*

The learning outcomes of the study programmes are formulated according to the aim of the study programme and include all components of the aim. Learning outcomes of the programmes are directed to the acquisition of general and special professional competencies of a prospective qualified environmental professional and address the main environment and sustainability issues, interaction between natural and socio-economic environments.

The list of learning outcomes and study programme itself is periodically updated and upgraded in accordance with environmental challenges and related national and EU regulation, international policy, needs of society and labour market.

Each study course of the programme has its own learning outcomes related to the learning outcomes of the programme. Outcomes of the particular course determine teaching/learning methods and assessment methods. The aims, learning outcomes, teaching/learning methods and assessment methods of each course are indicated in the course description.

(2) Expert judgement/indicator analysis

The aims and learning outcomes have been defined clearly, systematically, periodically updated, and their assessment methods are appropriate for achieving the learning outcomes.

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

(1) Factual situation

First-cycle study programme "Environmental Science" covers 240 ECTS credits, including theoretical courses, field practices, research papers and final thesis. The programme curriculum is distributed over 4 study years (8 semesters), with some 6 courses (about 30 ECTS credits) each semester. "Environmental Science" consists of two parts: general university education part (known as Groups A and B), which comprises 56 credits and specialty part (known as Group C) which comprises 184 credits of the programme. The study programme speciality part (Group C subjects, 186 ECTS) makes up the core of the programme "Environmental Science". The speciality part consists of courses that are specific for the study programme and prepare the students as specialists of their field. Such courses are offered throughout all study years but dominate during the third and fourth year. The logic for setting the study subjects along the four years of study is based on the principles of chronology and particularity. The studies are finished with the preparation and defence of the final thesis (15 ECTS) on the selected environment related topic.

Second-cycle study programme "Environmental Management" consists of courses, professional practice, two research papers and final thesis in total covering 120 credits for achieving the learning outcomes. The courses are arranged simultaneously from the first semester to start developing both research and practice related competences, for e.g., Environmental Research Methodology, Geoinformatics for Environmental Sciences etc. The programme studies culminate in the 4th semester with Scientific - Professional Practice and the Final Master 19 Thesis. Scientific - Professional Practice (6 ECTS) is aiming at application of theoretical knowledge into practice, acquiring professional practical skills.

*(1) Expert judgement/indicator analysis*

The programmes are logically grounded and ensure the achievement of programme aims and outcomes. In both study programs "Environmental Science" and „Environmental Management" the arrangement of study courses are coherent and ensure consistent development of students' competences related to the main aim of the programme to prepare high-level environmental specialists. Students are pleased about the liberal arts principles, and they can compile a certain part of their own study plan The curriculum of the Programmes are being constantly improved and updated adjusting to the newly emerging environmental and sustainability issues, labour market's needs and requirements. In 2016 several new courses, for example "Environmental Quality Assessment and Monitoring" were added to the bachelor Program and Environmental Research Methodology and European Union Public Administration was added to the master Program. However, during the meeting representatives of social partners and alumni recommended to increase an importance of subjects related to environmental technology and environmental law in both programs. In addition, very few BSc theses are related to research projects. None of the students participating in the interview have been involved in research projects.

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

VMU also provides students with opportunities to take individual studies when creating their own individual study plans following *Artes liberales* principles in order to acquire additional knowledge and skills necessary to prepare for further academic and professional activities. Programme "Environmental Sciences" includes *Artes liberales* general university study courses, which comprise 56 ECTS. VMU system of *Artes liberales* provides the possibility to deepen student's knowledge on the selected topics, thus ensuring flexibility and individualization of their studies.

(2) Expert judgement/indicator analysis

On the basis of *Artes liberales* principles students can personalise the structure of study programmes considering their personal learning objectives and intended learning outcomes.

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

(1) Factual situation

Preparation and defence of final theses are regulated by VMU Study Regulations and General Order on the Final Theses Preparation and Defence. The Commission for the public defence of final thesis consists of 5 competent specialists of the study field (fields) – scientists, practitioners and, social partners.

The topics of the final theses of the BSc and MSc study programmes are in accordance with the purpose of the study programmes.

(2) Expert judgement/indicator analysis

Preparation and defence of final theses corresponds well to VMU Study Regulations and General Order on the Final Theses Preparation and Defence.

Social partners are actively involved in preparation and defence of final theses in both study programmes. Very few themes of final bachelor theses are related to ongoing research projects.

***Strengths and weaknesses of this evaluation area:***

***(1) Strengths:***

1. The Programmes are in congruence with today's societal and labour market needs in Lithuania and in Europe;

The learning outcomes and curriculum of the Programmes are being constantly improved and updated adjusting to the newly emerging environmental and sustainability issues, labour market's needs and requirements;

3. VMU offers excellent opportunities for students to personalise their studies according to their personal learning objectives, research interests and career plans;

4. Social partners are actively involved in preparation and defence of final theses.

***(2) Weaknesses:***

1. The themes of final theses of bachelor program should be more related to research projects;

2. Curricula could be improved, paying more attention on Environment law, Environmental technologies and Scientific language.

## 3.2. LINKS BETWEEN SCIENCE (ART) AND STUDIES

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

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

*(1) Factual situation*

The research activities at VMU related to the study field under evaluation encompass Natural Sciences with particular emphasis on Environmental Science. The results of research performance on a yearly basis are presented to the Research Council of Lithuania. For the period of 2017-2019 the field of Natural Science at VMU showed rapid development - 4.34, 8.46 and 9.07 points, respectively. Based on the international expert group assessment (organised in 2018 by National Research and Higher Education Monitoring and Analysis Centre - MOSTA) the field of Natural Sciences at VDU received positive evaluation. The quality of R&D activities was evaluated – 3 (out of 5); the experts noted that the research carried out by the Unit is of a high standard and was recognized nationally, with limited international recognition. The economic and social impact of R&D activities was evaluated – 3 (out of 5); the experts concluded that researchers conduct important research, and the Unit is an important partner in R&D outside the academic community. Development potential of the Unit of Assessment – 3 (out of 5); the experts emphasized that academic staff is sufficient, although many researchers and teachers work part-time. The interdisciplinary research at VMU is organised via active groups of researchers in various fields – scientific clusters. The teachers of the study field under evaluation belong to one of the following clusters – *Effect of Anthropogenic Environmental Changes and the Climate to Alive Organisms* or *Application of Innovation Technologies to the Research on Health Risks Raised by Climate Change and Environmental Pollution*. The affiliation of Agricultural University to Vytautas Magnus University provides opportunities for activation of interdisciplinary research.

*(2) Expert judgement/indicator analysis*

The research in the field of Natural Sciences with particular emphasis on Environmental Science at VMU is well developed, however academic staff should strive for wider international recognition. The research activities are closely related to the field of study.

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

*(1) Factual situation*

As stated within the Self-Assessment Report (SER) close link between content of studies and the latest developments in science and technology is ensured through the regular update of the content of the courses, innovative tasks for students, compliance of the study content with the priorities of EU and Lithuania, study visits to social partners and innovative research methods. Hot topics in Environmental Science as well as Environmental Management are incorporated into the study curriculum (for example, sustainable consumption and production, prerequisites of green economy, sustainable use of biomass for energy, etc.). Teachers regularly participate within training activities, teaching and research internships. The memberships within international organizations and networks (for example Society of Environmental Toxicology and Chemistry, International Association for Urban Climate) provide background for newest Environmental Science knowledge transfer. The newest results of the research performed in the context of the international projects are integrated into the content of the study programmes. For example, KLIMAGRO and FORCROPS projects assess the effects of climate change and climate extremes to crops productivity and nutrition quality.

*(2) Expert judgement/indicator analysis*

The study content corresponds to the latest developments in Environmental Science.

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

*(1) Factual situation*

The involvement of students into the scientific activities starts already during the first semester. For students of both study programmes there are organised introductory meetings with academic staff, where teachers introduce themselves and their research interests. This information can be found on students' website "Modusas", Faculty of Natural Sciences took the initiative "Get acquainted with scientist of VMU Faculty of Natural Sciences". Students are invited to be curious and suggest their topics for research. According to the provided data 16% of first and second cycle students for the period 2017-2020 were involved into the research projects and related topics of their final thesis to the activities of the projects. During the analysed period 24% of students made oral or poster presentations in national and international conferences. Every year VMU holds scientific conferences „Human and Nature Safety", „The Vital Nature Sign", „Smart Bio" and others. The advanced student's co-author publications in scientific journals indexed in Clarivate Analytics and Scopus databases. The potential of social partners is widely used involving students into the research activities.

*(2) Expert judgement/indicator analysis*

Students are provided with several possibilities to get involved in scientific activities. The formal and in-formal systems of students' involvement into the scientific activities are consistent with their study circle.

***Strengths and weaknesses of this evaluation area:***

***(1) Strengths:***

1. The research in the field of Natural Sciences with particular emphasis on Environmental Science at VMU is recognised as high;

2. The system of students' involvement into the research as well as publicity of scientific activities is well established;

3. Graduates of the study programmes noted that a wide range of research competences obtained in the field of Environmental Science provide a good background for professional carrier.

***(2) Weaknesses:***

Not found.

## 3.3. STUDENT ADMISSION AND SUPPORT

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

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

*(1) Factual situation*

Admission to the first cycle (or integrated) is calculated based on the mark of the Matura, which comes from the with the admissions procedure approved by LAMA BPO (Lithuanian Higher Institutions Association for Organising Joint Admission), which is the institution authorised by the Ministry of Education, Science and Sports of the Republic of Lithuania, and the admissions procedure of VMU Faculty of Natural Sciences.

For the second cycle, there are other criteria depending on the previous studies of students. The needed information for admission is published on different websites such as LAMA BPO62, VMU63 and VMU Faculty of Natural Sciences.

The university organizes several dissemination activities, for example, future students have the possibility to find information about the university in several events like study fairs or when lecturers visit schools. Moreover, students have the chance to always go to the faculty at any time of the year to meet the teaching staff, other students and get more information.

*(2) Expert judgement/indicator analysis*

Regarding the admission criteria and process, it can be confirmed that the process works properly, students are satisfied in most of the aspects that concerns what the university offers them.

From the visit, it has been noticed that students have accessed the VMU smoothly regarding the admission and selection procedure. However, there are still many other recruitment activities that the university could organize. For example, it could be interesting for the university coordinators of environmental fields to start organizing recruiting activities such as visiting high schools around the country, explaining what VMU faculty of Natural Sciences can offer to them in terms of study opportunities, financial and personal support.

For these reasons, it can be confirmed that, in general terms, VMU meets the essential requirements regarding the suitability and publicity as well as the admission criteria and process applied.

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

*(1) Factual situation*

The university follows different official procedures when academic recognition is needed such as the regulation of the Republic of Lithuania following the information provided by the Centre for Quality Assessment in Higher Education. In particular, the recognition of foreign qualifications is done centrally in the International Cooperation Department. It is important to mention, that the university attempts to keep updated criteria for foreign students, since it is updated every year. In the case of Recognition of partial learning outcomes, this is regulated by VMU Description of the Procedure for Recognition of Learning Outcome, which in this case is not done centrally, but at the faculty level.

*(2) Expert judgement/indicator analysis*

During the period under evaluation, none of the students enrolled in the bachelor and master studies have applied for recognition of competences acquired in non-formal and informal ways. However, students that have participated in exchange programs have asked for recognition of partial studies with satisfactory results in terms of the final recognition.

From the point of view of the procedure that students have to follow during the application of recognition and after the interview with the different groups of interest, it can be confirmed that everything is sufficiently clear from the point of view of the students.

Consequently it can be confirmed that the VMU accurately applies the suitable recognition processes in order to guarantee the quality of the studies and learning outcomes of its students.

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

*(1) Factual situation*

From a mobility point of view, students have the possibility to spend a semester or a year abroad in a range of European and non-European universities. Not only the academic mobility is available for students in terms of their bachelor or master studies, but students can also participate in mobility programs following programs such as internships with companies/organization inside or outside the Lithuanian system.

*(2) Expert judgement/indicator analysis*

In terms of mobility, it has been detected that many students do not participate in mobility programs mainly because of economical and personal reasons. The mobility coordinators should clearly work in this direction. The organization of meetings between students and the mobility coordinator, whereby the coordinator could search the main reasons why students do not take advantage of the mobility programs could be a good idea. Particularly, it could help to find new ideas to motivate students from a personal and an economical point of view. This is particularly important at the bachelor level since first cycle students last 4 years and the students might not be working yet.

In terms of how the exchange programs are advertised, the university offers a wide range of opportunities where students can know more about programs, meet other students that have already participated in mobility or just simply get information about the procedures and opportunities.

Therefore, even though the number of students participating in exchange programs is not outstanding, it can be confirmed that the university is trying to improve the mobility of its students which is not always straightforward.

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

*(1) Factual situation*

The university provides support to students in two main aspects. Firstly, the economical one, students with financial needs could be granted, students also could have a reduction on the cost of accommodation as well as students with outstanding academic results could get honorary scholarships. Moreover, students could also ask for a payment in instalments to pay the tuition fee or accommodation. Secondly, the university provides social and individual support in many aspects. Information about different events is provided by Moodle, e-mail or at periodical meetings together with The Dean, Vice-dean, their Department Head, and members of the Study Programme Committee. VMU Student Council and VMU Career Centre of Student Affairs Department work for students in order to provide cultural, social and academic activities that could help students to find better job opportunities.

*(2) Expert judgement/indicator analysis*

From an economical and personal point of view the university is taking care of the main problems that students can have. As an example, the university offers the possibility to pay on instalment basis. Considering the positive impact that this measure can have on the household economy of the families, the university should try to find a method to automate this process to every student. Similarly, from a personal point of view, students have different services that can help them to fulfil their personal needs during their studies at VMU. However, during the interviews it has been detected that some everyday needs that a student could have in the campus are not being covered. For example, common spaces for students or eating areas could be easily improved by the university. These examples do not mean that the university does not listen to the needs of students, but it could show, that the communication channels are not helping the coordinators to understand those needs.

From a Career point of view, VMU also looks after giving good advice to their students for their professional future. Therefore, VMU organizes different activities that link companies and graduate students with current students.

Consequently, it can be confirmed that VMU provides very good support for students, with little details that are easily implemented by improving the communication between students' councils and coordinators.

### *3.3.5 Evaluation of the sufficiency of study information and student counselling*

*(1) Factual situation*

Information about the studies is delivered to students through various channels. Several events are organized to explain how the studies and the faculty work such as the "Introduction to studies" where each day focuses on a different aspect of interest for students. Additionally, the Faculty Day is organised, during which students are introduced in more detail to the study courses. Furthermore, the university has a centralized student Centre, where students have different options to receive information such as the official website, social media, and personalized emails, which are other tools that students can use to receive information about the faculty and their studies.

Moreover, at the beginning of the semester students meet with the head of the study programme to talk about their studies. During the semester, it is also possible to solve issues through the Study Programme Committee.

*(2) Expert judgement/indicator analysis*

Regarding the information that the university provides students about the study program courses, cultural possibilities, economical possibilities or career counselling, it can be confirmed that students have different sources of information where to find and improve their university experience.

From the visit, it has been detected that generally students find the information through websites or social media. Considering that many of the alumni have found jobs rapidly, it can be confirmed that students are well prepared and that the learning outcomes meet the needs of

the labor market. However, from the point of view of the advice that students could receive, it is not that apparent to see that this continuous process is happening. Nevertheless, students can acquire a lot of information regarding their future careers through different channels and opportunities that the university offers them.

***Strengths and weaknesses of this evaluation area:***

***(1) Strengths:***

1. Students satisfaction is high, regarding what the university offers them;

2. The connection between the social partners and the university is very good and constructive;

3. The admission system is clear, transparent and understandable for students.

***(2) Weaknesses:***

1. Low mobility of Bachelor students.

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

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

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

*(1) Factual situation*

According to SER both BSc and MSc study programmes are focused on a broad field of study related to environmental aspects, interdisciplinary, practical skills, research and professional activities related to environmental issues and their management.

VMU provides students with possibilities to study according to an individual study schedule in order to meet specific learning needs. The schedule is designed on the basis of the implemented study programme and individual study plans. An individual study schedule determines the distribution of the taken courses at a certain time, the number and time of consultations, the form and order of assessment, the beginning and end dates of the examination session

Different study methods are offered in different forms of study course delivery (lecture, seminars, laboratory works, etc.). The most common form of teaching is oral lecture. Lectures are enriched with audio-visual material, discussions, illustrations, presentations of questions and answers, etc. The seminars and laboratory works are mostly allocated for practical training to develop transferable skills; the tasks are usually problem oriented.

Teaching and studying methods applied are regularly reviewed and further developed. The study process involves individual assignments, when students work on thematic papers, essays, case analysis, presentations, research papers, research project, etc.

*(2) Expert judgement/indicator analysis*

Analysis of documentation and interviews confirm a well-defined and at the same time flexible teaching and learning process, considering demands and individual interests of students, and enabling them to achieve the intended learning outcomes. One of the consequences that the pandemic has involved, has been the fast necessity to quickly adapt the teaching methods to the new living scenario. This has had a positive impact since it made professors adapt their teaching methods to nowadays need. In fact, during the interviews the possibility for students to attend the lecturing classes remotely has been confirmed.

In terms of how the teaching staff update their teaching skills, they can participate in different teaching courses depending on the workload during semesters. Also, a yearly course is organized where professors can improve their teaching skills. Examples of new teaching methods, such as Mind maps or presentations without PowerPoints have been mentioned during the meetings, are considered as good practises.

Students expressed appreciation for the good reputation of the university prior to choosing the study program and they still maintain a high ranked reputation of the university during their studies. Social partners are contributing to curricula developments through the SER team members, also through bilateral communication with teachers during thesis support/defend process and working practice.

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

*(1) Factual situation*

The study process is organized according to individual needs of students, individual counselling is provided, when necessary, data on students with disabilities or from vulnerable groups is integrated into database systems, thus facilitating the learning process for them.

VMU was the first Lithuanian institution of higher education to launch a programme which integrated people with disability into the society through higher education. In 2015 VMU was awarded a certificate of Lithuanian Association of People with Disabilities which states, that infrastructure of the university is adapted and provided services are friendly to people with disabilities.

VMU continuously implements its disability-related policies: provide financial support both to students with disability and from vulnerable groups; adjust dormitory rooms for students with disabilities; provide disability adjusted learning and educational tools and devices.

Positive survey results of graduated students in regard to conditions of the disabled persons at the university support the expert team findings.

*(2) Expert judgement/indicator analysis*

Meetings with students and VMU staff confirmed a proper treatment of students from socially vulnerable groups and students with special needs. Facilities are adjusted according to demands and a flexibility of learning methods (incl. distance learning) positively contributes to the description of a rather luxury access to the study conditions for socially vulnerable groups and students with special needs.

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

*(1) Factual situation*

The analysis of the competitiveness of similar study programs and the analysis of the employment of graduates is carried out every year at the VMU Career Centre and the Department of Environmental Sciences. Monitoring student achievement and providing an assistance is divided into interrelated processes, which consist of the following stages: 1) analysis of the situation of student registration for studies and study subjects; 2) analysis of the reasons for students‟ non-participation in interim and final examinations; 3) analysis of students‟ assessments of interim and final assessments; 4) improving the organization of studies and implementing preventive measures to manage student progress.

Monitoring of student achievements and providing assistance at the university is carried out at three levels: individual, faculty and university. The monitoring of learning achievements is performed regularly, and students themselves are invited to make self-monitoring of their progress in studies and follow the processes of studies: to register for studies, to amend their study plans, to observe evaluations of their own learning and make improvements, to get acquainted with results of surveys for quality improvements, etc.

In terms of how feedback is given to students, by VMU regulations, the intermediate work assessment is announced and discussed during lectures within the period of 2 weeks, but not later than before the beginning of the examination session. These kinds of rules ensure that at some point of the semester, students will receive feedback from professors. The existence of such kind of regulation is considered as good practise.

*(2) Expert judgement/indicator analysis*

Students are continuously monitored by annual surveys, conversation with teachers and administration. Students did not claim any specific need to meet the dean or other persons from VMU administration, but confirmed being informed about such a possibility just in case of any issue. No doubts have risen to the expert panel about a properly organised monitoring of the student study process both by administrative measures and behaviour of teachers.

The teaching staff is aware of how important teaching methodologies and learning outcomes are. As it is mentioned in the SER, one of the areas of improvement “To encourage teachers to improve the organization of students‟ independent work on class (laboratory works, seminars) and out-of-class by providing students with sources of information for an efficient study based

on the stages of planning, performing, assessment and feedback". This statement has been also confirmed during the meetings with the different interest groups (professor and students), so it can be confirmed that even though it is a key issue, it is well known by the teaching staff and probably in the next future measures will be applied. Moreover, it has been confirmed with students, that for the most important assignments, teachers give the necessary feedback.

High involvement of social partners and graduates by comments and suggestions stimulates positively the successful study planning, improving the study quality and satisfaction of market demands.

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

*(1) Factual situation*

The University has an active VMU Alumni Club. Every year members of the club attend the University events, contribute to raising students' professional and employability skills as well as get acquainted with career opportunities. Alumni Club members organize club meetings, various events (lectures, discussions, informal meetings, field trips, excursions to various companies employing university alumni, etc.), actively participate as consultants and experts in study programme committees, study quality assessment groups. Each year, with the help of the University, the club organizes Alumni Day.

VMU Career Centre performs an online survey for alumni, one year after their graduation and monitors their career. VMU under an agreement with State Employment Service, Government Strategic Analysis Centre (STRATA), the State Social Insurance Fund (SODRA) and Education Management Information System (ŠVIS) received information twice a year about unemployment status of the graduates. It was claimed that none graduate is unemployed. Alumni are also asked in the specific survey to evaluate VMU's contribution to their preparation for the labour market. The survey results are published on the University website.

Based on the data of the portal Karjera.lt, the employment of the graduates of BSc programme in 2017 and 2018 on average reached 50%, according to STRATA data – 41%, among which 15% of graduates worked in highly qualified jobs. Employment of the graduates of MSc programme, 12 months after graduation, according to the data of the portal Karjera.lt averaged 76%, according to STRATA – 80%, all of them worked in highly qualified jobs.

The results of the last 3-year surveys of the journal "Ratingai" show that when assessing the quality of preparation of alumni of different universities in the field of Environmental Science and Ecology and choosing one or two universities and skills that satisfy employers the most, on average 47% of employers (average N=2195) distinguished VMU alumni. In addition, the well-organized implementation of the study process of the analysed programmes is confirmed by the fact that both analysed BSc and MSc VMU programmes have been recognized as the best programmes in this field throughout Lithuania for a number of years, in the annual ranking of Lithuanian universities.

*(2) Expert judgement/indicator analysis*

The link between study program's staff and social partners is exceptionally strong. Good involvement of social partners and alumni in Career Days, collaboration in sharing business aspects from their institutions, also offering an internship. The interview with social partners proved social partners' appreciation by VMU graduates.

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

*(1) Factual situation*

The principles of integrity are defined in the VMU Statute, the Code of Ethics of VMU, the Plagiarism prevention procedures of VMU, VMU Study Regulations. Non-discrimination measures are regulated by the Code of Ethics of VMU. VMU procedure for plagiarism prevention identifies types of plagiarism, methods of determining the plagiarism and consideration procedures, as well as recommendations for teachers and students on how to prevent plagiarism in written works. All bachelor and master theses of the faculties are checked by the internationally recognized and university-recommended plagiarism check system *iThenticate*. In 2019, the university acquired the *Oxsico* text matching system. During the period under review, no cases of violation of the principles of academic integrity, tolerance and non-discrimination have been recorded in the analysed study programmes of Environmental Science (first cycle) and Environmental Management (second cycle).

*(2) Expert judgement/indicator analysis*

No indication has been discovered against the given information in SER about the preventive measures assuring academic integrity, tolerance and non-discrimination.

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

*(1) Factual situation*

Procedures for appeals and complaints of the study process are regulated by VMU Description of procedure for appeal investigation, the plagiarism prevention procedures of VMU are ensured by VMU Academic Ethics Committee and regulated by VMU Study Regulations, Plagiarism Prevention VMU and The Code of Ethics of VMU.

All colloquia and examinations are conducted in written form only, and the assignments are the same for all students. During the period of analysis there were no appeals and complaints from the students of the programmes in the study field of Environmental Sciences.

*(2) Expert judgement/indicator analysis*

Procedures for appeals and complaints are well defined. Students, graduates and teachers confirmed fair and transparent assessments of examinations. During the period of analysis there were no appeals and complaints from the students of the programme.

***Strengths and weaknesses of this evaluation area:***

***(1) Strengths:***

1. Good involvement of social partners and alumni in the Career Days, collaboration in sharing business aspects, contribution to curricula developments and improvement of quality of learning outcomes;

2. Alumni and social partners are deeply involved in research projects together with University, and are keen working together on new prospects and project applications;

3. Exceptionally strong link between study program's staff and social partners: continuous consultation toward program development, work practices in social partner's authorities, joint projects, facilitation by social partners in thesis production and defence.

***(2) Weaknesses:***

Not found.

## 3.5. TEACHING STAFF

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

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

*(1) Factual situation*

The number of staff delivering Programmes of Environmental Sciences exceeds 30 persons and includes also professors from other faculties. The qualification of the program staff is high and most of them are in Lithuania and internationally recognised experts. The average ratio between the number of teachers of the study field courses and students is 1:5.6. All teachers of the programme in the field of Environmental Sciences are active researchers and as indicated by the publications in high impact factor journals and high h index of several staff members: they are oriented towards high level research. All teachers (100%) in the BSc and MSc programmes are researchers and 30% of teachers in MSc study programme are professors.

*(2) Expert judgement/indicator analysis*

This programme is taught by a large number of staff who are suitably qualified and meet the legal requirements. There is a good mix of experience among the Professors, Associated Professors and Lecturers.

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

*(1) Factual situation*

The staff of the programs are active in international mobility programs as indicated by active participation in teaching visits (17 visits), training visits (20 visits): altogether 38 % of the staff

have participated in mobility activities, but regular participation in conferences, project meetings also indicates efficient mobility of program staff. Funding at VMU are available to support staff mobility. High number of visiting professors (47 visiting professors) visited the Faculty. High outgoing and incoming mobility has supported research collaboration and development of joint projects.

*(2) Expert judgement/indicator analysis*

At VMU there exists a well elaborated system to support staff mobility, international collaboration and staff is actively using provided opportunities and demonstrate high motivation to gain new experience, increase qualification and increase international visibility of the study programs.

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

*(1) Factual situation*

At VMU there is an elaborated staff motivation system in place and major efforts are taken to improve the competences of the teaching staff. For staff also a 1 year study course to develop teaching skills is offered. Professional development of the staff is organised under 8 groups of competences and training courses for professional development are available. Some staff members participated in international distance learning events as well as have had internships at different EU universities and research institutions.

*(2) Expert judgement/indicator analysis*

The conditions for improvement of the staff competencies can be considered as excellent and the staff is efficiently using provided possibilities.

### *Strengths and weaknesses of this evaluation area:*

### *(1) Strengths:*

1. This programme is taught by qualified staff, actively participating in research and legal requirements are met;

2. Program staff is actively participating in different mobility programs;

3. Provided possibilities to improve the staff competencies can be considered as excellent, qualification improvement and active research work is important criteria for qualification evaluation and the staff is efficiently using provided possibilities.

### *(2) Weaknesses:*

1. Not found.

## 3.6. LEARNING FACILITIES AND RESOURCES

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

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

*(1) Factual situation*

The quality of premises for studies and research fully satisfies the needs to provide high quality education. Their newly built laboratory building is available for the programme as well as up-to-date teaching technologies (judging by description in SER and photos of facilities). Laboratories are available 24/7. Technical staff is available to support laboratory classes and the laboratories do have not only basic facilities, but up-to-date facilities to support high quality research. Care is taken to make the student and staff work in laboratories safe. There is an adequate number of textbooks and practice/laboratory manuals for most of the study courses in the study program and measures are taken to purchase the most important titles for the remaining courses. Electronic databases are available and used by students for their research. Learning materials in general are accessible. E-resources and e-learning materials are available and used by the students. There is access to major databases and they are used by students for their research. Learning materials in general are accessible. All the buildings are adjusted for disabled people.

*(2) Expert judgement/indicator analysis*

The facilities were recently upgraded/purchased and provide excellent opportunities to perform high quality research and efficient studies.

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

*(1) Factual situation*

Study program management has responsibility for planning and upgrading of resources needed in laboratories and study committees regularly prepare plans for the improvement of the infrastructure. There are available resources (available funds of the department, new projects or targeted funding) to cover regular maintenance and upgrading.

*(2) Expert judgement/indicator analysis*

The procedures for planning, maintenance and upgrading of infrastructure are not described in details, but it seems, that the system is functioning well.

***Strengths and weaknesses of this evaluation area:***

***(1) Strengths:***

1. Judging by SER, photos, results of interviews, the study program is well equipped and quality of premises for studies and research fully satisfy the needs to provide high quality education;

2. The planning of resource upgrading, and maintenance seems to be functioning well.

***(2) Weaknesses:***

Not found.

## 3.7. STUDY QUALITY MANAGEMENT AND PUBLIC INFORMATION

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

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

*(1) Factual situation*

The management of the study programmes is performed via Faculty Council, Study Field Committee, Faculty administration and Head of the Department. Since the spring of 2021 the same Study Field Committee (10 teachers, 2 social partners and 1 student) is responsible for both study programmes and takes the leading role in study quality assurance. The Committee indicates the drawbacks and envisages how to eliminate them.

*(2) Expert judgement/indicator analysis*

The existing subordinated system ensures an efficient management of the study programmes and provides preconditions for continuous improvement of the study process.

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

*(1) Factual situation*

The periodic electronic surveys for different focus groups (all students, first-year bachelors, last year students before graduation, alumni, and teachers) are organised on a regular basis. The results of the surveys are analysed by the Study Field Committee and are used for the development of annual activity programme, which in spring term is presented to VMU Study Quality Unit. Teachers have online access to the survey results and get acquainted with the feedback for their study courses. Representatives of social partners and alumni actively participate in the internal quality assurance system and provide insights into the labour market requirements, practical placement of students.

*(2) Expert judgement/indicator analysis*

Different groups of stakeholders (social partners, alumni, students and teachers) are involved into the internal study quality assurance process, however communication on study programme performance should be improved.

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

*(1) Factual situation*

Monitoring of students' achievements is an integral part of the internal study quality assurance system. Monitoring of academic achievements is performed through the student self-service portal, which provides information on students‘ status, tuition fees, benefits, awarding of scholarships, registration to studies and study courses, their final evaluation marks, survey on monitoring of study quality and career and other relevant information. Teachers provide assessment of student achievements in the information system.

*(2) Expert judgement/indicator analysis*

The collection, use and publication of information on studies is well managed.

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

*(1) Factual situation*

The SER provides data of students‘ surveys for the period 2018-2020. The overall score of evaluated subjects for the study programme *Environmental Science* – 8.5 points (out of 10), for study programme *Environmental Management* – 9 points (out of 10). The surveys of graduates‘ opinion showed that evaluation scores for both study programmes each year is increasing. For the year 2020 study programme *Environmental Management* received the highest evaluation among all study programmes at VMU. Based on students‘ comments we can conclude that the need for practice-based courses and a better learning environment are the major issues to be addressed. The communication with academic staff, liberal atmosphere, flexible study schedule and field practice – these issues received the highest evaluations.

*(2) Expert judgement/indicator analysis*

Students were satisfied with the study process, however expressed some criticism in relation to the study/leisure environment.

### ***Strengths and weaknesses of this evaluation area:***

### ***(1) Strengths:***

1. The collection of quality indicators, opinions and reflections from students and teachers as well as alumni and social partners is well organised. Regular anonymous surveys are conducted, answers collected and analysed, the feedback to respective parties is provided;

2. The study programmes maintain excellent collaboration with social partners. Social partners are involved to the Study Committee (2 members), also, a number of representatives of social partners contribute by offering topics of final theses and support preparation of final theses;

3. Alumni are involved in the study process by giving lectures, supporting study visits and internships as well as providing consultations for teachers and students.

***(2) Weaknesses:***

1. Despite that the study programmes maintain excellent links with alumni and social partners, communication on study programme performance should be improved.

## IV. EXAMPLES OF EXCELLENCE

Expert team has been impressed by the exceptionally strong collaboration between study program's staff, social partners and alumni. Social partners provide continuous consultations toward program development, offer a wider scope of internships and work practices, help students in choosing subjects for thesis, and support them as mentors in thesis preparation and defence. Teachers keep a close relation to social partners, assuring an alignment of academic research with business trends and market expectations. Social partners share "best practice" and "know-how" with students and teachers, initiate joint research projects, open laboratories and get access to other needed facilities for young researchers.

## V. RECOMMENDATIONS

| Evaluation Area | Recommendations for the Evaluation Area (study cycle) |
|---|---|
| Intended and achieved learning outcomes and curriculum | It could be recommended to consider possibilities of transformation of the BSc study program accordingly to Bologna principles untill the next period of accreditation. |
| Links between science (art) and studies | To improve competitiveness of the study program graduates and strengthen the links between science, practice and studies it could be recommended to increase volume of study content related to teaching of environmental technologies, scientific writing (especially at MSc level) as well as provide possibilities for students to acquire basics of project preparation and management. |
| Student admission and support | -- |
| Teaching and learning, student performance and graduate employment | Communication about future employees might commence from the first courses. |
| Teaching staff | -- |
| Learning facilities and resources | Establish a centralised shared storage for big data (spatial data, imagery, statistical, etc.). It would assure currency of the data and avoid duplication. |
| Study quality management and public information | Despite that study programmes maintain excellent links with alumni and social partners, communication on study programme performance (content and processes) should be extended. |

# VI. SUMMARY

**Main positive and negative quality aspects of each evaluation area of the study field of environmental sciences at Vytautas Magnus University:**

**Main positive aspects:**

1. The Programmes are in congruence with today's societal and labour market needs in Lithuania and in Europe;
2. The learning outcomes and curriculum of the Programmes are being constantly improved and updated adjusting to the newly emerging environmental and sustainability issues, labour market's needs and requirements;
3. VMU offers excellent opportunities for students to personalise their studies according to their personal learning objectives, research interests and career plans;
4. Social partners are actively involved in preparation and defence of final theses;
5. The research in the field of Natural Sciences with particular emphasis on Environmental Science at VMU is recognised as high;
6. The system of students' involvement into the research as well as publicity of scientific activities is well established;
7. Graduates of the study programmes noted that a wide range of research competences obtained in the field of Environmental Science provide a good background for professional carrier;
8. Students satisfaction is high regarding what the university offers them;
9. The connection between the social partners and the university is very good and constructive;
10. The admission system is clear, transparent and understandable for students;
11. Good involvement of social partners and alumni in the Career Days, collaboration in sharing business aspects, contribution to curricula developments and improvement of quality of learning outcomes;
12. Alumni and social partners are deeply involved in research projects together with university and are keen working together on new prospects and project applications;
13. Exceptionally strong link between study program's staff and social partners: continuous consultation toward program development, work practices in social partner's authorities, joint projects, facilitation by social partners in thesis production and defence;
14. This programme is taught by qualified staff, actively participating in research and legal requirements are met;
15. Program staff is actively participating in different mobility programs;
16. Provided possibilities to improve the staff competencies can be considered as excellent, qualification improvement and active research work is important criteria for qualification evaluation and the staff is efficiently using provided possibilities;
17. Judging by SER, photos, results of interviews, the study program is well equipped and quality of premises for studies and research fully satisfy the needs to provide high quality education.

18. The planning of resource upgrading, and maintenance seems to be functioning well;
19. The collection of quality indicators, opinions and reflections from students and teachers as well as alumni and social partners is well organised. Regular anonymous surveys are conducted, answers collected and analysed, the feedback to respective parties is provided;
20. The study programmes maintain excellent collaboration with social partners. Social partners are involved to the Study Committee (2 members), also, a number of representatives of social partners contribute offering topics of final theses and support preparation of final theses;
21. Alumni are involved in the study process by giving lectures, supporting study visits and internships as well as providing consultations for teachers and students.

**Negative quality aspects:**

1. The themes of final theses of bachelor program should be more related to research projects;
2. Curricula could be improved, paying more attention on Environment law, Environmental technologies and Scientific language;
3. Low mobility of Bachelor students;
4. Despite that study programmes maintain excellent links with alumni and social partners, communication on study programme performance should be improved.

**Expert panel chairperson signature:**

**Prof. Dr., Kalev Sepp**