Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: University of Latvia

Study field: Environmental Protection

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Summary of the Assessment of the Study Field and the Relevant Study Programmes

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The study field of Environmental Protection at University of Latvia (UL) is well-aligned with global, European Union (EU), and national strategic goals, which emphasize sustainability and environmental protection. This alignment ensures the relevance of the study programmes and prepares students to meet contemporary demands in the field of environmental science. The integration of natural sciences, social sciences, and humanities provides a holistic education, enabling students to approach environmental protection from diverse perspectives.

A significant strength of the study field is the interconnected nature of the study programmes offered: the Academic Bachelor's in Environmental Science, the Academic Master's in Environmental Science, and the Academic Bachelor's in Research and Protection of Cultural and Environmental Heritage. These study programmes collectively offer comprehensive education, leveraging interdisciplinary approaches to cover a wide array of topics.

Support from UL's strategic framework and the Faculty of Geography and Earth Sciences is a notable strength, ensuring cohesive development and implementation of the study programmes. The effective management structure fosters collaborative decision-making and is supported by extensive administrative and technical resources. Furthermore, the study field boasts a robust system of transparent and standardized procedures for admissions, recognition of prior learning, and assessment of student achievements, underpinned by strong principles of academic integrity and effective anti-plagiarism tools.

However, several weaknesses were identified that require attention. High student attrition, particularly in the first year, is a significant concern. This issue is partly attributed to varying levels of student preparedness, indicating a need for improved preparatory study programmes or support mechanisms. Additionally, international collaboration is limited. The low proportion of foreign visiting lecturers and underutilization of Erasmus+ programme restrict the international exposure and collaborative opportunities for both students and faculty. There is also a lack of detailed structuring in domestic cooperation and in directly attracting foreign students and teaching staff.

Another critical area needing improvement is the continuity of the study programmes. There is a need for a direct follow-up at the master's level for the study programme in "Research and Protection of Cultural and Environmental Heritage." Furthermore, there are insufficient support tools for improving study courses if lecturers receive low evaluations from students in yearly surveys. To maintain relevance, the curriculum must continuously be updated to reflect the latest scientific developments and regulatory changes. Additionally, the budget attracted from international sources has decreased over the last three years, potentially impacting the quality and scope of the study programmes offered.

The Bachelor's Study Programme in Environmental Science has a curriculum designed to provide a strong foundation in environmental science, integrating natural science study courses, specialized study courses, and interdisciplinary study courses. This design ensures that graduates acquire the necessary knowledge, skills, and competencies to address complex environmental issues. The study programme complies with national and international educational standards, ensuring high quality of education.

However, there are weaknesses in student support. There is a need for improved support tools for lecturers with low evaluations from students. Additionally, there should be better integration of industry feedback to continuously update the curriculum. Increasing efforts to attract more foreign students and visiting lecturers would enhance the study programme's international exposure and collaboration opportunities.

The Academic Master's Study Programme in Environmental Science exhibits notable strengths. Its interdisciplinary approach integrates various fields, ensuring comprehensive coverage of

environmental science topics. The study programme involves practitioners and professionals in the teaching process, linking theory with practice. There is a strong emphasis on research activities, aligning with the strategic goals of UL. Opportunities for students to engage in scientific research promote innovation and academic inquiry.
However, there are areas needing improvement. The lack of a direct follow-up study programme at the master's level for students from the bachelor's study programme in "Research and Protection of Cultural and Environmental Heritage" is a significant shortcoming. Additionally, a structured advising system is needed to guide students in selecting elective study courses that align with industry needs and career goals. The study programme also underutilizes Erasmus and other international exchange opportunities.
The Bachelor's Study Programme in Research and Protection of Cultural and Environmental Heritage has its own set of strengths and weaknesses. The innovative curriculum combines environmental science with cultural heritage studies, integrating smart technologies and techniques. High student satisfaction is evident with the diversity of content in the curriculum.
However, there is a need for better promotion to attract more students, as the small number of enrollees creates financial issues. Developing closer relationships with different departments can provide well-prepared lecturers and practitioners. Establishing a direct follow-up master's study programme is necessary to provide clear academic progression for graduates.

In conclusion, the study field "Environmental Protection" at UL is well-aligned with strategic goals and offers comprehensive, interdisciplinary study programmes that prepare students for diverse roles in the field. However, addressing student attrition, enhancing international collaboration, and ensuring continuous curriculum updates are essential for further improvement. The Bachelor's Study Programme in Environmental Science offers a well-designed curriculum and high educational standards but requires better student support and international exposure. The Master's Study Programme is strong in its interdisciplinary approach and research integration but lacks continuity for bachelor's graduates and better student mobility opportunities. The Bachelor's Study Programme in Research and Protection of Cultural and Environmental Heritage boasts an innovative curriculum and high student satisfaction but needs better promotion and clear academic progression paths. Addressing these weaknesses while building on the existing strengths will enhance the quality and impact of the study field and its study programmes at the University of Latvia.

I - Assessment of the Study Field

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1.1 Management of the Study Field

Analysis

1.1.1. The study field "Environmental Protection" at the University of Latvia (UL) demonstrates a clear alignment with the strategic development goals of the university, as well as with the societal and national economic needs. This assessment is based on the criteria of compliance, strategic alignment, and interconnection of study programmes within the field, supported by the detailed descriptions in SAR Section 2.1.1.
The study field "Environmental Protection" is well-defined and comprehensive, aligning with the requirements specified by various international, national, and local regulatory frameworks. The relevance of the study field is underscored by its alignment with global Sustainable Development Goals, the EU Sustainable Development Strategy, and the European Green Deal, among others. Nationally, the field supports the strategic directions outlined in Latvia's National Development Plan and the Sustainable Development Strategy "Latvia 2030," emphasizing sustainable development, green economy, and environmental protection.

The study field includes three interconnected study programmes:
1. Academic Bachelor’s Study Programme in Environmental Science.
2. Academic Master’s Study Programme in Environmental Science.
3. Academic Bachelor’s Study Programme in Research and Protection of Cultural and Environmental Heritage.
Each study programme is designed to provide a comprehensive education in environmental science, integrating interdisciplinary approaches that include natural sciences, social sciences, and humanities. This structure ensures that graduates are well-prepared to address complex environmental issues (SAR Section 2.1.1).
The study field and its study programmes are in full compliance with the UL's strategic development goals as outlined in the UL Strategy 2021–2027. These goals include offering unique and competitive study programmes that promote international and interdisciplinary education. The objectives of the study field are formed by following both Latvian and international development trends, ensuring that the education provided is current and relevant.
The study field aims to prepare specialists for roles in state management institutions, environmental quality control institutions, consulting companies, and enterprises developing environmental technologies. This alignment with professional needs ensures that graduates are equipped with the necessary skills and knowledge to contribute effectively to the national and international labour markets.
The interconnection between the study programmes in the field is clear and logical. Administratively, all study programmes are housed within the Faculty of Geography and Earth Sciences (UL FGES), facilitating cohesive management and development. Thematically, the study programmes share a series of standard study courses at the bachelor's level, primarily in the natural sciences, which provide a strong foundational knowledge base for students.
The integration of these study programmes supports interdisciplinary and innovative approaches to environmental protection, enhancing the educational experience and research opportunities for students. The interconnection is further strengthened by collaborative research efforts, which contribute to the professional growth of academic staff and the development of students' qualification theses.

1.1.2. The University of Latvia (UL) has effectively identified and analyzed the strengths, weaknesses, opportunities, and threats (SWOT) of the study field "Environmental Protection'', and integrated these findings into its development planning documents. This process is thoroughly documented in SAR Section 2.1.2, and the corresponding annexes. The SWOT analysis was conducted through a collaborative effort involving a working group composed of study programme directors, department heads, and industry representatives. This group drafted initial documents, which were subsequently reviewed and refined through multiple iterations involving the Development Plan elaboration working group, the SWOT analysis working group, and the SF EP Council. Feedback was also gathered from the Academic Department and student representatives, ensuring a comprehensive and inclusive planning process. The final version of the Development Plan was approved by the SF EP Council on February 16, 2023, and by the UL FGES Council on February 20, 2023 (SAR Section 2.1.2).
The strengths identified in SAR, include comprehensive higher education in environmental science relevant to the labour market and research provision, study programmes that provide two-level studies corresponding to the Bologna Process, experienced and highly qualified academic staff, successful involvement of social partners in the study process, and a balanced mix of theory and practice in study programmes with opportunities for field courses and internships. Additionally, well-equipped laboratories, IT, and library resources, strong cooperation with other study areas and universities in Latvia, active participation in international and national scientific projects, good cooperation with employers and graduates, provision of state publicly funded study places, and the

competitiveness of graduates in Europe and the Latvian labor market are also noted as strengths.
Weaknesses identified (SAR Section 2.1.2) include a high student attrition rate, particularly in the first year, varying levels of student preparedness, insufficient state public funding for the study process and scientific research, a low proportion of foreign visiting lecturers, underutilization of Erasmus+ programme for mobility, communication issues in the organization of the study process, underused e-study environment and overlapping study course content, insufficient use of foreign languages in the study process, and a lack of motivation for lecturers to improve study content and teaching methods.
Opportunities for the study field include utilizing resources to increase the qualifications and competence of university teachers, increasing the mobility of academic staff and students through Erasmus and other programmes, leveraging the UL Natural Sciences Centre's infrastructure for interdisciplinary research, attracting EU financial resources to improve study quality and research projects, expanding cooperation with state and commercial institutions, attracting qualified lecturers from Latvia and abroad using EU funds, enhanced advertising of study programmes, using the European Green Deal to attract funds for study process improvement, and increasing openness and cooperation with other study programmes.
Threats identified (SAR Section 2.1.2) include a decreasing number of school graduates due to demographic and economic issues, lower levels of knowledge in natural sciences and mathematics among school graduates, insufficient financial resources for staff education and research, early student involvement in the labor market hindering the acquisition of study content, uncertainties in secondary school reforms and higher education, dominance of remote studies reducing motivation, non-competitive academic staff remuneration, and risks from UL structural reorganization .
To address these weaknesses and mitigate threats, UL has outlined several strategic measures. These include implementing various study forms to meet student needs, promoting inclusive and student-centered studies, enhancing cooperation with schools, students, and teachers, increasing advertising efforts to boost student numbers and reduce attrition, ensuring timely and accurate information flow, fostering inter-institutional cooperation for improved information dissemination and employment opportunities for graduates, promoting academic staff growth through internationally recognized research and science-based studies, and encouraging academic staff to improve study content and teaching methods.
The development plan, based on the SWOT analysis, includes regularly updating study course content to reflect current environmental protection issues and labor market needs, stabilizing and increasing the number of students in bachelor and master's study programmes while reducing attrition, enhancing academic and student mobility, promoting academic staff internships domestically and internationally, increasing student involvement in research projects, and ensuring the operation and renewal of infrastructure through research project funding.
The University of Latvia has conducted a thorough SWOT analysis of the study field "Environmental Protection," integrating the results into its development planning documents. The comprehensive analysis and strategic planning ensure that the study field addresses current challenges and leverages opportunities for future growth. The management structure supports the development and continuous improvement of the study field, aligning with both national and international educational standards and labor market needs.

1.1.3. The management structure of the study field "Environmental Protection" at the University of Latvia (UL) is robust and oriented towards continuous development and efficient decision-making, reflecting the criteria outlined in SAR Section 2.1.3. This structure emphasizes decision-making efficiency, supported by administrative and technical staff, ensuring a strong foundation for the study field's ongoing progress.
The governance of the study field "Environmental Protection" is overseen by several UL decision-making bodies, including the Senate and the Study Programme Quality Assessment Commission (SP

QAC), as well as the respective faculty and study field councils (Annex “4P_Management studyfield”). These bodies play a crucial role in evaluating study quality and determining quality assurance measures, with the Academic Department holding ultimate responsibility for the study quality assurance system, ensuring a cohesive and strategic approach to management.
Within each study programme, a designated director is responsible for development and implementation, coordinating closely with the head of the study field and the dean of the faculty (Annex “4P_Management studyfield”). These directors, who are also members of the Study Field Council, work under the supervision of the head of the study field, who is approved by the Rector to manage and develop the study field. This structure ensures accountability and alignment with the university's strategic goals.
The Study Field Council includes study programme directors, student representatives, employer representatives, graduates, and teaching staff, fostering collaborative decision-making that reflects diverse perspectives (Annex "4P_Management_study_field"). Regular discussions within the Council about the study field's development and quality facilitate timely and effective decision-making (information from the meeting with the Study field management).
Administrative and technical support for the study field (SAR Section 2.1.3) is comprehensive, meeting the diverse needs of the study programmes (information from the meeting with the Study programmes management). Various departments, including the Academic Department, the Department of Study Service, and the Department of Information Technology, ensure that administrative and logistical needs are efficiently addressed, providing crucial support to the programmes.
The Academic Department plays a key role in managing the study field, focusing on regulatory compliance, strategic planning, quality assurance, and providing methodological support for both new and existing study programmes. Meanwhile, the Department of Study Service manages student matriculation, document handling, social support, and mobility programmes, ensuring a smooth student experience throughout their studies. Technical staff contribute significantly by maintaining essential equipment, collections, and digital materials necessary for teaching and research. They also train students and faculty on using these resources, which is particularly crucial for field studies and research projects, thereby maintaining the high quality of research and education infrastructure.
The management structure (Annex "4P_Management_study_field") is clearly designed to support the continuous development of the study field and the improvement of the study programmes, allowing for efficient and effective decision-making. This structure is responsive to current trends in natural sciences, labor market demands, and the needs of student-centered education .
The head of the study field plays a pivotal role in strategic planning, promoting study programme development, preparing self-evaluation reports, and ensuring compliance with accreditation requirements. These responsibilities are carried out in close collaboration with study programme directors and the Academic Department, ensuring a coordinated approach to the study field’s development.

1.1.4. The University of Latvia (UL) has established a comprehensive system and developed procedures for the admission of students, the recognition of study periods, professional experience, prior formal and non-formal education, and the assessment of students' achievements and learning outcomes. These procedures are logical, effective, and well-communicated to the stakeholders involved, as described in SAR Section 2.1.4.
Student admission procedures and requirements are governed by various regulations, including the Terms of Admission at the University of Latvia and specific criteria for undergraduate and higher-level studies. These regulations, such as the UL Order No 1/277 of 10.08.2018, ensure that the admission process is transparent and standardized across the university.
The admission process for the study programmes within the study field "Environmental Protection"

includes a centralized system for undergraduate studies, and a decentralized system for master's degree study programmes. For undergraduate admissions, secondary education and results from centralized examinations in Latvian, foreign languages, and mathematics are considered. Specific study programmes may also have additional entrance examinations or requirements based on the nature of the study programme. For master’s degree admissions, previous higher education in relevant fields and an entrance examination assessing the applicant's motivation and understanding of the study field are required.
The UL provides opportunities for students to recognize previously acquired study periods, professional experience, and formal and non-formal education. This recognition process is regulated by the UL Senate Decision No 2-3/86 of 28 June 2021, and the UL Order No 1-4/543 of 04.11.2021. These regulations ensure that learning outcomes achieved through professional experience or previous education are appropriately recognized and included in the student’s academic obligations.
The procedures for recognizing study courses and professional experience are particularly important for students returning from exchange programmes or those resuming studies after a break. The recognition process involves comparing the scope and content of previously acquired study courses to ensure their relevance to the current study programme. This process is managed by the recognition committee or the study programme director, and includes a thorough evaluation of documents, certificates, and other proof of learning outcomes.
During the period from 2015 to 2023, study courses were recognized for 63 students within the study field "Environmental Protection." This includes students who participated in Erasmus+ programmes and various summer or winter schools. The process ensures that the academic achievements of students are acknowledged and integrated into their current study plans, promoting continuity and reducing redundancy in their education.
The UL also supports student mobility within the Erasmus+ programme and other international exchange opportunities. Despite the impact of the COVID-19 pandemic, which significantly reduced mobility, the university continues to encourage and facilitate student exchanges. Information about mobility opportunities is provided from the first semester, and individual study plans are created to support students interested in international experiences.
In conclusion, the UL has established a well-structured and effective system for student admissions, recognition of prior learning and professional experience, and assessment of student achievements. These procedures are aligned with the university’s regulations (SAR Section 2.1.4) and are designed to support students' academic progress and mobility. The stakeholders are well-informed about these systems, ensuring transparency and accessibility throughout the academic journey .

1.1.5. The study field "Environmental Protection" at the University of Latvia (UL) employs well-defined and systematic methods, principles, and procedures for assessing student achievements, which are designed to align with the study programme aims (SAR Section 2.1.5). These methods are tailored to meet the diverse needs of students, ensuring that assessments are both relevant and effective.
In conformity with the Law on Higher Education Institutions, UL's internal regulation (UL Order No 1/277 of 10.08.2018) stipulates that detailed information regarding study course content, learning outcomes, assessment methods, and criteria are included in all study course descriptions. These descriptions are made accessible to students through the LUIS and the UL e-study environment, providing transparency and clarity.
The assessment methods used in the bachelor and master's study programmes "Environmental Science" reflect the field's interdisciplinary nature (SAR Section 2.1.5; meeting with the programme directors). These methods include written examinations, project works, evaluation of laboratory work protocols, preparation of cartographic material, tests, report presentations, and essays, among others. For the "Research and Protection of Cultural and Environmental Heritage" study programme, assessment methods are adapted to leverage resources available from UL and the Art Academy of

Latvia.
The organisation of assessments and grading is governed by the Law on Higher Education Institutions and the UL Senate Decision No 211 of 29.06.2015. Interim assessments, which constitute at least 50% of the total grade, and final examinations, contributing at least 10% of the total grade, are included in each study course. The forms of assessments are carefully selected to align with the teaching methods used, ensuring both relevance and fairness in grading.
Interim assessments may include quizzes, individual work, practical work, laboratory work, reports, and papers, with specifics detailed in the study course descriptions. Final examinations can be written, oral, or a combination of both, and the grading for each course is calculated according to an algorithm specified in the study course description, which is then recorded in the UL Centralised Recording System.
The assessment methods and procedures adhere to principles set out in the Cabinet of Ministers' Regulations No 240, including summing up positive achievements, openness and transparency, reviewability, mandatory assessment, variety of assessment types, and conformity of assessment (SAR Section 2.1.5). These principles are crucial in ensuring that assessments are fair, transparent, and in compliance with the learning outcomes of the study programmes.
These methods and procedures undergo regular review and improvement, based on feedback from students, employers, and graduates, ensuring that assessments remain relevant to the evolving needs of the labor market. This continuous feedback loop also ensures that evaluation methods are adapted to the interdisciplinary nature of the study field, adequately assessing both theoretical knowledge and practical skills.
The criteria for graduation examinations are outlined in the UL Order No 1/38 of 03.02.2012, with the master's study programme thesis development organised in two parts: the development and defence of the thesis project and the final thesis defence. All final theses undergo electronic plagiarism checking before defence, ensuring academic integrity throughout the process.
The study field "Environmental Protection" at the University of Latvia has developed robust and comprehensive methods, principles, and procedures for assessing student achievements. These methods are clearly defined, regularly reviewed, and aligned with the aims of the study programmes and the needs of the students, ensuring a high standard of education and continuous improvement.

1.1.6. The University of Latvia (UL) has established principles of academic integrity and mechanisms for their observance, which include effective anti-plagiarism tools that promote the development of the internal culture of the university. These principles and mechanisms are thoroughly described in SAR Section 2.1.6, and are reinforced by the UL internal regulations, such as the Academic Ethics Code (UL Senate Decision No 2-3/46 of 26.04.2021), and the Regulations on Academic Integrity (UL Senate Decision No 2-3/48 of 26.04.2021). These regulations are publicly available to both staff and students, ensuring transparency and accessibility.
Students are introduced to the concept of academic integrity early in their studies, starting from the first year. This includes training on the quality of independent work, laboratory protocols, reports, and other forms of assessment. As students progress to qualification papers in both first and second cycle study programmes, academic integrity is further emphasized, particularly within the master’s study programme during study courses like the "Master’s Thesis Project."
To ensure compliance with academic integrity, UL has developed a procedure for verifying the originality of text using similarity detection tools such as Turnitin, and the Unified Computerised Plagiarism Control System. These tools are employed to check the originality of student papers, final and doctoral theses, and scientific articles developed by UL academic personnel. The procedures and actions to be taken in cases of potential breaches of academic integrity are detailed in the Regulations on the Use of Text Originality Verification Tools and Procedure for Plagiarism Detection (approved on 09.01.2024, Order No. 1-4/12).
The UL system for plagiarism detection is not only used internally but also shared with other higher

education institutions (HEI) in Latvia under a cooperation agreement established in 2014. This system, unique for its collection of study papers in Latvian, is financially and technologically accessible even to smaller HEIs. It effectively promotes the originality and quality of final theses by comparing uploaded papers against a vast database of previous works from multiple institutions. In cases of detected similarities, authorized faculty members review the results and forward any suspected breaches of academic integrity to the respective Graduation Examination Commission.
Despite the rigorous application of these tools, no cases of plagiarism have been registered in the study programmes of the SF at the UL FGES. Nevertheless, the FGES places significant emphasis on educating students about the risks of plagiarism, the correct formation of references, and the proper use of self-citation.
The cooperation among HEIs in using this system enhances the effectiveness of plagiarism control across Latvia. However, for scientific publications, which require access to restricted or paid databases of international publishing houses, UL also uses Turnitin's "Turnitin Similarity" service. This tool integrates into the e-study platform, allowing academic staff to verify the originality of regular study papers and address the challenges posed by new text creation technologies powered by machine learning and artificial intelligence.
In 2022, recognizing the evolving needs of the academic and scientific community, UL supplemented its existing plagiarism control system with Turnitin's tools, following a careful evaluation and testing of available market solutions. This agreement with Turnitin LLC, concluded on 16.12.2022, ensures that UL can effectively respond to the new challenges in text verification and maintain high standards of academic integrity (SAR Section 2.1.6).
Through these comprehensive measures, UL demonstrates its commitment to upholding academic integrity and fostering a culture of honesty and responsibility among its students and staff.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The University of Latvia (UL) has effectively aligned the study field "Environmental Protection" with its strategic goals, societal needs, and national economic trends. This alignment is evident in the comprehensive and interdisciplinary nature of the study programmes, integrating natural sciences, social sciences, and humanities. The study field supports global Sustainable Development Goals, the European Green Deal, and Latvia's National Development Plan, emphasizing sustainable development, green economy, and environmental protection.
The study field includes three interconnected study programmes: Academic Bachelor's in Environmental Science, Academic Master's in Environmental Science, and Academic Bachelor's in Research and Protection of Cultural and Environmental Heritage. These study programmes ensure graduates are well-prepared to address complex environmental issues and meet labor market demands.
UL has conducted a thorough SWOT analysis, identifying strengths such as relevant education, experienced academic staff, strong social partner involvement, and well-equipped facilities. Weaknesses include a high student attrition rate, varying student preparedness, and insufficient research funding. Opportunities involve leveraging resources to increase qualifications, expanding institutional cooperation, and attracting EU funds. Threats include demographic challenges, financial insufficiencies, and educational reform uncertainties. Strategic measures have been outlined to address these weaknesses and mitigate threats.
The management structure of the study field supports continuous development and efficient decision-making. Governance involves various UL decision-making bodies, ensuring comprehensive oversight and quality assurance. The Study Field Council, comprising diverse members, promotes collaborative decision-making. Extensive administrative and technical support meets the logistical and operational needs of the study programmes. The Academic Department plays a crucial role in managing the study field, ensuring regulatory compliance, and providing methodological support .

UL has established a comprehensive system for student admissions, recognition of prior learning, and assessment of student achievements. These procedures are transparent, standardized, and well-communicated. The recognition process includes thorough evaluations to ensure relevance to current study programmes, supporting student mobility and academic progress.
Assessment methods in the study field are well-defined, reflecting the interdisciplinary nature of environmental protection. They include written examinations, project works, laboratory evaluations, and more. Procedures ensure fair, transparent assessments aligned with learning outcomes. Regular reviews and updates based on stakeholder feedback ensure relevance and effectiveness.
UL has established robust principles of academic integrity, supported by effective anti-plagiarism tools such as Turnitin and the Unified Computerised Plagiarism Control System. These tools and procedures ensure the originality of student work and maintain high standards of academic integrity. Continuous updates address new challenges posed by evolving technologies.
In summary, the University of Latvia has established a well-structured and effective management system for the study field "Environmental Protection." The system supports strategic goals, continuous development, and aligns with labor market needs and societal trends. Comprehensive admission procedures, robust assessment methods, and strong principles of academic integrity enhance the quality and relevance of the study programmes. The university's proactive approach to identifying and addressing weaknesses and threats, while leveraging strengths and opportunities, ensures the continuous improvement and success of the study field.

Strengths
1. Alignment with global, EU, and national strategic goals, emphasizing sustainability and environmental protection.
2. Comprehensive and interdisciplinary study programmes that prepare graduates for diverse roles in environmental protection.
3. Strong support from the UL strategic framework and the Faculty of Geography and Earth Sciences, ensuring cohesive development and implementation.
4. Effective management structure with collaborative decision-making and extensive administrative and technical support.
5. Transparent and standardized procedures for admissions, recognition of prior learning, and assessment of student achievements.
6. Robust principles of academic integrity and effective anti-plagiarism tools.

Weaknesses
1. High student attrition rate, particularly in the first year.
2. Varying levels of student preparedness.
3. Low proportion of foreign visiting lecturers and underutilization of Erasmus+ programme for mobility.
4. The need for a direct follow-up at the master's level for the study programme in "Research and Protection of Cultural and Environmental Heritage."

1.2. Efficiency of the Internal Quality Assurance System

Analysis

1.2.1. The UL quality assurance system is in place and well-maintained. The UL official website hosts a publicly available and recently updated manual of quality policy, which is also provided in the SAR as Annex LU Kvalitātes vadības rokasgrāmata, and UL Quality Management Manual.
According to SAR Section 2.2.1., quality improvement measures are introduced based on outcomes from:
· Regular meetings of the structural unit involving academic staff and student participation;

· Regular meetings of the Study Direction Council unit involving participation of students and social partners;
· Centrally organised student surveys;
· Regular mutual observations of university lecturers' classes that ensures the experience exchange;
· Annual meetings with field representatives, employers and graduates in conference ''Current issues in the content of environmental education'';
· Formal and informal consultations with graduates and employers, provoking improvements in study programme content;
· Research activities, using the outcomes in study course content.

Quality control and the measures taken are aligned with accreditation and planned over a 6-year period in accordance with the UL strategy (current for 2021–2027: https://www.lu.lv/fileadmin/user_upload/LU.LV/www.lu.lv/Zinas/2021/Augusts/LU_strate__g__ija_buklets_2021.pdf). The measures include developing a development plan and implementing recommendations for the study direction, carrying out actions, evaluating and adapting. The process also includes evaluating the results of regular surveys and statistical quantitative indicators.

The implementation of the study direction development plan and the introduction of recommendations for the study direction, along with actions taken to improve the study direction and its included study programmes, are evaluated annually in a self-assessment report, which is regulated by the University of Latvia's procedure for preparing annual reports on study directions (University of Latvia Order No. 1/255 – available online: https://www.lu.lv/fileadmin/user_upload/LU.LV/www.lu.lv/Dokumenti/Dokumenti_LV/3._STUDIJU_UN_ZINATNES_PROCESU_REGLAMENTEJOSIE_DOKUMENTI/LU_Studiju_virzienu_ikgadejo_parskatu_sagatavosanas_kartiba_2023.pdf). According to the annual report preparation procedure, the process includes evaluating and, if necessary, improving the report.

The reports are prepared by the head of the study direction and the directors of the study programmes. Subsequently, a wider circle of stakeholders is involved, who evaluate, provide recommendations, and approve the report. The reports are evaluated and approved by the academic department, the study direction council, and the faculty council.

In the final phase, the report is evaluated and forwarded for approval by the University of Latvia Senate by the Quality Assessment Commission for Study Programs (SPKNK). The SPKNK includes various involved parties, including pro-rectors, the chairman of the Senate Academic Commission, the Quality Manager, representatives of internal auditors from students, the Alumni Club, the UL Library, the Academic Department, and the Study Service Department.

The results of student surveys are additionally evaluated each semester, with particular attention paid to courses with consistently low ratings. In the case of low ratings, the possibility of replacing the instructor is considered. Low ratings may indicate that the instructors lack specific skills or competencies that could be improved. In SAR Section 2.2.2. (pp. 38-42), there is no mention of support for instructor education to improve the criteria that received low ratings.

SAR Section 2.2.2. (pp. 38-42) does not clarify how the accreditation commission's recommendations have been used to improve the study direction and study programmes.

There is evidence of benefits associated with the implementation of the quality assurance system. The SAR Section 2.2.2. (pp. 41–42) provides examples of implemented improvements in the study programmes. Survey results for Master and Bachelor's study programmes indicate that students, graduates, and employers rate the study process, study course content, and achieved results relatively high (SAR Annex: Analysis of the Results of Surveys of Students, Graduates, and Employers). However, Master's students' well-being is rated relatively low. Similarly, it can be inferred that both Master and Bachelor's studies have a relatively high level of difficulty. The SAR does not elaborate on the reasons or actions taken regarding these issues.

There is also a lack of clear evidence on the efficiency of the mechanisms and how stakeholders evaluate their effectiveness. Meetings with employers reveal their willingness to engage more in

feedback processes, the current avenues for their involvement may be inadequate.

1.2.2. Defined procedures for developing and reviewing study programmes are documented and accessible. Normative regulations are in place, providing the guidelines for preparing the content of the study programmes and ensuring quality control.
According to SAR Section 2.2.2. (pp. 38-42), feedback mechanisms are introduced within the self-assessment process and development of study programmes. Multiple stages of preparation, coordination, and evaluation by various governance levels (Study Field Council, Faculty Council, Academic Department, SP QAC) are in place, and necessary stakeholders from the academic environment, students, and representatives from the UL Alumni Club are involved.
Quantitative indicators and survey result analysis are in focus, and as a result, proposals for improvement of the study field are provided. Also, the study courses with low ratings within the student surveys are evaluated by the UL Department of Environmental Science. Within SAR, survey results are available in a summarised form (SAR Annex Analysis of the results of surveys of students, graduates and employers). The Quantitative indicators are available in SAR Annexes: 1) Summary of quantitative data on scientific and/or applied research and/or artistic creation activities corresponding to the study field in the reporting period; 2) Statistical data on the teaching staff and the students from abroad; 3) Statistical data on the teaching staff and the students from abroad; 4) Statistical data on the incoming and outgoing mobility of students (by specifying the study programmes); 5) Statistical data on the incoming and outgoing mobility of the teaching staff).
Examples provided in the SAR Section 2.2.2. (pp. 41-42) of implemented improvements in study programmes demonstrate the effect resulted from reviewing and development procedures. The inclusion of these examples is a positive aspect. However, these examples lack a broader discussion and detailed explanations of what initiated these activities and changes. There is no explanation of what these activities aim to change or achieve—what the goal is, how these changes fit into the overall perspective of the study programme, how they address shortcomings, additionally, what the current trends are, and how these changes help adapt to trends in environmental protection.

1.2.3. The centralised UL system comprises regulations and mechanisms for submitting complaints and suggestions, catering for both local and international students and applicants. These mechanisms are developed to encompass all stages and aspects of the study process. They are underpinned by a comprehensive set of regulations detailed in SAR Section 2.2.3. (pp. 42-44). Key regulations include those governing student admission (UL Senate Decision No. 2-3/68, 31.05.2021), examination procedures (UL Senate Decision No. 211, 29.06.2015, and No. 183, 27.12.2011), and the lodging and review of complaints (UL Order No. 1-4/501, 28.09.2022). Additionally, the regulatory framework covers areas such as academic ethics (UL Senate Decision No. 2-3/46, 26.04.2021), competition for state-budget subsidized study places (UL Senate Decision No. 381, 24.05.2010), and procedures for granting academic leave (UL Senate Decision No. 178, 01.12.2008).
The study programme directors play a pivotal role in guiding students through these regulations. The study programme directors introduce students to the mechanisms for lodging complaints and providing feedback. Through regular surveys and dissemination meetings, they proactively address and mitigate issues, thereby ensuring continuous improvement within the study programmes.
The regulations provide the option to submit complaints and suggestions individually or in groups, which is a positive aspect as potential deficiencies in the study environment and process can affect both individuals and multiple students. It is good that the internal regulations provide not only the procedure for submitting complaints but also for suggestions, which promotes finding solutions and improvements.
The internal regulations allow complaints to be submitted to both the faculty dean and the vice-rector, reducing the possibility of conflicts of interest. However, it should be noted that friendly relations may exist between deans and vice-rectors, which could lead to inadequate handling and

decision-making processes for complaints in some cases.
It is positive that the study direction council, involving both faculty members and representatives of the student self-government, is involved in reviewing complaints. However, an independent body or the involvement of independent representatives could improve the process of reviewing complaints and suggestions and ensure objective decision-making.
Although the complaints and suggestions, along with the decisions made in their context, are reviewed and evaluated once a year by the UL Quality Manager and potentially also by the UL management, some deficiencies may be identified too late, which could have unfavorable consequences for the complainant. At the same time, it is positive that the decisions made in the complaint and suggestion process are evaluated with a certain regularity - once a year.

1.2.4. The collected data comprehensively cover significant issues and provide a full understanding of key questions relevant to the study process. According to SAR Section 2.2.4. (pp. 44-48), the following data are collected:
- Dynamics of student numbers in faculties, study programmes, levels, and years;
- Students' study forms, types, and sources of funding;
- Data characterizing student profiles (secondary education institution, graduation year, exam scores, age, gender, previous higher education and its exam scores);
- Student performance (assessments);
- Interim and final course evaluations;
- Breakdown by exam types;
- Final examinations;
- Average weighted grade;
- Programme plan completion (A, B, C parts);
- Fulfillment of financial obligations;
- Distribution of students by funding source;
- Number of scholarship recipients;
- Number of students receiving study and tuition loans;
- Plagiarism check using the unified computerized plagiarism control system,
- Surveys on course quality, content, and instructors,
- Surveys of final-year students,
- Alumni surveys,
- Employer surveys,
- Surveys on reasons for early termination of studies.
Evaluation of Data Collection and Analysis Mechanisms Surveys are conducted, data are compiled and processed centrally using the ULIS individual access system. This system is positively evaluated as it reduces the need for human resources and provides a unified approach to data evaluation and comparison. Additionally, the student self-government conducts additional surveys on course content quality during the semester. This activity is commendable as it potentially allows for earlier detection of deficiencies in the study process and content. Also potentially effective is the practice of regular mutual observations of university lecturers' classes, which has been noted as being in place. Additionally, teaching staff should be informed and encouraged to include short surveys during their classes to obtain immediate feedback from students.
According to the information provided in SAR Section 2.2.4, confidentiality and data protection are maintained when publicizing survey results. Anonymity of respondents is ensured. The ULIS system and UL My Portal provide individualized access to survey results with varying levels of detail, depending on the role of the student or UL staff member, avoiding information overload. For example, more detailed information is available to the study programme directors, involved structural unit leaders, the student council, and faculty student self-government. The broader availability of information is understandable, as these stakeholders are involved in discussing results

and making decisions. Feedback is provided to respondents by presenting general summarized results of the surveys via ULIS and UL My Portal. Survey results are also discussed by the study programme director with the involved students. Theoretically, environmental protection study field reports can be found and downloaded using an internet browser search. For example, the 2020/2021 report can be found in the link: https://www.lu.lv/fileadmin/user_upload/LU.LV/www.lu.lv/Dokumenti/Dokumenti_LV/5._DAZADI/pasnovertejuma-zinojumi/2021/1_PARSKATS-VIDES-AIZSARDZIBA_2021-PUB.pdf. This allows any interested party to review the report's information and included statistics. However, finding these reports can be somewhat inconvenient. Although there is a subsection "Study Direction Reports" under the "About Us" section on the UL website, only one report for the Architecture and Construction study field for the 2022/2023 academic year is currently available.
It can be concluded that manual evaluation and discussion of survey results are ensured in annual study field reports, involving key stakeholders within the university. It is significant that the results of course surveys are discussed in Environmental Science department meetings, potentially leading to new ideas for the study programme development. Further discussion of survey results in the Environmental Protection study field council is positive, as it could promote more effective and targeted result discussion and, if necessary, defining solutions within the Environmental Science department staff. Practical use of survey results is indicated in SAR Section 2.2.4. (pp. 44-48), referencing discussions between study programme directors and instructors whose courses received ratings below 5 points. It is also mentioned that recommendations and opinions from students, academic staff, and employers are integrated into the study plans and study programme structures submitted for accreditation. A significant integrated aspect mentioned in the report is the example of providing student internship opportunities within the study programme content, as the lack of practical skills was noted as a major weak point (SAR, pp. 138-143, supported by answers from field representatives). However, it is generally difficult to evaluate the relevance of decisions and measures taken to address deficiencies and suggestions highlighted in student, alumni, and employer surveys. Although SAR Section 2.2.4. (pp. 44-48) includes summarized statistical data, there is no precise information on comments and recommendations provided by stakeholders, the decisions made as a result of their collaboration, and the corresponding implemented measures. As a preventive measure for the successful completion of final theses and to avoid plagiarism, the SAR notes that students are informed about proper citation and self-citation. In the result, no plagiarism has been detected.
The regularity of statistical data collection is evaluated as appropriate and provides an understanding of the study process throughout the academic semesters. SAR Section 2.2.4 (pp. 44-48) indicates that statistical indicators are collected twice a year, including data on student numbers, performance, academic debts, programme plan completion, and student surveys conducted at the end of each semester. Additionally, between semesters, the student self-government organizes independent surveys on study courses and their content quality. The regularity of mutual observations of university lecturers' classes is not described in the SAR.

1.2.5. The UL website offers comprehensive information about the university, including current updates, academic and scientific activities, regulatory documents related to studies and university operations, and details about the study process. Essential details for applicants and students, such as study programme descriptions, admission requirements, and study course structures, are provided online. The information is available in both Latvian and English to accommodate national and international students.
The site is visually appealing and modern, featuring up-to-date content. Information can be filtered based on the target audience, facilitating access for employees, students, and first-time visitors. Registered students and staff can access additional and restricted information using their assigned usernames and passwords. The content is organized into logical sections and subsections, making it

easy to navigate.
Due to structural changes and the timing of SAR preparation, the information about structural units on the official website may vary accordingly.
Most of the information on the website is consistent with official registers, including details about study programmes, which align with the State Education Information System (VIIS) data. However, the link to general admission conditions for the master's programme (https://www.lu.lv/gribustudet/normativie-dokumenti/uznemsanas-prasibas-un-kriteriji-augstaka-limena-studiju-programmas-20192020-akademiskaja-gada/) was not functional as of the review on 07.08.2024. The Admission Rules on the UL website do not match the data provided by VIIS, which includes rules approved by a Senate decision from 2016, while the UL website lists rules from 2021.
The About Us section on the UL website (https://www.lu.lv/par-mums/par-lu/) and its related subsections provide basic information about the university, including the official website, contact details, and registration number. This information is consistent with the data provided in VIIS.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The University of Latvia (UL) has a robust quality assurance system that ensures continuous improvement and efficient performance of its study programmes. This system is publicly documented and includes regular meetings, student surveys, and regular mutual observations of university lecturers' classes. Feedback mechanisms involve multiple stakeholders and are based on comprehensive data analysis.
Survey results indicate high ratings from students, graduates, and employers, though improvements are needed in addressing Master's students' well-being and ensuring challenging grading standards. The UL has effective mechanisms for student complaints and suggestions, promoting continuous enhancement.
Overall, the UL's quality assurance system supports the achievement of study programme aims and learning outcomes, maintaining high standards and fostering continuous improvement.

Strengths:
1. UL has implemented a structured quality assurance system as regulated by publicly available and regularly updated quality policy manual.
2. The quality assurance system fosters continuous improvement through multiple mechanisms, including the centralized regular collection and automated summarization of statistical data and surveys, regular meetings with stakeholders, and result analysis.
3. A centralized system allows all students, including international ones, to submit complaints and suggestions, supported by comprehensive regulations and proactive measures through regular surveys and meetings.
4. The findings are shared among key stakeholders including academic staff, students, and external partners, ensuring transparency, collaboration and broader perspective of the field.
5. The experience exchange is also enhanced among academic staff through regular peer observations of university lecturers' classes and participation in education-related conferences. Additionally, the research activities of academic staff ensure that students receive the most current and relevant knowledge in the study field.
6. Study programme information on the UL website aligns with official registers, providing essential details in both Latvian and English for accessibility to national and international students.

Weaknesses:
1. Master's students report relatively low well-being, potentially influenced by the perceived high difficulty of both Master and Bachelor's study programmes. The SAR lacks clarity on reasons and actions taken to address these issues.

2. There is a lack of clear evidence on the efficiency of feedback mechanisms, particularly in terms of how stakeholders evaluate their effectiveness and implement improvements.
3. Employers may lack sufficient information and opportunities to actively contribute to enhancing the content and quality of the study programmes.

Assessment of the requirement [1]

1 R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:

Assessment of compliance: Partially compliant

The regulations and procedures for developing study programmes and ensuring performance improvements within the study field are generally in place and detailed within SAR Part 2. However, there is a lack of clear evidence how stakeholders evaluate the efficiency of the mechanisms.

2 1.1 - The higher education institution/ college has established a policy and procedures for assuring the quality of higher education.

Assessment of compliance: Fully compliant

UL has established its quality assurance policy and procedures, as outlined in SAR Section 2.2.1. (pp. 36-38), and further detailed in the UL Quality Management Handbook (SAR Annex UL Quality Management Manual). Regular measures and activities are implemented as part of this framework.

3 1.2 - A mechanism for the development and internal approval of the study programmes of the higher education institution/ college, as well as the supervision of their performance and periodic inspection thereof has been developed.

Assessment of compliance: Partially compliant

The University of Latvia (UL) meets the requirement for developing and internally approving study programmes, as well as supervising their performance and conducting periodic inspections. This is evidenced by the defined procedures documented in SAR Section 2.2.2. (pp. 38-42). Normative regulations are in place to guide the preparation of study programme content and ensure quality control. Examples provided in SAR Section 2.2.2. (pp. 41 – 42) of implemented improvements in study programmes demonstrate the effect resulted from reviewing and development procedures. However, there is a lack of clear evidence on the efficiency of the mechanisms and how stakeholders evaluate their effectiveness.

4 1.3 - The criteria, conditions, and procedures for the evaluation of students' results, which enable reassurance of the achievement of the intended learning outcomes, have been developed and published.

Assessment of compliance: Fully compliant

Criteria, conditions, and procedures are detailed in SAR Section 2.2.3 (pp. 42–44) and published on the UL website as regulations:
1. The Procedure for the Organisation of Study Course Examinations at the University of Latvia (the UL Senate Decision No 211 of 29.06.2015).
2. Regulation on Graduation Examinations at the University of Latvia (the UL Senate Decision No 183 of 27.12.2011)
Learning outcomes and evaluation procedures are also detailed in individual study course descriptions.

5 1.4 - Internal procedures and mechanisms for assuring the qualifications of the academic staff and the work quality have been developed.

Assessment of compliance: Fully compliant

The qualifications and work quality of the teaching staff are supported through several mechanisms. These include regular events like the "Current Issues in the Content of Environmental Education" conference, and ongoing peer observations of university lecturers' classes, as outlined in SAR Section 2.2.1. Staff also enhance their pedagogical skills through a 160-hour vocational development programme, and a 12-hour Moodle training course (SAR Sections 2.2.2 and 2.3.6).
Quality is monitored via student surveys and mutual observations of university lecturers' classes, with feedback discussed and actions taken as needed. Persistent low ratings may lead to staff replacement (SAR Sections 2.2.2 and 2.2.4).

6 1.5 - The higher education institution/ college ensures the collection and analysis of the information on the study achievements of the students, employment of the graduates, satisfaction of the students with the study programme, efficiency of the work of the academic staff, the study funds available and the disbursements thereof, as well as the key performance indicators of the higher education institution/ college.

Assessment of compliance: Fully compliant

UL ensures comprehensive collection and analysis of data on student achievements, graduate employment, student satisfaction, academic staff efficiency, and other key performance indicators, detailed in SAR Section 2.2.4. (pp. 44-48).

7 1.6 - The higher education institution/ college ensures continuous improvement, development, and efficient performance of the study field whilst implementing its quality assurance systems.

Assessment of compliance: Partially compliant

UL demonstrates a commitment to continuous improvement and performance through its quality assurance systems, involving regular education related events, scientific work, meetings, surveys, consultations with stakeholders, qualification enhancement measures.
There is a lack of clear evidence on the efficiency of feedback mechanisms, particularly in terms of how stakeholders evaluate their effectiveness and implemented improvements. Employers may lack sufficient information and opportunities to actively contribute to enhancing the content and quality of the study programmes.

1.3. Resources and Provision of the Study Field

Analysis

1.3.1. The University of Latvia (UL) has established a robust system for determining and redistributing the financial support required for the implementation of the study field and the corresponding study programmes. This system, grounded in national legislation and university-specific regulations (Annex I "List of the Main Internal Normative Acts and Regulations of the University of Latvia" 1P_list_of_normative_acts.docx), ensures effective funding for both scientific research and applied research within the institution.
According to the Self-Assessment Report (SAR) section 2.3.1. " Resources and Provision of the Study Field " page 50 and supplementary documentation, the UL's financing system is based on the Law on Higher Education Institutions, Cabinet RegulationsNo 994 of 12.12.2006 The Procedures for Financing Higher Education and Colleges from the Funds of the State Budget, No 445 of 05.07.2016 the Regulations Regarding Remuneration of Teachers , and other regulatory enactments. These regulations outline the procedures for financing higher education and colleges from state budget

funds and set guidelines for the remuneration of teaching staff. The primary sources of funding for the study process at UL include state budget subsidies and tuition fees.
State budget subsidies are allocated by the Ministry of Education and Science based on the base funding, programme level, and field of study. These subsidies are a crucial part of the financial structure, ensuring that fundamental educational activities are supported. Tuition fees are clearly stated on the UL website for all study programmes. These fees are determined by considering the prime cost of the study place, tuition fees for similar programmes at other higher education institutions (HEIs), the interest of prospective students, and the estimated state budget financing. The fees are set annually to provide transparency and stability for students throughout their studies (https://www.lu.lv/studijas/studiju-programmas/).
The management and redistribution of financial resources are handled independently by the faculties within the UL. The dean and executive director of each faculty are responsible for ensuring the rational use of financial resources and overseeing operational financial management. Faculties manage their budgets within the guidelines provided, allowing them to address specific needs and priorities related to their study programmes (SAR, p. 52).
The UL secures funding for scientific research through various projects. Technical supplies for research can be organized through both project-specific funds and direct UL funding. This dual approach ensures that necessary resources are available for advancing research and innovation (SAR, p. 51, and in-person meetings with UL management and with the members of the group responsible for the preparation of Self-Assessment report, and the person responsible for QA management system).
The UL Study Quality Improvement Fund allocates annual sums to address faculty-specific issues, including the development and enhancement of study programmes. This ensures that financial support is available for curriculum development and the improvement of educational resources. Additionally, academic staff at UL engage in research activities, international projects, and scientific events, which indirectly support the development of study programmes. This involvement enhances the academic and research competence of the staff, positively impacting the quality of education provided.
Despite the comprehensive financial system in place, some areas require attention. During meetings with students, a lack of financial support for mandatory field trips was highlighted. Addressing this issue is essential to ensure that all students have access to necessary practical experiences. As the study programme is relatively new, continuous monitoring and feedback are crucial to address any initial implementation issues related to course adjustments and administrative processes. Defining cultural heritage within the education classification of Latvia remains a challenge. Aligning this with international classifications would enhance the study program's recognition and support its development.
The University of Latvia has established an effective and well-defined system for financial support allocation and management, ensuring the successful implementation of its study field and corresponding study programmes. By continuously refining this system and addressing the identified challenges, UL can further enhance the quality and relevance of its educational offerings, thereby maintaining its high standards of academic excellence.

1.3.2. The University of Latvia (UL) has established a thorough system for identifying and managing the infrastructure resources and material and technical support necessary for the implementation of the study field. The system ensures that resources are readily available to both students and teaching staff, and includes well-defined procedures for the improvement and procurement of necessary materials and equipment.
According to SAR Section 2.3.2. (p. 52), a significant enhancement in technical support was achieved by moving to the House of Nature in 2015. The newly developed UL Academic Centre in Torņakalns includes auditoriums, seminar rooms, and teaching and research laboratories equipped with the

latest technological equipment. Its total indoor area of 18,540 m², including 30 auditoriums, 45 teaching laboratories, and 69 research laboratory rooms.
According to SAR (p. 53), the computer classrooms in the House of Nature are equipped with both Windows and Linux operating systems, along with essential software applications such as Microsoft Office, statistical programmes (R, SPSS, PC-Ord), and geoinformatics-specific programmes (ESRI ArcGIS, QGIS, PostgreSQL/postGIS, Bentley MicroStation). Additionally, all auditoriums are equipped with projectors, laptops, and whiteboards, and some feature interactive whiteboards. The building is fully covered by a wireless network and includes a café, a Natural Sciences Library, and individual work booths. It is also accessible to people with mobility impairments, featuring several elevators and appropriately equipped sanitary facilities. The first two floors are accessible to students 24 hours a day, providing continuous access to resources.
The university has invested in supplementing study and research equipment and improving the material and technical base of several laboratories. These include the Map Library, Remote Sensing and Cartography Laboratory, Soils Environmental Chemistry Laboratory, Environmental Monitoring Laboratory, Environmental Technologies Laboratories, Forest and Water Resources National Centre, and the Chromatography Laboratory. The laboratories are equipped with advanced tools such as gas-liquid chromatographs, mass spectrometric detection systems, UPLC systems, spectrometers, and other analytical devices. These resources ensure the quality and depth of studies, as well as support participation in scientific grants, cooperation projects, and EU structural funds projects.
The faculty maintains a Map Browser that provides continuous (24/7) access to cartographic and spatial materials of Latvia, which can also be accessed remotely. Study laboratories are freely accessible to students and teaching staff, while access to research laboratories requires coordination with responsible staff members. Additionally, the faculty has several unmanned aerial vehicles (drones), including the DJI Matrix600 with a multispectral camera and interchangeable cameras, although there is a noted issue regarding flying licenses, as only one staff member currently holds such a license, which is required for drones over 25 grams according to Regulation of Cabinet of Ministers No. 457.
According to SAR (p. 53), for individual research, such as bachelor and master's theses, students can also utilize material and technical support from other UL structural units, such as the UL Institute of Chemical Physics, the Institute of Food Safety, Animal Health, and Environment "BIOR", and the Latvian State Forests Research Institute "Silava". Additionally, the Art Academy of Latvia provides material and technical support for the cultural heritage components of the relevant study programme.
Overall, the study programmes in the study field have access to all necessary material and technical support for a high-quality study process. The UL and UL FGES have established a unified, well-functioning system and clear procedures for the procurement and improvement of material, methodological, and informational resources. This system ensures that the infrastructure and technical support remain up-to-date and adequate to meet the demands of both students and faculty, thereby facilitating an effective learning and research environment.

1.3.3. The University of Latvia (UL) has developed a detailed system for the improvement and purchase of methodological and informative provisions, ensuring that library resources and databases are available to students and meet the needs of the study field. This system is designed to provide accessibility to all users and to continuously update the collection with the latest resources necessary for both study and research.
The UL Library is included in the Library Register of the Ministry of Culture and has been accredited until 2027 with the status of a national library (accreditation certificate No 22C of the Ministry of Culture) (SAR p.54). According to SAR Section 2.3.2., the first floor of the Academic Center, which includes the library, is open 24 hours a day, and students actively utilize this resource.
The library provides access to a wide range of resources, including cartographic and spatial

materials of Latvia, and resources from the Art Academy of Latvia library. It offers printing and scanning options, online e-resources, and guiding materials available on both the library website and the LUIS (the UL information system). The library also provides access to several scientific e-journals, with websites available in both Latvian and English, making them accessible to foreign students.
During the expert onsite tour of the facilities while meeting with librarians, experts were introduced to the book search system, login system, and self-checkout station, which enhances the 24/7 functionality of the library. The Natural Sciences Library, part of the House of Nature, provides about 150 working places, including 20 equipped with computers, according to SAR page 54. The library's collections are continually updated to align with the fields of study and academic work of the UL, prioritizing the purchase of e-resources. New acquisitions, including books, databases, and periodicals, are conducted annually through centralized funding approved by a UL order.
It is mentioned in SAR (p. 55) that in 2022, the UL Library made available 1.8 million information resources to its readers. The collections, which support the study field "Environmental Protection," are housed in multiple structural units, including the Natural Sciences Library in the House of Nature, the Humanities Library, the Faculty of Social Sciences Library, and the UL Library Repository. As of January 1, 2023, the UL Library held 36,952 printed editions of 13,668 titles, with a significant portion of these resources located in the House of Nature (7,366 copies of 2,855 titles).
The UL Library has embraced digitalization, offering free online access to its e-resources repository, which contains approximately 45,000 publications relevant to the study field "Environmental Protection." The library provides remote access to 42 e-resource platforms, including e-books, e-journals, databases, and reference tools. Notable resources include JSTOR, EBSCO, ScienceDirect, Scopus, SpringerLink, and many others. The library also subscribes to multidisciplinary e-resources like Cambridge Journals Online, OECD iLibrary, and Nature, which are essential for comprehensive environmental protection studies.
The library's collection is supplemented annually with the latest information resources, ensuring that the study process and scientific research in the field of environmental protection are well-supported. The availability of these resources, combined with the continuous improvement of digital access and user training, highlights the UL Library's commitment to meeting the academic needs of its students and faculty.
The University of Latvia has established an effective and comprehensive system for managing library resources and informative provisions. The UL Library's extensive and continuously updated collection, combined with its 24/7 accessibility and digital resources, ensures that students and faculty have access to the necessary materials to support their academic and research endeavors. This system effectively supports the study field "Environmental Protection," contributing to the overall quality and relevance of the university's educational offerings.

1.3.4. The University of Latvia (UL) has implemented a broad and effective system of information and communication technology (ICT) solutions to support the study process. These solutions are designed to enhance the learning experience, increase accessibility, and provide robust tools for both students and staff.
According to SAR (page 61), the Department of Information Technology at UL provides students and employees with access to a wide scope of electronic tools such as Microsoft Office 365 (includes Outlook, Forms and other). Through these tools, UL has facilitated modern study and work environments, ensuring that all users have access to essential software. Additionally, UL offers software such as SPSS, Question Pro, Autodesk, MathWorks MATLAB, and Esri ArcGIS, which require a VPN connection for access outside the UL premises.
To secure remote learning, Microsoft Teams of the Office 365 is used extensively. It supports online lectures, lecture recordings, and real-time communication with students. Complementing this, the UL also utilizes BigBlueButton (BBB), an open-source web conferencing system that supports online

events and can be integrated with the e-study system for registered users.
The university offers two primary e-study environments: estudijas.lu.lv and edu.lu.lv. The estudijas.lu.lv platform is used for managing the study process, while edu.lu.lv is tailored for e-education projects, events, courses, and distance learning programmes. Both platforms are based on the open-source Moodle system, which provides a flexible and cost-effective solution for e-studies. Moodle supports the creation and management of courses, enabling the availability of study materials, student assessments, and attendance tracking. For safe data storage, UL provides Office 365's OneDrive service, offering 1TB of cloud storage for each student and employee. Additionally, a large-scale file transfer system (https://store.lu.lv/) is available for transferring large files.
The expert meeting with UL management and with members of the group responsible for the preparation of Self-Assessment report, and the person responsible for QA management system revealed that Moodle is user-friendly and convenient, though there are concerns about the timely accessibility of materials and the organization of course content by lecturers. Feedback indicated that materials for some courses are inserted chaotically without a clear scale of importance, which can hinder the learning process.
Both the library and teaching laboratories are well-equipped with computers, appropriate software, and internet connectivity, including Wi-Fi. The Department of Environmental Science staff, except for the youngest colleagues, have extensive experience in teaching university courses and are adept at using the Moodle platform to create comprehensive e-study environments. Learning materials, such as original course summaries, task sets, and laboratory work descriptions, are regularly uploaded to the e-study environment. The system supports various forms of student assessments, including tests and submitted written materials.
The UL promotes the continuous improvement of teaching methods through seminars, peer observation, and professional development activities. The "UL Moodle course creator’s guide 2019," along with other resources like tutorials and video guides, support staff in creating and managing e-study materials. These efforts ensure that new study materials are continually developed, approved, and integrated into the Moodle environment.

1.3.5. The University of Latvia (UL) has developed and implemented detailed procedures for attracting qualified teaching staff, ensuring that these processes are open and that stakeholders are well-informed. These procedures are governed by a series of regulatory enactments that set out the mechanisms and criteria for recruitment, selection, and assessment of academic and administrative positions.
According to SAR Section 2.3.5, the UL classifies its teaching staff into three groups: academic staff holding elected positions, acting academic staff and visiting academics, and hourly-paid staff. The recruitment and selection of these groups are regulated by three key normative acts: Regulatory Enactments on Academic and Administrative Positions at the University of Latvia, Regulations of the UL Professors Council, and Procedures for the Recruitment of Unelected Teaching and Research Staff at the University of Latvia.
The Regulatory Enactments on Academic and Administrative Positions detail the requirements, tasks, and assessment criteria for various academic positions such as professor, associate professor, assistant professor, senior researcher, lecturer, researcher, assistant, and research assistant. These regulations ensure that the recruitment process is systematic and transparent. Public calls for applications for these positions are announced openly on the UL website, internationally advertised vacancies, and on national platforms such as the National Scientific Activity Information System and the State Employment Agency of the Republic of Latvia vacancy portal.
The election process for academic positions involves delivering an open lecture evaluated by two reviewers, with the final decision made through a secret ballot for positions such as assistants and lecturers or an open vote for professors and associate professors. The elections must occur within two months of the call for applications, and those elected hold their positions for a term of six years,

after which a new competition may be announced. The UL ensures that these procedures are transparent and communicated effectively to all stakeholders.
Minimum requirements for academic positions include knowledge of the state language, proficiency in foreign languages necessary for academic duties, and a commitment to continuous improvement of academic and scientific qualifications. Higher positions, such as associate professors, require extensive academic and pedagogical experience, a significant publication record, and involvement in scientific research projects.
For guest lecturers and hourly-paid staff, the recruitment and selection decisions are made by the respective faculties based on the needs of the study programmes. These positions are typically filled by specialists in their fields, bringing practical skills and professional competence to the teaching process. The selection of these personnel is aligned with the strategic goals of the university and involves cooperation with employers' representatives to ensure that the best professionals are selected.
The UL also utilizes external funding, such as the European Social Fund's specific support goal No 8.2.2., to attract visiting university lecturers and strategically important personnel. This initiative strengthens the academic staff in areas of strategic specialization, ensuring that the university maintains high standards of education and research.
Personnel planning at UL is conducted biannually, based on the study plan and scientific needs. A centralized staff list and workload maps are used to manage and review the number of academic staff, ensuring that vacancies and workload distributions are monitored and addressed efficiently.

1.3.6. The University of Latvia (UL) has established detailed procedures to identify and address the professional and didactic development needs of its teaching staff. These procedures are outlined in the UL Strategy 2021-2027, which emphasizes development-oriented personnel policies aimed at ensuring the growth, renewal, and excellence of academic and general personnel. The strategy includes creating a performance-based personnel management system, improving career development opportunities, attracting local and foreign academic staff, and promoting international mobility. UL has set 9 goals for development, 3 goals for scientific excellence, 3 for study development and 3 for contribution to society. For example, Development- and excellence-oriented personnel policy; Green thinking, attractive, sustainable university environment and effective administrative support, and Inclusive, cooperation- and innovation-focused culture. For all three goals in 3 directions indicators are defined (https://www.lu.lv/fileadmin/user_upload/LU.LV/www.lu.lv/Dokumenti/Dokumenti_LV/1._VISPAREJIE_DOKUMENTI/LU_Strategija_2027_buklets_lv_eng.pdf).
According to the Self-Assessment Report (SAR) and additional documentation, the UL has defined several key actions for the professional development of teaching staff in the study field "Environmental Protection." These actions include participating in international mobility programmes, conducting scientific and academic activities, attending international conferences, improving English language skills, and undertaking certified continuing education courses. The Academic Department of the UL, along with the Adult Pedagogical Education Centre (APEC) of the Faculty of Education Sciences and Psychology, provides informative, consultative, and methodological support to the academic staff in higher education didactics.
The university regularly updates its study courses based on student surveys and implements various methodologies to enhance teaching capabilities. Since 2018, targeted courses in digital skills and academic integrity have been added to the professional development offerings. These initiatives ensure that teaching staff remain current with educational trends and pedagogical innovations. The UL has also outlined a Plan of Measures for the Development of Academic Staff for 2018–2023, though specific links to this plan were not found by the experts.
Professional development at the UL is organized in accordance with national regulations, including the Cabinet of Ministers Regulations No 569 on the Necessary Academic and Professional

Qualifications of Pedagogues and Professional Competence Development Procedures. These regulations require higher education and college educators to complete a vocational development programme focused on innovations in higher education or higher education didactics, totaling 160 academic hours.
The UL also provides opportunities for improving English language skills through a continuing training programme offered by the Centre for Applied Linguistics of the UL Faculty of Humanities. This programme has been utilized by multiple lecturers and researchers. Newly elected lecturers and assistant professors have positively evaluated the knowledge gained during these courses. Additionally, the UL offers a continuing education programme titled "Introduction to Teaching in Higher Education" for young academics and doctoral students, fostering the exchange of teaching experiences and the development of new pedagogical approaches.
The university has implemented several EU-funded training programmes from 2018 to 2023, focusing on online learning development, digitalization of learning content, and innovations for improving the quality of the learning process. These programmes were developed by analyzing the professional development needs of academic staff in the context of higher education trends.
The effectiveness of professional development measures is evaluated through surveys and assessments conducted after each programme. The UL organizes thematic seminars on topics relevant to the academic staff, and the results of these activities are summarized in periodic reports. These evaluations ensure that the professional development activities meet the needs of the teaching staff and contribute to the continuous improvement of the study programmes.
The UL pays special attention to identifying and nurturing the most capable students, motivating them to engage in academic work during their studies. This effort includes developing requirements and selection criteria for attracting new doctoral students and foreign academic staff. The criteria for these positions include relevant academic qualifications, research experience, and the ability to work in an e-study environment.

1.3.7. The University of Latvia (UL) has established in-depth procedures to ensure that the academic, research, and administrative workloads of teaching staff are balanced effectively. This system is designed to accommodate the various responsibilities that faculty members hold, ensuring that each aspect of their professional duties is adequately addressed.
According to SAR Section 2.3.7, the workload of teaching staff in the study field "Environmental Protection" includes several key elements: study work, methodological work, scientific work, and professional development. Study work encompasses conducting study courses, managing and reviewing final theses, and providing consultations for students. Methodological work involves updating existing courses or developing new ones, including those in e-learning environments, and participating in methodological seminars or conferences. Scientific work includes participation in scientific conferences and projects, preparation of publications, and other research activities. Professional development consists of engaging in professional development programmes and staying current with the latest scientific and methodological literature.
The detailed distribution of these components varies among university lecturers, depending on their involvement in different levels of study, research activities, and administrative responsibilities. All lecturers are expected to engage in research, with a minimum requirement of 15% of their workload dedicated to research activities. This percentage can increase, particularly when lecturers are involved in approved projects, such as those funded by the EU, which may lead to a reduction in administrative tasks to balance the increased research load.
In the academic year 2021/2022, 34 teaching staff members with doctoral degrees and 9 with master's degrees were involved in the study field "Environmental Protection." For the academic year 2023/2024, it is planned that 46 doctors of science will participate in the implementation of the study field. The number of teaching staff involved in the study field has grown over the years, from 30 academic staff members in 2013/2014 to an expected 44 in 2023/2024. This increase reflects the

university's commitment to maintaining a strong academic environment and ensuring that the workload is distributed among a larger pool of qualified staff.
The UL employs various strategies to monitor and adjust the workload of teaching staff to ensure balance. For example, the university uses a centralized staff list and workload maps to plan and review the distribution of duties. This system helps to identify any imbalances and make necessary adjustments. Additionally, the involvement of faculty members in both academic and research roles allows for a dynamic allocation of tasks, ensuring that no single aspect of their duties is disproportionately burdensome.
Moreover, the UL places a strong emphasis on professional development and continuous improvement. Teaching staff are encouraged to participate in various professional development programmes, such as certified continuing education courses and digital skills training. These opportunities not only enhance their qualifications but also contribute to a more balanced workload by integrating professional growth with their regular duties. But unfortunately the expert team did not see the proof of individual approach if lecturers' performance is badly evaluated several years in a row. It is essential to have additional support as the workload and personal development cannot be successfully managed by employees themselves.
The university's approach to workload management is further supported by the inclusion of part-time lecturers and visiting academics, who help to share the teaching responsibilities and bring diverse expertise to the study field. This collaborative model ensures that full-time faculty members can maintain a balanced workload while benefiting from the contributions of specialists and practitioners in their respective fields.

1.3.8. The University of Latvia (UL) has identified and established a wide-ranging support system to meet the diverse needs of its students, including international students, part-time students, distance learning students, and students with special needs. This system encompasses academic support, career development support, and psychological support, ensuring that all students have access to the necessary resources and assistance throughout their studies.
According to the Self-Assessment Report (SAR), academic support at UL is provided through various services managed by the Department of Study Service. This support includes the implementation of a first-year support programme, advice on the study process, consultations on study skills, and workshops on time management and exam anxiety. The Study Service Department coordinates with faculty staff, including study programme directors, tutors, mentors, programme assistants, and study course lecturers, to ensure that students receive comprehensive guidance. Additionally, the UL Library offers consultations on using library and internet resources, further enhancing the academic support system (SAR Section 2.3.8).
Career development support is another essential component of the UL student support system. The Career Centre, part of the Department of Study Service, provides individual consultations for career planning, workshops on career development skills, and an online resource portal with information on career planning and labor market trends. The "E-career" electronic resource enables students to find internship opportunities and jobs by adding their CVs to a database accessible to employers. This system helps students transition smoothly from education to the labor market, ensuring they are well-prepared for their future careers.
Psychological support is provided by the Department of Study Service, with a psychologist-counsellor available to help students address personal and study-related issues such as relationship problems, conflict resolution, and emotional difficulties. This support includes both individual and telephone counseling sessions, ensuring that students have access to the help they need when facing challenges during their studies.
UL also provides specialized support for international students through dedicated events organized in cooperation with the Erasmus Student Network (ESN). These events introduce international students to Latvian culture and traditions, promoting interactions with local students and facilitating

their integration into the university community. Additionally, the university ensures that all support services are accessible to international students, helping them navigate the academic and social aspects of studying abroad (University of Latvia for International Students).
Support for students with special needs is a critical aspect of the UL support system. The university has conducted assessments of infrastructure accessibility for persons with disabilities, ensuring that all study premises are accessible to students with mobility impairments. These efforts are considered in the construction of new infrastructure and in the provision of study programmes, ensuring an inclusive environment for all students (Studying in Latvia International Student Guide).

Conclusions on this set of criteria, by specifying strengths and weaknesses

All criteria corresponding to the resources and provision of the study field at the University of Latvia (UL) are fully compliant. The university has established robust systems for finance, material and technical resources, library resources and databases, and the attraction of teaching staff. These systems ensure the comprehensive and effective implementation of the study field.
The University of Latvia demonstrates full compliance with all criteria related to resources and provision for the study field. The strong systems in place for financing, personnel election, and library capacity, along with comprehensive data and communication resources, contribute to the effective implementation of the study field. By addressing the identified weaknesses, UL can further enhance the quality and relevance of its educational offerings, thereby maintaining its high standards of academic excellence.

Strengths:
1. Strong systems for financing, including state budget subsidies and tuition fees, ensuring the necessary financial resources are available for the study field.
2. Effective election and recruitment processes for academic staff, governed by transparent and well-defined regulations.
3. Extensive library resources and capacity, including access to numerous e-resources and scientific journals.
4. All library websites are accessible in English, providing ease of access for international students.
5. Comprehensive resources for data programmes, statistics, and mapping programmes available to students.
6. Internal communication systems such as videoconferences, lectures, and emails are readily available for students and teachers, facilitating effective communication and collaboration.
7. Continuous updates and improvements to library collections, aligning them with the needs of the study field.

Weaknesses:
1. Lack of support tools for improving study courses if lecturers receive low evaluations from students in yearly surveys, indicating a need for mechanisms to assist lecturers in enhancing their teaching quality.

1.4. Scientific Research and Artistic Creation

Analysis

1.4.1. The directions of scientific research of the study field are integrated into the general UL scientific directions (SAR, p. 75) which are carried out in close cooperation with several research directions in the study field of Earth sciences and take place in accordance with the priorities of strategic specialization:
- Environmental quality and especially climate change, their driving factors, influence and

management tools;
- Environmental resources, their protection and sustainable management solutions: innovation for the development of bioeconomy and circular economy.
The main research areas of the faculties from the environmental study field are: assessment of the state of natural and environmental systems, impact of climate, land use and land cover change on soil and its properties, driving forces in landscape transformation and their impact on landscape sustainability, Sustainability of cultural and environmental heritage in the context of climate change, composition and biological diversity of surface waters in Latvia, environmental education, climate education and other subjects related to above mentioned themes (SAR, p. 76).
A large number of fundamental and applied research have been carried out in the field of environmental protection (SAR, p. 79-81 - Table 2.4.3.2). The researchers of the Department of Environmental Science participate in a European joint research programme aiming to ensure sustainable soil management in agricultural lands, which would contribute to limiting climate change. The Department of Environmental Science is one of the cooperation partners that implements the development of soil classification, description, diagnostics and mapping methodologies and the updating of peat moss distribution maps in Latvia. Between the projects, there are several which are ongoing beside 16 of which were carried out between 2016-2022. In conclusion, the directions of scientific research and applied research of the study field correspond to the development goals of the UL and are relevant for the study field and industry.

1.4.2. In the discussions of the experts with the faculties of the study programmes, it was pointed out that a good part of the research interest is oriented to provide output for gaining new data to improve the content of the lectures and in the same time to offer solutions regarding the protection of the environment for the national agencies or the private sector.
Teaching staff of the study field, a part of the study process, is involved in science and participates in the achievement of project results. Elective study courses included in the study programmes usually are related to the research areas of the teaching staff. The teaching staff incorporates their research experience, proven results and developed methods into study courses, thus ensuring continuous acquisition of the latest knowledge and skills for students as it is pointed out in SAR, p. 77-78. Also these affirmations are sustained by the list of the publications of the faculties involved in the study field (Annex 16 List of staff publications and artistic creation works for the reporting period), which contains more than 50 pages of the titles of studies, articles and monographs published by the faculties involved in academic and research activities in the study field.
The Department of Environmental Science provides science-based studies using modern and competitive educational technologies, as well as promoting the scientific activity of students and staff. Access to the databases of scientific publications, as was proven during the expert visit of the library and during the meetings with the teaching staff and students, allows students to enrich their knowledge in study courses by using the latest research findings.
In all study programmes, the research is an integral part of the final theses. In the experts' meetings with the students and with the alumni, it was pointed out that almost all students' final theses are developed under the supervision of scientists, which is feasible only due to the extensive research capacity. Besides, the majority of students are involved and also employed in the research projects during the development of their works (SAR, p. 78), thus, essentially gaining their first work experience in the field already during the studies. Such closer interaction allows better development of students' research skills.
It can be concluded that scientific research / applied research and the outcomes thereof are integrated in the study process in the study programmes of all levels (bachelor and master degrees).

1.4.3. All study programmes in the study field benefit from international cooperation, as the

scientific qualification of the teaching staff is ensured, orientation to world trends in the represented field is realized and current scientific topics are offered for the elaboration of students' final theses (SAR, p. 79). The research in the fields of environmental science and technologies is carried out both in the framework of international cooperation and in solving local applied issues by performing contract works for the national economy of Latvia as pointed out in the SAR, Table 2.4.3.1 and Table 2.4.3.2 which summarize the international research projects implemented in the study field and the funding placed at the disposal of the study field.
Regarding the attraction of the international funding for the research, there is visible the influence of the epidemic (2020-2022) because the total amount of finance dropped as most of the international funding calls were stopped or there was a limited amount of money. To see the evolution of the budget attracted from international sources see SAR, Tab. 2.4.3.1 and Tab. 2.4.3.2 (p. 79-81). The budget for the study field "Environmental protection" and the total amount of international research shows that international research funds represent almost 50% from the annual budget of the Department.
Some of the research projects implemented at the study field level attracted international funding such as Horizon Europe, European Joint Programme for Soil Research, or Norway Grants project.

1.4.4. The professional development system of the UL academic staff and the support programme for scientific excellence have been developed and implemented, which provides material support for a publication in the Q1 category according to the classification indicated by the databases Scopus or Web of Science. At the university level, material support has also been provided for the participation of the UL academic staff in international conferences, but it cannot be considered sufficient. Participation of academic staff in international conferences and publication of research results at the international level are supported at the level of structural units of the faculty. This mechanism seems to encourage the teaching staff to be more and more involved in scientific research as it is proved by Table 2.4.4.1. - The compilation of quantitative data on scientific and/or applied research activities during the reporting period in the study field "Environmental protection" (bachelor and master's study programmes – SAR p. 83). This table shows an increasing trend of the participation in international conferences and for the number of studies published in most important journals and publishing houses. It is worth mentioning that the number of popular science publications increased very fast in 2022 (155).
In the experts' discussions with the teaching staff it was pointed out that the mechanism is important for increasing the participation of the faculties in the scientific projects but it would be better for the future to increase the financial contribution from the UL budget.
In conclusion, as it is described in SAR p. 83 and how it was proved by the statements of the faculties and how it was discovered during the expert visit of the research laboratories of the study field, UL has developed mechanisms for the involvement of the teaching staff in scientific research and/or applied research, and they are efficient.

1.4.5. As stated before, the students of environmental science elaborate their final theses in the Department of Environmental Science, in other scientific institutions under the supervision of scientists or solving practically significant issues in enterprises, as well as in state administration institutions (SAR, p. 84). The final theses subjects starting from 2019 can be read in the unified electronic General Catalogue (https://kopkatalogs.lv/ - which is only in Latvian). The subject matters of both bachelor and master's theses are related to scientific research at the faculty and cooperating institutes. The connection with active scientists ensures the connectedness of the topics of the work with the development of projects in significant subject matters at global scale and in Latvia, furthermore, the works are supervised by recognized researchers.
Many students elaborate their bachelor and master's theses in connection with practical projects or tasks at their workplaces. At the bachelor's level, the best students are legally involved in projects

as employees, UL mentions 6 students who had been evaluated very well and they were elected as research assistants. (SAR, p. 84). The students participate in the students' conferences as members of the scientific research project during their bachelor or master studies.
The mechanisms to promote the involvement of the students in scientific research and/or applied research seems to be well-functioning and efficient.
In conclusion, it can be said that the students of the study programmes of all levels are involved in scientific research and/ or applied research.

1.4.6. The main innovation in infrastructure development is the creation of the UL Academic Centre in Torņakalns, where currently located nearby are the House of Nature and the House of Science. Also, during the expert visit on site of the teaching and research infrastructure, all the faculties pointed out that the new building in which the study field programmes are located offers much more possibilities to integrate scientific research into the teaching process. Also, during the expert discussions with the students it was clear that the impact of the new and modern infrastructure completed with the new organizational transformation has a positive impact on the study process. Some of the students (bachelor and master level) pointed out the facilities provided by the library have a significant impact on increasing their learning outcome.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The directions of scientific research of the study field correspond to the development goals of UL and are relevant for the study field. Scientific research and the outcomes thereof are integrated in the study process, in the study programmes, and there is a good international cooperation in which are involved most of the teaching staff of the study programmes. The new and modern infrastructure completed with the new organizational transformation has a positive impact on the study process.
UL has developed mechanisms for the involvement of the teaching staff in scientific research and/or applied research, and they are efficient.The students of the study programmes of all levels are involved in scientific research and/ or applied research.

Strengths:
1. The study field has a good infrastructure for study and scientific research.
2. The teaching staff is involved in major scientific research projects at the national level, and some of them have good international visibility.
3. The labs and the library offer a good environment for the research and study for students (bachelor and master levels) and the faculties.

Weaknesses:
1. During the last 3 years, there has been a decrease of the budget attracted from the international sources.

Assessment of the requirement [2]

1 R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)

Assessment of compliance: Fully compliant

The scientific research is well represented by the international and national scientific programmes carried on by the faculties.

1.5. Cooperation and Internationalisation

Analysis

1.5.1. Based on the provided list of cooperation agreements (Annex 18), it is evident that UL engages extensively with various Latvian institutions. This collaboration spans higher education institutions, employers, scientific institutes, non-governmental organizations, and government agencies. These partnerships are crucial for achieving the aims and learning outcomes of the study fields and relevant study programmes.

The institution collaborates with a broad array of Latvian partners, including

- Higher Education Institutions: The Latvia University of Life Sciences and Technologies, Riga Technical University, Daugavpils University;
- Employers and Employer Organizations: JSC “Latvijas valsts meži”, Ltd. “Rīgas meži”, Ltd. “Envirotech”;
- Scientific Institutes and Research Centers: Latvian State Institute of Forestry Science “Silava”, SRI “BIOR”, Latvian Biomedical Research and Study Centre;
- Government and Non-Governmental Organizations: Nature Conservation Agency, Latvian Environment, Geology and Meteorology Centre (Perpetual), Latvian Geospatial Information Agency.
- Contribution to Educational Aims and Learning Outcomes

The partnerships focus on key activities that significantly enhance the educational experience:

- Educational Activities: Institutions like JSC “Latvijas valsts meži” and Ltd. “Envirotech” provide lectures, integrating industry knowledge and practices into the curriculum.
- Research and Applied Studies: Collaborations with research bodies such as the Latvian State Institute of Forestry Science “Silava” and SRI “BIOR” facilitate scientific research and applied studies, contributing to students' practical skills and academic growth.
- Organization of Conferences and Seminars: Hosting scientific conferences with partners such as JSC “Latvijas valsts meži” provides students with networking opportunities and exposure to the latest research developments.

The majority of the agreements are either perpetual or indefinite, indicating ongoing collaboration. However, some agreements have specific end dates, and their current status should be verified: SRI “BIOR” (up until 2025), Riga Technical University (up until 2030), Daugavpils University (up until 2025).

Additionally, a few agreements have already expired and may need renewal or review: Institute of Agricultural Resources and Environment (Taiyuan, China) (up until 2022), SJSC “Latvijas dzelzceļš” (up until 2022), Ltd. “Vides konsultāciju birojs” (up until 2021)

JSC “Grindeks” (up until 2021), Ltd. “Latvijas šķirnes sēklas” (up until 2022), Finnish Institute of Natural Resources (Finland) (2017–2022), Latvian Peat Association (up until 2022).

In SAR section 2.5.1, the involvement of social partners in curriculum development is characterised. The social partners participate both in the development of the study programme content and giving guest lectures during studies. Study tours are also an essential element of the study content. They are an integral part of the study programmes, providing students with practical learning experiences outside the classroom setting, and exposing students to real-world environments: wastewater treatment plants, environmental management solutions in protected areas, the Latvian Environment, Geology and Meteorology Centre.

The cooperation partners are selected taking into account three main conditions: 1) the complementarity of competence and the directions of practical activity, 2) functions in the Latvian environmental protection system, and contribution to ensuring the study process, 3) existing cooperation experience in Latvian and international cooperation networks. (SAR, p.86) In several discussions during the expert visit it was emphasised that choosing cooperation partners UL also look for some possible contribution to the achievement of the goals of the study field.

UL exhibits a robust network of partnerships with various Latvian institutions, significantly contributing to the educational and professional development of its students. These collaborations

ensure that the study programmes remain relevant and aligned with industry standards and scientific advancements. While most agreements are current and ongoing, a few have expired and should be reassessed to maintain the institution’s strong collaborative framework.

1.5.2. As mentioned in its website - the University of Latvia (UL) actively participates in international organizations and networks such as EUA, UNICA, and the Utrecht Network, promoting diverse exchanges and internationalization in education and research. UL maintains bilateral cooperation agreements with 232 universities in 53 countries and regions, and has signed 1020 agreements with 447 European partner institutions. The university's involvement in ERASMUS+ projects, including Capacity Building, Strategic Partnership, Knowledge Alliances, and Jean Monnet, has been instrumental in introducing innovative educational methods and enhancing staff competencies. UL's participation in the Erasmus Mundus programme has significantly increased international student exchanges, especially from the Western Balkans, Russia, Central and Southeast Asia, and South Africa. Additionally, UL's active engagement in research projects under Horizon 2020, EU, and UNESCO has fostered the development of top-level research initiatives and the creation of Centres of Excellence, making UL an attractive destination for both full-time and exchange international students. (https://www.lu.lv/en/cooperation/international-cooperation/)
In addition to the information available on the university website, the self-assessment report shows that UL SF “Environmental Protection” has concluded 20 Erasmus+ cooperation agreements with foreign universities for studies in environmental science (SAR, p.87-88, Table 2.5.2.1). The cooperation agreements have been signed with 4 universities in Germany, 2 universities in France, 2 in Poland, 2 in Slovenia, 2 in Finland, 2 in Spain, 2 Turkey, and also with one from each of the following countries: Denmark, Italy, Netherlands, and Sweden. The criteria for attracting foreign partners include promoting academic mobility, fostering research collaboration, and learning best practices in study content and methods. Partnerships are developed through participation in international networks like the Baltic University Program, COST projects, and utilizing EU cooperation opportunities. Agreements are regularly updated, and each semester, UL FGES discusses Erasmus+ opportunities with students, covering partner universities, scholarships, and conditions. Interested students, who must have a weighted average grade of at least 7 points from the last semester, submit motivation letters and applications, which a commission reviews. New partnerships are sought through the faculty's scientific contacts and the offers from other universities that meet UL's criteria.
UL is part of the FORTHEM Alliance, promoting lecturer mobility and student exchanges. The SF EP maintains bilateral agreements with institutions such as the National University of Food Technology in Ukraine, and the Academy of Sciences of Shaanxi province in China. Many of the teaching staff are involved in international societies and organizations, contributing as peer reviewers and editorial board members of scientific journals. Additionally, UL's participation in Erasmus Mundus, Horizon 2020, EU, and UNESCO projects has bolstered its research capabilities and international student engagement.

1.5.3. As mentioned in SAR Section 2.5.3. page 89, until now, the UL FGES has not implemented specific measures to attract foreign students, as this responsibility lies with a separate unit within the university dedicated to student recruitment. The primary strategy for attracting international students involves cooperation with recruitment agencies abroad. To support this effort, the faculty creates informative materials and maintains an English-language website that provides detailed information about study opportunities, application procedures, and other relevant topics for prospective international students.
In terms of attracting foreign teaching staff, several mechanisms are employed:
1. International tenders for vacant teaching positions, particularly for professors and tenured professors.

2. Recruitment of foreign teaching staff within the framework of UL's academic staff renewal and competence improvement projects.
3. Expanding contacts established through international scientific cooperation to attract researchers as teaching staff.
Despite these efforts, the number of foreign students and visiting teaching staff could have been a lot higher during the reporting period. In the study field Environmental Protection, 57 foreign students have studied during the recent years (SAR, Table 2.5.3.1). According to Annexes 14 and 15, engagement with foreign students and staff has primarily been realized through the Erasmus+ mobility programme.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The University of Latvia demonstrates a strong commitment to both local and international cooperation and also mobility projects, with numerous agreements and active participation in international networks and projects. However, there are areas for improvement, particularly in detailing cooperation structures, enhancing specific measures to attract foreign students, and increasing engagement with foreign teaching staff and students. Addressing these weaknesses could further strengthen UL's internationalization efforts and the overall quality of its study programmes.

Strengths:
1. Robust local and international cooperation, as evidenced by numerous bilateral agreements and active participation both in international and local organizations and networks.
2. Effective use of ERASMUS+ and other international programmes to enhance staff competencies and introduce innovative educational methods.
3. Well-structured processes for developing new partnerships and regularly updating existing agreements.

Weaknesses:
1. Limited detailed information on the structure and frequency of curriculum updates based on industry feedback in domestic cooperation.
2. Insufficient specific measures implemented by the faculty to attract foreign students directly, relying instead on a separate university unit.
3. The number of foreign students and visiting teaching staff is lower than expected, indicating potential areas for improvement in international attraction efforts.

Assessment of the requirement [3]

1 R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.

Assessment of compliance: Partially compliant

The cooperation with Latvian and foreign organizations within the study field ensures the achievement of the study field aims through robust international partnerships and active participation in global networks. However, there are areas for improvement in the detailed structuring of domestic cooperation and the direct attraction of foreign students and academic staff.

1.6. Implementation of the Recommendations Received During the Previous Assessment Procedures

Analysis

After the previous visit of study field assessment experts in 2012, three primary recommendations were provided, all of which have been fully implemented. The key changes include significant improvements in the infrastructure and research capacity of the university, particularly in research-based studies. This ongoing process has also led to enhancements in the content of natural sciences and the expansion of engineering study courses in environmental science study programmes.
For the study programme “Research and Protection of Cultural and Environmental Heritage,” both short-term and long-term recommendations were issued during the licensing process and inclusion in an accredited study field. These recommendations have been largely implemented or are in the process of being implemented, with ongoing efforts to enhance the study programme content, structure, and international appeal.
The University of Latvia has demonstrated a strong commitment to implementing the recommendations received during previous accreditation and licensing procedures. These efforts have led to substantial improvements in infrastructure, curriculum content, and research integration, ensuring that the study programmes remain relevant, comprehensive, and aligned with current academic and industry standards. The ongoing implementation and adaptation of recommendations reflect the university’s dedication to maintaining high-quality education and continuous improvement in response to expert feedback.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The University of Latvia has demonstrated a strong commitment to addressing and implementing recommendations from previous accreditation procedures. The efforts have resulted in substantial improvements across various aspects of the institution, particularly in infrastructure, curriculum development, and international collaboration. The analysis outlines the key strengths and areas for improvement observed in the university's approach to implementing these recommendations, highlighting significant achievements and ongoing challenges (Annex 21P _Implement_Recommend “ Report on the implementation of recommendations”).

Strengths:
1. Full Implementation of Previous Recommendations: The University of Latvia has successfully implemented all three recommendations provided during the previous accreditation visit in 2012. This includes significant infrastructure improvements and increased emphasis on research-based studies.
2. Infrastructure Development: The construction of the UL Academic Centre, including the House of Nature, has greatly enhanced the university’s capacity to support environmental education, providing state-of-the-art facilities and technical support for studies.
3. Curriculum Enhancement: The integration of engineering sciences into the environmental science study programmes has been achieved through the annual updating of study courses. This ensures that the curriculum remains current and relevant to industry needs.
4. Programme Transformation: The successful transformation of the Environmental Management study programme into a specialized master's study programme with a focus on Management, Administration, and Real Estate Management reflects the university's responsiveness to recommendations and market demands.
5. Ongoing Improvements: Continuous efforts to improve the content and structure of study programmes, such as those for “Research and Protection of Cultural and Environmental Heritage,” demonstrate a commitment to maintaining high standards. This includes incorporating interdisciplinary methodologies and enhancing study course content based on expert feedback.
6. International Collaboration and Appeal: The development of international cooperation networks and efforts to attract students globally enhance the university’s profile and the appeal of its study

programmes.
7. Faculty Development: Initiatives to ensure that all teaching staff have at least a B2 level of English proficiency and the adaptation of study course descriptions for international students highlight the university's focus on quality teaching and global standards.

Weaknesses:
1. Pending Recommendations: Some recommendations, such as the provision of free-of-charge copies for students and the final decision on the name of the awarded degree for certain programmes, remain unresolved. This indicates areas where further progress is necessary.
2. Ongoing Improvement Process: Although significant strides have been made, the university acknowledges that enhancing infrastructure, research integration, and curriculum development is an ongoing process. Continuous monitoring and adaptation are required to keep pace with evolving scientific and market trends.
3. Inter-faculty Coordination: The need for planned inter-faculty discussions and a SWOT analysis to revise study course content, particularly for humanities courses oriented towards environmental philosophy, points to a need for better coordination and collaboration across different faculties.

Assessment of the requirement [4]

1 R4 - Elimination of deficiencies and shortcomings identified in the previous assessment of the study field, if any, or implementation of the recommendations provided.

Assessment of compliance: Fully compliant

The University of Latvia has made substantial progress in implementing the recommendations from previous assessment procedures, resulting in notable improvements in infrastructure, curriculum, and research integration. The university's proactive approach to addressing expert feedback and its commitment to continuous improvement underscore its dedication to providing high-quality education in environmental science and related fields. However, ongoing efforts and attention to pending recommendations are crucial to maintain and further enhance the quality and relevance of its study programmes.

1.7. Recommendations for the Study Field

Short-term recommendations

Stronger system for support for improving lecturers' study courses should be implemented after students' yearly evaluation surveys.
Introduce short-term initiatives such as peer tutoring, academic workshops, and counseling services to support first-year students and reduce attrition rates. Monitor the effectiveness of these measures and adjust as needed.
Promote and facilitate greater participation in Erasmus+ mobility programme for both students and staff. Provide clear information, support, and incentives to encourage involvement in these opportunities.
Regularly update and enhance the content of study programmes based on stakeholder feedback and emerging trends. Incorporate interdisciplinary methodologies and ensure that study course delivery methods are engaging and effective.
Perform regular SWOT analyses to identify new strengths, weaknesses, opportunities, and threats. Use the findings to inform strategic planning and continuous improvement efforts.

Evaluate current feedback processes to identify inefficiencies and streamline collection and analysis procedures.
Inform, and emphasise it to the teaching staff about good lecturing practice. Some examples that students enjoyed: discussions, targeted questions, work in small groups, debates, role games, game of resource planning, examples where the knowledge can be applied practically. Students don’t suggest for the lecturer to just read the presentation without actively involving students.
Perform regular meetings to disseminate information about the possibilities of accessing the international research funds.
Launch targeted marketing campaigns focusing on unique study programmes, faculty expertise, and research opportunities to attract foreign students.
Organize annual workshops with faculty and industry representatives to review and update the curriculum, ensuring it remains aligned with current industry needs.

Long-term recommendations

Develop and implement comprehensive support programmes aimed at reducing the high student attrition rate, particularly in the first year. This could include mentoring, academic advising, and enhanced onboarding processes to better integrate students into the university environment.
Introduce preparatory courses and bridge study programmes to ensure a more uniform level of preparedness among incoming students. Focus on strengthening foundational knowledge in key areas relevant to the study field.
Actively recruit more foreign visiting lecturers to bring diverse perspectives and enhance the internationalization of the study programmes. Leverage existing partnerships and seek new collaborations to facilitate this.
Establish a direct follow-up study programme at the master's level for the "Research and Protection of Cultural and Environmental Heritage" to provide a clear academic and professional progression path for graduates of the bachelor's study programme.
Pursue additional funding sources, including EU funds and private sector partnerships, to enhance research capabilities and provide more opportunities for student involvement in research projects. Strengthen grant application processes and support for faculty in securing research funds.
Expand international cooperation networks, particularly within the EU, to enhance the university’s profile and attract students globally. Focus on developing joint programmes, collaborative research projects, and student and staff exchange initiatives.
Explore ways to improve student well-being by addressing potential gaps in prior knowledge, motivation, and external factors. Evaluate if changes are necessary and review and adjust study programme content, teaching methods, and organisation to support student success better.
Incorporate targeted enhancements to address challenges related to student well-being and the academic rigor of studies.
Investigate and address factors contributing to the challenging perception of the study process, ensuring supportive learning environments and effective teaching methods.

Enhance communication strategies to inform employers about their role in providing feedback and enhancing study programme quality.
Suggest to plan the field specific load balancing. Teaching staff may want to dedicate more time for scientific activities.
University administration may consider that: 1) in contrast to existing practice, teaching staff are spending more time for study course preparation than it is included in official working load calculations; 2) teaching staff would like a more detailed counting of responsibilities and their corresponding workloads in the workload documents. Some lecturers would like to organize their lectures in modules – a combined system could probably be appropriate.
Take into consideration to organize an international scientific conference around the topic of environmental heritage in collaboration with partners from the academic alliances in which UL is a member.
Develop faculty-led recruitment initiatives targeting international students, including participation in international education fairs and virtual open days hosted by faculty members.

II - "Research and Protection of Cultural and Environmental Heritage" ASSESSMENT

II - "Research and Protection of Cultural and Environmental Heritage" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1. The bachelor study programme "Research and Protection of Cultural and Environmental Heritage" at the University of Latvia is fully aligned with the Environmental Protection study field, as indicated in SAR Section 3.1.2. The study programme's design integrates environmental research with disciplines such as art history, humanities, and restoration sciences, offering an interdisciplinary approach that is essential for addressing both cultural and environmental heritage (Meeting with the study programme director).

Spanning four years and totaling 160 CP (240 ECTS), the study programme's duration ensures that students receive comprehensive education that adequately covers interdisciplinary content. It includes a mix of compulsary and elective study courses in environmental science and cultural heritage, providing a balanced and thorough understanding of the field.

The curriculum is structured to meet level 6 of the European and Latvian Qualifications Frameworks, ensuring that students acquire both theoretical knowledge and practical skills necessary for the field (SAR Section 3.1.2; Interview with faculty members). Admission to the study programme is competitive, requiring results from centralized exams in Latvian, foreign language, and mathematics, which supports the study programme’s goal of developing well-prepared graduates.

Upon successful completion, students are awarded a Bachelor’s degree of Natural Sciences in Environmental Science, which accurately reflects the study programme's interdisciplinary nature (SAR Section 3.1.2; Meeting with study programme director). Although there is currently no direct master’s study programme available, the development of such a programme would provide students with a clear pathway for further academic advancement.

In summary, the study programme is in strong compliance with both national and international standards within the Environmental Protection field. It prepares students for a range of career opportunities, though the addition of a master’s study programme would further support the academic progression and specialization.

2.1.2. The bachelor study programme "Research and Protection of Cultural and Environmental Heritage" at the University of Latvia is designed to be fully compliant with the Environmental Protection study field, as indicated in SAR Section 3.1.2. The study programme's aim is to equip students with the knowledge and skills necessary to research, protect, and manage both cultural and environmental heritage. This is achieved through an interdisciplinary approach that integrates environmental research with art history, humanities, and restoration sciences (Meeting with the study programme director).
The learning outcomes of the study programme are clearly defined and aligned with the aims of the study field (SAR Section 3.1.2). Students are expected to develop a deep understanding of environmental science while gaining insights into cultural heritage conservation. These outcomes ensure that graduates are capable of addressing complex issues at the intersection of these disciplines, reflecting the interdisciplinary nature of the study programme.
Spanning four years and totaling 160 CP (240 ECTS), the study programme's duration is justified by the need to provide comprehensive coverage of the interdisciplinary content. The curriculum includes a balanced mix of mandatory and elective courses, covering essential topics in environmental science and cultural heritage. This structure supports the learning outcomes by ensuring that students receive both broad and specialized knowledge in these areas. It adheres to the Cabinet of Ministers' regulations and meets the requirements for academic education standards in Latvia, with a study programme code (43431) that accurately reflects its study field and educational level.
The study programme is designed to meet level 6 of the European and Latvian Qualifications Frameworks, which ensures that students acquire both theoretical and practical competencies essential for the field (SAR Section 3.1.2; Interview with the study programme director and teaching staff). The learning outcomes are further reinforced by the study programme's rigorous admission requirements, which include centralized exams in Latvian, foreign language, and mathematics. This ensures that incoming students have a strong foundational knowledge to build upon.
Upon completion, students are awarded a Bachelor's degree of Natural Sciences in Environmental Science, which accurately reflects the interdisciplinary focus of the study programme. The degree title is justified by the significant proportion of environmental science courses within the curriculum, which align with the study programme's learning outcomes.
While the study programme currently lacks a direct master's follow-up, the development of such a study programme would provide a seamless transition for students wishing to pursue advanced studies. This would further support the achievement of the learning outcomes by allowing students to deepen their expertise in the field.
In summary, the study programme not only complies with the requirements of the Environmental Protection study field but also effectively achieves its aims and learning outcomes. The study programme is well-aligned with national and international standards, preparing students for diverse career opportunities in both environmental and cultural heritage sectors.

2.1.3. The academic bachelor study programme "Research and Protection of Cultural and Environmental Heritage" has been significantly revised since its initial licensing on August 24, 2022, in response to both regulatory requirements and expert recommendations. These changes reflect the study programme's commitment to aligning more closely with the evolving demands of the field and ensuring that students receive a comprehensive and relevant education.
One of the key revisions involved renaming several study courses and adjusting the number of credits associated with them. This was driven by two main factors: first, the recommendations from the licensing commission experts who advised reducing the number of study courses by combining them to streamline the curriculum (SAR Section 3.1.1). This consolidation not only simplifies the learning process but also enhances the coherence of the study programme, making it more manageable for students and aligning better with the integrated nature of the field (Expert panel

analysis). Second, the adjustments were made in anticipation of transitioning to the European Credit Transfer and Accumulation System (ECTS), which required the study plan to eliminate courses with odd credit points while ensuring the overall study programme remains within the required 160 CP (240 ECTS) (SAR Section 3.1.1). This strategic alignment with ECTS standards is crucial for ensuring the study programme's compatibility with European higher education frameworks, thus enhancing student mobility and international recognition of the degree.
In addition to these structural changes, the study course descriptions were thoroughly reviewed and updated to correct errors and inaccuracies, particularly in the English versions. This revision process was not merely administrative but was crucial in addressing the substantive issues highlighted by the licensing commission experts, who pointed out the need for greater precision in course content descriptions. The revision of 18 study course descriptions demonstrates the study programme's dedication to maintaining high academic standards and ensuring that the content is both accurate and reflective of current academic and professional expectations.
A significant change was the renaming of the study programme from "Cultural and Environmental Heritage" to "Research and Protection of Cultural and Environmental Heritage." This change was implemented during the process of including the study programme in the accredited study field on October 25, 2023 (SAR Section 3.1.1). The new title more accurately reflects the study programme's expanded focus on both research and practical applications in heritage protection, which aligns with the interdisciplinary nature of the field (Meeting with study programme director). This renaming also enhances the study programme's appeal and clarity to prospective students and employers, as it more explicitly conveys the breadth and depth of the curriculum.
The rationale behind these changes is well-founded and complies with both expert recommendations and regulatory requirements. By reducing the number of study courses and adjusting credit points, the study programme not only complies with the ECTS credit system but also achieves a more streamlined and cohesive structure, which is essential for effective learning outcomes (Expert panel analysis). The updates to study course descriptions are particularly significant, as they ensure that students and faculty have a clear and accurate understanding of the course content, which is vital for maintaining the study programme's academic integrity and quality (Expert insight). Furthermore, the renaming of the study programme enhances its strategic positioning within the study field, clearly reflecting its objectives and scope.

2.1.4. The academic bachelor study programme "Research and Protection of Cultural and Environmental Heritage" presents a compelling economic and social justification for its implementation, highlighting a critical need for cross-sectoral study programmes within Latvia's higher education system. This need is particularly urgent in light of the European Union's recommendations and the Faro Convention (2005), both of which advocate for an interdisciplinary approach to cultural heritage studies. The alignment with these frameworks underscores the study programme's relevance on a broader European scale, indicating that Latvia is actively responding to international educational trends and commitments.
The integration of cultural heritage studies into the environmental sciences curriculum is reflective of global academic trends, where such interdisciplinary study programmes are increasingly common in European and international universities. These study programmes are essential for preserving cultural heritage and ensuring that specialists are adequately trained to meet the sector's evolving demands. The study programme's design, which involves professional organizations in curriculum development, ensures that it remains relevant and compliant with the practical needs of the sector (SAR Section 3.1.3). This collaboration between academia and industry not only enhances the curriculum's applicability but also strengthens the employability of graduates.
In the context of Latvia, this bachelor's study programme stands out as unique, being the only independent study programme of its kind at the national level. It provides a crucial educational pathway for students coming from secondary vocational education in restoration and cultural

heritage, offering them an opportunity to advance to higher education. This addresses a significant gap in the Latvian educational system, which has been lacking in flexible and successive educational offers that facilitate a smooth transition from secondary to higher education. The study programme thus fills an essential niche, contributing to the broader educational landscape by bridging this gap.
Although the study programme only began in the 2022/2023 academic year and has yet to produce graduates, its necessity is already evident. The high demand for well-educated specialists in the cultural heritage sector, coupled with strong interest in related study programmes such as the restoration specialty at the Art Academy of Latvia (LMA), suggests that the study programme is meeting a critical need (SAR Section 3.1.3; Survey data analysis).The competition for entry into related fields indicates that the study programme is not only timely but also has a good reputation and potential for attracting high-caliber students.
The interdisciplinary nature of the study programme, which incorporates environmental sciences, chemistry, geology, humanities, and the arts, is well-aligned with the recommendations of the OECD Frascati Manual 2015. This manual emphasizes the importance of conservation activities within research and development, thereby validating the study programme's comprehensive approach. By equipping students with a wide range of skills and knowledge, the study programme prepares them for both the local labor market and further scientific research. This broad-based education is crucial in a rapidly evolving sector where interdisciplinary competencies are increasingly valued.
The study programme's potential to foster cross-sectoral research and prepare specialists for diverse roles within the cultural heritage sector is significant. Graduates are expected to find employment in various sectors, including government institutions, private enterprises, and research organizations. The interdisciplinary competencies they acquire are designed to enable them to tackle complex issues related to cultural and environmental heritage, ensuring their relevance and employability in a dynamic and evolving field (SAR Section 3.1.3; Labor market analysis). This aspect of the study programme is particularly important, as it not only meets current labor market demands but also anticipates future needs, thereby securing the long-term viability of the study programme.
In conclusion, the bachelor study programme "Research and Protection of Cultural and Environmental Heritage" is both economically and socially justified. It addresses a critical need for interdisciplinary education in Latvia, aligns with international and European standards, and meets the demands of the labor market. The comprehensive and interdisciplinary nature of the curriculum, along with its alignment with global trends and local needs, ensures that the study programme is not only relevant but also has the potential for significant impact in the cultural heritage sector. The proactive approach to curriculum development and the strategic focus on cross-sectoral skills further reinforce the study programme's value and sustainability in the long term.

2.1.5. Not applicable.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The academic bachelor study programme "Research and Protection of Cultural and Environmental Heritage" demonstrates strong compliance with the study field Environmental Protection. The study programme is well-aligned with national and international educational standards, ensuring a comprehensive and interdisciplinary education for its students. It adheres to the Cabinet of Ministers' regulations and meets the requirements for academic education standards in Latvia, with a study programme code (43431) that accurately reflects its study field and educational level.
In summary, the bachelor study programme "Research and Protection of Cultural and Environmental Heritage" at UL is well-structured. It is economically and socially justified, addressing a critical need for interdisciplinary education in Latvia and preparing graduates for diverse roles in the cultural heritage sector. However, there is a need to develop a corresponding master's study programme

and address regulatory alignment challenges to further strengthen the study programme's impact and continuity.

Strengths:
1. The study programme effectively combines environmental sciences with cultural heritage studies, art history, humanities, visual arts, and restoration sciences, offering students a broad and diverse education.
2. The study programme aligns with both the European and Latvian Qualifications Frameworks, ensuring graduates acquire relevant skills and knowledge that meet state academic education standards.
3. The four-year duration is well-justified, allowing adequate time to cover extensive interdisciplinary content, with a modular design that integrates theoretical and practical training effectively.
4. The study programme addresses a critical need for interdisciplinary education in Latvia, offering a valuable pathway for students from secondary special education to higher education in restoration and cultural heritage.
5. Despite its recent inception, the study programme has already demonstrated high demand, reflecting its strong reputation and the necessity for such educational offerings in Latvia.

Weaknesses:
1. The absence of a direct master's level follow-up limits the academic progression for students, highlighting the need for developing a corresponding master's study programme.
2. As a newly implemented study programme, there may be early challenges related to study course adjustments and administrative processes, requiring ongoing monitoring and responsive feedback mechanisms.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1. In the higher education institution area in Europe, not just in Latvia, the need for interdisciplinary study programmes must be fulfilled. The SAR (p. 167) basically says that the need to create this study programme was caused by the lack of interdisciplinary study programmes rooted in the ideas and processes of the cultural and environmental heritage field in the higher education of Latvia and an insufficiently developed interdisciplinary research environment. The argument is true not just for Latvia but for a lot of other countries from the EU and also true is the necessity to have good specialists in this domain. From this point of view, the initiative of UL to implement such a study programme must be saluted.
The basic structure of the study programme consists of four thematic modules: 1. Environmental Sciences and Cultural Heritage; 2. Environmental Sciences; 3. Humanities and Arts; 4. Theory and Methods of Cultural and Environmental heritage. The structured four thematic modules enhance clarity and facilitate understanding of interconnections between subjects.
A detailed description of the study courses included in each thematic module and the amount of their credit points can be found in the full-time study plan of the Study Programme (Annex 40). There are some shortcomings noted by the experts concerning study courses and reading lists. The study course Theory of Styles and Structures of Art and Architecture requires prior completion of Protection of the tangible cultural heritage in the context of international legislation as a prerequisite, yet both study courses are scheduled in the same semester. Some study course compulsory reading lists include literature in different languages, potentially challenging for English-speaking students who do not know Latvian. For example, the study course Natural Systems, Their Diversity and Protection lists compulsory reading in Latvian, German, and English, which could be problematic for both Latvian and English speakers. In contrast, the study course Philosophical and

Mythological Thinking: Transformations of Thinking Patterns in European Culture includes compulsory reading exclusively in Latvian. Some study course reading lists could benefit from more recent materials appropriate to the thematic content. For example, the thematic relevance of sources like Maslow, P. Chemical Materials for Construction. Structures Publishing company, 1974 might be outdated. Within the course description the assignment of Chemical Sciences to the study course Civil Protection may require review for alignment. The collaboration of UL with the Art Academy of Latvia is reflected not just by the presence of the faculties from the Art Academy of Latvia in the study programme but also by, as was pointed out during the discussion with the teaching staff, using facilities of the Art Academy of Latvia by the study programme, and by common research projects in which are involved students, too.

The study programme aligns well with the State Academic Education Standard, as evidenced by the study programme aims and expected learning outcomes (Conformity with standarts_CH.docx). However, slight improvements in defining aims and outcomes could better reflect the need for awareness of current knowledge limitations, fostering abilities to identify issues, seek innovations, plan and conduct research, and provide scientifically approved solutions. The study programme's overall volume complies with the standard. The average contact hours slightly exceed the minimum requirement of 40%, with most study courses meeting this threshold (up to 46%), except for "Specialisation Course I: Acquisition of German," which has a lower share of 30% of the study course volume.

The mandatory content volume is fully covered and significantly exceeds the minimum standard specified in the State Academic Education Standard. The study courses, including Civil Protection, Introduction to Basics of Environmental Science, Natural Monuments, Framework for Sustainable Development, Environmental Monitoring Methods, Natural Systems and Their Diversity and Protection, and Ecotoxicology and Chemical Analysis of Contemporary Materials, fully cover the requirements of Civil Protection and Disaster Management Law and Environmental Protection Law.

The study programme’s content is designed in accordance with the Action Program’s “Growth and Employment” specific support goal 8.2.1. undergone Project “Creation of Internationally Competitive Study Programs Promoting the Development of the National Economy of Latvia in the University of Latvia”, defining the requirements set out in the Law on Higher Education Institutions of the RL4 (Cabinet of Ministers No 322 “On the Classification of Education in Latvia” (June 13, 2017, available only in Latvian) and Regulations on the Study Programs and Continuing Education Programs at the UL (Senate Decision No.102 on April 24, 2017) for academic bachelor’s study programmes (SAR p. 171, and Annex 36 - Conformity of the 'Research and protection of Cultural and Environmental Heritage' Bachelor's Study Program with the National Education Standard). The regulations above mentioned are all in accordance with the State Education Standard (Cabinet Regulations No. 240).

The mandatory part of the study programme includes 43 study courses (including a Bachelor’s thesis, two course works and a practice course) with 116 CP in total, including study courses in accordance with the requirements of Civil Protection and Disaster Management Law and Environmental Protection Law. The number of CP of the limited elective part is 38, this part contains 15 study courses. In addition, the study programme has a free elective part of 6 CP. At the end of the study programme, students work on a Bachelor’s thesis corresponding to 10 CP (SAR p. 171, and Annexes 39 and 40P).

The model of interdisciplinary content of the study programme has no direct analogues either in Latvia or in the higher education space of the Baltic region. The interdisciplinary orientation of the study programme is characterized by the title of the study programme, which includes the key word ‘environment’ characteristic to environmental sciences and the words ‘culture’ and ‘heritage’ characterizing humanities and arts. All of this creates the framework for preparing a very good specialist with a holistic approach for cultural and natural heritage. During the experts’ meeting with the academic staff, all participants emphasized the need for the specialists in understanding, analysis and heritage management which is not just from a cultural point of view or just from

environmentalists either.
The learning outcomes of the bachelor study programme are described for each thematic module. Learning outcomes include 11 knowledge, 12 skills and 12 competencies according to thematic study modules (SAR pp. 172-175).
To conclude, it can be said that the content of the study programme is topical, the content of the study courses is interconnected and complementary, corresponds to the objectives of the study programme and ensures the achievement of learning outcomes, as well as meets the needs of the industry, labor market and scientific trends.

2.2.2. Not applicable.

2.2.3. For students to achieve study results – to acquire and strengthen knowledge, skills and develop competence – the study process is dominated by methods in which student activity is essential. The study process uses methods that facilitate student communication in performing study assignments solving real industry challenges by modeling situations (SAR p. 178).
UL, taking into account the principles of student-centric education, is promoting student mobility (recognition of study results), and students engage in studies initiated by academic staff and social activities in society, thus gaining significant experience using the practice acquired in studying. In implementing the internal quality assurance policy, the study programme is implemented so that students are encouraged to actively participate in improving the study process. There are procedures for submitting student proposals, resolving complaints, examining student appeals. The results of student surveys are evaluated and taken into account in the improvement of the study process. All of the above mentioned can be proved by the annual teaching staff assessment realized by the students and during the experts' discussion with alumni and the current students, they express their appreciation for the way the whole process works.
During the experts' discussions with the teaching staff and students, it was pointed out that the use of the e-platform Moodle offers a very good base for communication and learning, but there are some study courses which do not have well-structured information on the platform.
The study methods are currently being adapted to the conditions that the UL resources and the Art Academy of Latvia, the cooperation partner of the study programme, can provide. UL has entered into a co-operation agreement with the Centre for Competence in Vocational Education "National High School of Art" to provide a qualitative study process with premises suitable for art classes. The NVM's methodological materials and objects are also partly used for the study process; however, shortly the performance of studies is planned in the auditoriums and workshops of the "House of Letters". (SAR p. 179).
Studies employ a variety of knowledge acquisition and consolidation methods, such as introductory lectures, interactive lectures, consolidating lectures, and problem-oriented lectures. Practitioners and professionals from different institutions are invited to deliver individual lectures in study courses to promote the unity of theory and practice (SAR p. 147). Seminars in study courses promote students' presentation and discussion skills. To aid students in achieving learning outcomes – in acquiring and consolidating knowledge, skills, and competence – student-centered methods dominate in the study process. The study process is supported by methods that facilitate students' communication in the implementation of study tasks, solving real-world problems, and modelling situations.
To conclude, the study implementation methods have a real contribution to the achievement of the aims and learning outcomes of the study courses and the study programme.

2.2.4. The study programme envisages an "Academic practice course" in the amount of 2 CP, which is comparable with academic practice and, if necessary, the director of the study programme will invite specialists from the field for the successful implementation of the practices (SAR p. 179 and

Annex 40 40P_Course description).
Support for providing the Practice course was expressed by "Daugavpils Mark Rothko Art Center", "Pedvāle Art Park", the National Cultural Heritage board, the management of the Cultural and Historical Heritage Preservation Office and other institutions, whose representatives directly (by teaching study courses) or indirectly (by participating in various measures to promote the study programme) have expressed their readiness to offer internship opportunities to students (SAR p. 179-180). The Practice course is planned in the 7th semester of the study programme and thematically correlates with the Course-work “Development of a Bachelor's Thesis topic project” and therefore supplements both the progress of the thesis and the opportunity to test one's cognitions in practice (SAR p. 180).
The SAR does not describe how students can choose an internship in a foreign language environment but during the expert discussion with the management of the study field and the director of the study programme were presented some projects abroad, projects in which the students from the study programme were involved. Despite the opportunities offered by the UL to choose a possibility to be involved in international projects, due to the fact that almost all are employed, the students were not too keen to take advantage of these opportunities. But the study programme has had just two years of study, and the internship will take place only in 7th semester. There is still time to change the perception among them.

2.2.5. Not applicable.

2.2.6. At the time of the preparation of the report, the students' final theses have not yet been developed, because the study programme has only the first academic year. The director of the study programme has said during the discussion with the expert team that the process is in development as the students will enter the next academic year in their 3rd year of study when they can choose the title of their final thesis among different topics.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Based on the analysis, experts conclude that this is an interdisciplinary study programme that complies with the study field of Environmental Protection. The content of the study programme is well balanced between cultural and environmental study courses, and the management of the department needs to pay attention to maintain this balance. The uniqueness of the study programme not just for Latvian higher education area but for at least the Northeast Europe region is a strong point. From this viewpoint, the future of the graduates to be employed after their graduation, has a very good perspective. Because the study programme started just in August 2022, the number of the students is low, which can be a good thing when they finalize their study because they all have a great chance to find a job in the institutions dealing with cultural and environmental heritage.

Strengths
1. Innovative approach to cultural heritage studies. The Research and Protection of Cultural and Environmental Heritage study programme can provide an additional value for the UL.
2. Interdisciplinarity is used as the main driving factor to achieve learning outcomes. The interconnections between humanities and sciences provide an excellent platform to prepare and to have outstanding specialists in the Latvian cultural and environmental heritage.
3. Students are thrilled with the diversity of content in the curriculum. UL has the advantage to be the first HEI not just from Latvia, but from almost all the Northeast Europe region of the European Union to start a bachelor study programme in these domains.

Weaknesses:
1. The need of the management to pay attention to the balance between cultural and environmental discipline which can create some problems regarding the selection of the specialists involved in the teaching process.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Not relevant

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1. The University of Latvia (UL) has established a comprehensive system for the provision of study, scientific, informative, material, and technical resources, as well as financial support, to ensure the effective implementation of the study programme "Research and Protection of Cultural and Environmental Heritage." These provisions are crucial for achieving the study programme's learning outcomes and ensuring a high-quality study process.
The study programme is implemented at the Faculty of Geography and Earth Sciences (FGES) of UL, with teaching staff sourced from various faculties, including the Faculty of Biology, Faculty of Chemistry, Faculty of History and Philosophy (FHP), Faculty of Humanities (FH), and the Art Academy of Latvia (AAL). This interdisciplinary approach enriches the educational experience by incorporating diverse perspectives and expertise, which is essential for a study programme that spans cultural and environmental heritage.
The study programme's methodological provision includes advanced teaching methodologies and aids available through the Direction of Environmental Protection Studies. These resources consist of books, specialized educational literature, and developed laboratory work descriptions. The inclusion of methodical training and teaching tools from the FHP and FH further supports the implementation of the study programme. This extensive methodological framework ensures that students are well-equipped with the necessary theoretical and practical knowledge.
Material and technical provisions are solid, with the study programme benefiting from access to the AAL library’s resources. This access supports the cultural heritage components of the curriculum, providing students with a wealth of information and research materials. The UL Library's extensive collection, which includes approximately 1.8 million units of information resources, is distributed across eight branch libraries and the Repository. Recent acquisitions (between 2020 and 2022) for the implementation of the bachelor’s study programme “Research and Protection of Cultural and Environmental Heritage” include 364 copies of 214 titles, ensuring that the library's collection remains up-to-date and relevant to the study programme's needs (SAR Section 3.3.1).
Financial provision is also well-structured. The UL employs a dual-funding approach that includes state budget subsidies and tuition fees, ensuring that sufficient financial resources are available to support the study process. The administrative structure, as defined by the Administration Statute and the Administrative Regulations, provides a clear framework for decision-making and resource allocation. This framework ensures that financial resources are managed efficiently and effectively, facilitating the smooth operation of the study programme.
During the expert visit, it was noted that while the overall support system is robust, some areas require improvement. For instance, students reported that mandatory field trips, which are integral to their education, sometimes need to be paid out-of-pocket. Despite this, students expressed that

these trips significantly enhance their practical knowledge and insights. Additionally, involved partners, such as institutions and museums (SAR Section 3.3.1), contribute to the study programme by offering lectures and excursions, providing students with practical experience and in-depth knowledge of the field .

2.3.2. Not applicable.

2.3.3. The University of Latvia (UL) has established a financial framework to support the study programme "Research and Protection of Cultural and Environmental Heritage." This framework ensures that funding is available to fully implement the study process and supports the study programme's development. However, the financial viability of the study programme is contingent upon maintaining a minimum number of students.
According to the Self-Assessment Report (SAR, p.183), the primary source of funding for this study programme is the tuition fees paid by students. The tuition fee is set at 2400 EUR per year. For the academic year 2022/2023, the study programme's estimated annual income with 70 students is 168,000 EUR. The total annual cost of implementing the study programme is 97,073 EUR, which is distributed among teaching staff costs (41.5%), general staff costs (19.5%), infrastructure expenditure (11%), property and services (2%), and indirect costs (26%).
The financial analysis indicates that the study programme requires at least 81 paying students to be profitable. Currently, with only 8 students enrolled, the study programme generates an annual income of 19,200 EUR, which is significantly below the required threshold for profitability. This shortfall highlights a critical dependency on student numbers to ensure financial sustainability. The university's strategy involves forecasting the possible number of students for the next three academic years to adjust funding and resource allocation accordingly (SAR Section 3.3.3).
Furthermore, the SAR reveals that the study programme’s financial viability is not guaranteed if the number of enrolled students falls short of the projections. This dependency on student enrollment underscores the importance of effective student recruitment strategies and possibly creating state-funded student places to enhance the study programme’s attractiveness and financial stability.
During the expert visit, it was noted that despite the overall robustness of the financial system, there are concerns regarding the affordability of mandatory field trips, which are an integral part of the study programme. These trips are sometimes paid for by students out-of-pocket, which could be a barrier to participation and a potential area for improvement in financial planning.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Criterion for Resources and Provision of the Study Programme is partially compliant because it is not profitable yet and is insufficient in funds for mandatory field trips, as the study programme is funded by tuition fees. Overall, the study programme is built in a comprehensive manner and can bring students a great overview. There is a system for material, library resources and databases and attraction of teaching staff in place for the study programme to be carried out fully. As the study programme is not yet profitable, a system for attracting students should be carried out. Experts verified that students were satisfied with the balanced study content.

Strengths:
1. Several libraries are available for students including libraries out of UL.
2. In-depth practical knowledge is available for students through on site visits to partners.

Weaknesses:
1. Number of students in the study programme currently is too low.
2. The study programme is not profitable yet.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Partially compliant

The study programme is compliant with most requirements to ensure conditions of implementation of the study programme, but lacks funding for on site field trips, as it is a tuition funded study programme and the study programme is not yet profitable. Also more students should be attracted.

2.4. Teaching Staff

Analysis

2.4.1. The study programme is implemented by a diverse group of 49 teaching staff members, including 4 professors, 5 associate professors, 14 assistant professors, 8 researchers, 1 leading researcher, and 18 industry professionals, including LMA lecturers and guest lecturers. Among these, 34 hold doctoral degrees, 14 have master's degrees, and one is a restorer-master, ensuring the teaching staff's qualifications meet the study programme's and regulatory enactments' requirements. (SAR p. 186). Recent changes include a lecturer obtaining a PhD and another being appointed as a professor, further enhancing the qualifications of the staff. This diverse and highly qualified team contributes to achieving the study programme's aims and learning outcomes across various disciplines.
A total of 14 associate professors and professors are engaged in the implementation of the study programme, in accordance with Article 55, Part 1, Clause 3 of the Law on Higher Education Institutions. (SAR p. 156) There is a discrepancy in the information as 4 associate professors and 4 professors are indicated in the SAR Annex Basic information on the teaching staff involved in the implementation of the Study field while 4 professors and 5 associate professors are indicated in SAR p.186.
Upon examining the study programme "Research and Protection of Cultural and Environmental Heritage" (43431) and the curriculum vitae of its faculty members (Annex CV_ENG.docx), it is clear that there is a strong correlation between the teachers’ areas of expertise and the subjects they teach. However, there are some discrepancies in the provided information regarding English language proficiency among the teaching staff as presented in different annexes (SAR Annexes: Basic Information on the Teaching Staff Involved and Biographies of the Teaching Staff Members (Curriculum Vitae in Europass Format)).
During the assessment visit and subsequent review of the available materials, it can be concluded that the teaching staff possess the requisite qualifications and are sufficient in number to effectively implement the study programme. The interdisciplinary nature of the "Research and Protection of Cultural and Environmental Heritage" study programme is well-represented by the diverse qualifications and professional interests of its teaching staff.

2.4.2. The University of Latvia (UL) ensures that changes in teaching staff do not negatively impact the study programme's quality by involving highly qualified industry specialists, experts, and lecturers from other educational and cultural institutions. The study courses "Natural Monuments" and "Biocorrosion and Biodegradation" have seen changes in lecturers, while new lecturers have joined study courses like "Data Analysis and Vector Graphics in Cultural Heritage Field." The introduction of a new study course on "Digitization Methods of Cultural and Environmental Heritage" demonstrates the study programme's adaptability and commitment to providing relevant and up-to-

date education. (SAR p. 187). However, to further enhance the study programme, efforts could be made to attract foreign teaching staff to broaden the international perspective and enrich the learning experience.
Nevertheless, it can be concluded that UL aims to maintain the integrity and excellence of its study programme, regardless of changes in teaching staff.

2.4.3. Not applicable.

2.4.4. Teaching staff members have demonstrated significant scholarly output, with nearly 200 scientific publications indexed in the Web of Science and Scopus databases between 2016 and 2021. Additionally, several lecturers from the Art Academy of Latvia are involved in artistic creativity, with personal exhibitions, curatorial work, and various awards, underscoring their practical experience and contributions to their fields. These achievements align with the Law on Higher Education Institutions' requirements, ensuring that staff members are active contributors to their disciplines. (Annexes CV_Eng.docx and 16P_Publicat_of_staff.docx)

2.4.5. The study direction council periodically reviews questions concerning the progress of studies. A structured mechanism for the mutual cooperation of the teaching staff has been established to facilitate the enhancement of study courses. The effectiveness of this cooperation was evidenced during the experts' visit.
A strong mechanism for mutual cooperation among teaching staff is in place, facilitating the achievement of the study programme's goals. Examples include the coordination of study course content between "Theory of Styles and Structures of Art and Architecture" and "Representation of Geometric Objects and Space" to enhance learning outcomes. Regular discussions among lecturers on final evaluation tasks and necessary equipment further illustrate effective collaboration. The visit to the Estonian Academy of Arts and subsequent agreement for closer cooperation and student exchange highlight the study programme's commitment to continuous improvement and international collaboration. (SAR p. 188) While implementing the modules, the lecturers actively communicate in order to synchronize the content of concurrent study courses.
The established mechanism for mutual cooperation of the academic staff ensures that the aims of the study programme are achieved, providing students with a high-quality education.

Conclusions on this set of criteria, by indicating strengths and weaknesses

The University of Latvia's study programme "Research and Protection of Cultural and Environmental Heritage" benefits from a highly qualified and diverse teaching staff, ensuring the achievement of its educational goals and compliance with regulatory standards. Mutual cooperation of the teaching staff facilitates the enhancement of study courses. Teaching staff members have demonstrated significant scholarly output in recent years. However, to further enhance the study programme, efforts could be made to increase the number of foreign teaching staff to broaden the international perspective and enrich the learning experience.

Strengths:
1. The UL employs diverse and highly qualified teaching staff, including professors, associate professors, assistant professors, researchers, and industry professionals. With a large number holding doctoral degrees.
2. The study programme benefits from the interdisciplinary nature of its teaching staff, who possess expertise in various fields relevant to the "Research and Protection of Cultural and Environmental Heritage" study programme. This diversity ensures a comprehensive educational experience for students.

Weaknesses:
1. Lack of foreign teaching staff indicates a need for improved efforts in international attraction and exchange programmes.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

The study programme meets all regulatory requirements and maintains high standards in teaching quality, staff qualifications, ensuring the achievement of the intended learning outcomes.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Fully compliant

According to SAR (pp. 134-159) and Annex (24P_BSP_Compliance with HE standarts (ENG).docx) , the study programme is compliant with Academic Education Standard. Experts have concluded in the analysis above that all requirements are met.

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Not relevant

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Partially compliant

The study course descriptions (SAR Annex Descriptions of the study courses/ modules) are well developed and comply with the Law on Higher Education Institutions. They are provided in both Latvian and English, covering the study programme implementation languages. There are some potential shortcomings concerning reading lists and the sequence of the study courses analysed in section 2.2.1. above.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Partially compliant

The diploma sample (SAR Annex Sample of the diploma and its supplement to be issued for completing the study programme) mostly complies with the national regulatory enactment Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus dokumentus (Cabinet of

Ministers regulations No. 202 of 16.04.2013 (prot. No 20 13.§))
Potential weakness: the study course 'Evolution of the Styles of Architecture and Processes in Architecture in Latvia and the Baltic Region' is listed as a compulsory study course in the study programme plan but designated as a limited elective in the diploma sample. Conversely, the study course 'Mākslas klasisko pamatprincipu studijas', defined in the study programme plan, is missing from the diploma sample, while 'Klasiskās kultūras objektu un koloristikas studijas' appears in the diploma sample but is not listed in the study programme plan.

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

In accordance with the Law on Higher Education Institutions, the implementation of the mandatory and limited elective parts of academic study programmes involves at least five professors and associate professors elected at the respective higher education institution. The academic staff of the bachelor study programme ''Research and Protection of Cultural and Environmental Heritage'' fully comply with the requirements. However, there is a slight discrepancy in the information about the number of associate professors and professors, that is analysed in section 2.4.1. above.

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

All teaching staff members have Latvian as their mother tongue or possess knowledge in Latvian at level C1 or higher (SAR Annex Biographies of the teaching staff members (Curriculum Vitae in Europass format)). However, there are unsubstantial discrepancies in the provided information: SAR Annex Basic Information on the Teaching Staff involved does not consistently list Latvian as the mother tongue, unlike SAR Annex Biographies of the Teaching Staff Members (Curriculum Vitae in Europass format).

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Partially compliant

Most teaching staff have English proficiency at B2 level or higher. SAR (pp.185-186) reports: "Those whose knowledge of English at the start of the programme implementation will not meet at least B2 level, will not be involved in teaching courses in English (...)." Potential weakness: According to SAR Annex Basic information on the teaching staff involved indicates that 5 teaching staff members of bachelor study programme "Research and Protection of Cultural and Environmental Heritage" have English language knowledge below B2 level, with no alternatives currently indicated in SAR.
There are several discrepancies in the information regarding English language proficiency among the teaching staff as presented in different annexes (SAR Annexes: Basic Information on the Teaching Staff Involved and Biographies of the Teaching Staff Members (Curriculum Vitae in Europass Format)).

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Fully compliant

The study agreement (SAR Annex Standard sample of study agreement) fully complies with the mandatory provision as regulated by the Cabinet of Ministers regulations No. 70.

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

UL has an agreement with the Art Academy of Latvia (Annex Agreement translation LU-LMA) ensuring that in the case of termination of the bachelor study programme "Research and Protection of Cultural and Environmental Heritage", the Art Academy of Latvia undertakes to provide opportunities for continuing studies for those studying in the study programme, in the academic bachelor study programme "Art", Art Science (43211).

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme’s license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

The UL has provided confirmation (Statement No. 71-61/7 of UL from 23.04.2024) that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked due to the actions UL, and the student does not wish to continue studies in another study programme (SAR Annex JD_compensation_policy_statement_environmental_protection.docx).

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Not relevant

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Partially compliant

The evaluation indicates strong compliance with the requirements set forth in the Law on Higher Education Institutions. The study programme meets the legislative requirements regarding the preparation and content of study course descriptions, which are available in both Latvian and English as required. The study programme plan is structured into thematic modules, facilitating clarity and understanding of the curriculum's organisation.
However, the study course descriptions and diploma samples contain several deficiencies as described above. The SAR does not address solutions for the English proficiency gaps among some teaching staff.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

The study programme demonstrates strong alignment with the State Academic Education Standard, particularly in terms of its comprehensive aims, expected outcomes, and adherence to legal requirements. The study programme effectively covers key areas such as cultural and environmental heritage education, with a robust emphasis on theoretical knowledge, research skills, and the use of appropriate technologies. While the study programme's overall structure and content meet the required standards, there are areas such as language considerations and course-specific adjustments that require attention to further enhance its effectiveness and compliance.
Deficiencies in the course descriptions and diploma samples could likely be resolved relatively quickly. However, addressing the issue of English language proficiency may necessitate recruiting additional personnel to effectively support foreign students. While recruiting new personnel can be challenging, it is feasible within a two-year period. Addressing these issues will strengthen the overall quality and alignment of the study programme with regulatory requirements and student needs.
Despite these minor shortcomings, the programme's overall compliance with national standards and its potential for continuous improvement highlight its strength and viability within the educational landscape.

Strengths:
1. Objectives and expected outcomes are clearly defined and support the educational goals effectively.
2. Excepting minor deficiencies, the descriptions of study courses are clearly described in both Latvian and English.
3. The study programme plan is structured into thematic modules, enhancing clarity and interconnections between subjects.
4. The Bachelor's degree obtained provides opportunities for further education in several related Master's study programmes in Latvia.

Weaknesses:
1. There are little discrepancies within the SAR in reporting the number of professors and associate professors involved in the study programme.
2. Some study courses list mandatory literature in multiple languages including Latvian, German, and English, while others include literature exclusively in Latvian. This discrepancy may pose challenges for non-Latvian speakers.

3. Inconsistencies in English language proficiency among teaching staff may affect study course delivery standards.
4. Some compulsory reading lists could benefit from more recent and relevant materials.
5. The branch of science listed as 'Chemical Sciences' in the course description for 'Civil Protection' is likely incorrect and should be changed.
6. There are discrepancies between the study programme documentation and the diploma sample regarding study course titles and their classification as elective or compulsory.

Evaluation of the study programme "Research and Protection of Cultural and Environmental Heritage"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Research and Protection of Cultural and Environmental Heritage"

Short-term recommendations

Implement a systematic process for regularly updating study course content to reflect the latest scientific findings and industry trends. This will ensure the curriculum remains current and relevant.
Enhance the practical orientation of existing study courses by incorporating more hands-on projects, case studies, and simulations. Engage field-related organizations to provide real-world insights and applications.
Increase participation in international exchange programmes and partnerships. Encourage students to take part in Erasmus+ programmes to gain global perspectives and enhance their academic experience.
Engage with industry stakeholders to explore ways to improve employment opportunities and remuneration for graduates. Advocate for better recognition and compensation in the environmental protection sector.
Realize more intese advertising in order to attract more candidates for the study programme.
Try to develop the inter-departmental cooperation in order to create a synergy between environmental sciences and cultural heritage involving well prepared specialists from all kinds of the domain dealing with the protection of the environmental and cultural heritage.
In the study course descriptions, review the literature lists, particularly the mandatory readings, to ensure they are suitable for both Latvian and international students.
In the study course descriptions, update reading lists with more recent and relevant materials where feasible.
Within the study course description, reevaluate the assignment of the branch of science "Chemical Sciences" to the study course "Civil Protection" for better alignment.
Develop a solution to ensure the effective delivery of study courses in English, considering that some teaching staff may lack proficiency in the language.
Avoid scheduling conflicts by ensuring that prerequisite study courses are not scheduled within the same semester.

Ensure consistency between study programme documentation and diploma regarding study course titles and their classification as elective or compulsory.

Long-term recommendations

Number of students should be increased to make the study programme profitable, and self-sufficient decisions could be made on student field trips.
Advocate for the inclusion of cultural heritage in the education classification of Latvia. Work with regulatory bodies to align this classification with international standards, thereby enhancing the study programme's recognition and support.
Foster partnerships with international universities and cultural heritage institutions to broaden the scope of interdisciplinary education. Encourage collaborative research projects and exchange programmes to enrich the academic experience and global perspectives of students.
Secure funding and resources to increase research opportunities within the study programme. Encourage student involvement in research projects related to cultural and environmental heritage, promoting a culture of innovation and academic inquiry.
Develop a comprehensive marketing and outreach strategy to promote the study programme both nationally and internationally. Highlight the unique interdisciplinary nature and career prospects of the study programme to attract a diverse pool of applicants.
Develop the cooperation with the institutions outside of the UL to increase the impact in real life of the scientific research of the faculties.
Develop a structured advising system that guides students in selecting elective study courses, ensuring alignment with industry needs and career goals.
Collaborate with stakeholders to evaluate the need and approaches for enhancing practical skills training by integrating more hands-on experiences and real-world applications into the curriculum. When updating content, consider that study courses should also include subjects of innovations and issues from a future perspective.
Launch targeted global outreach initiatives to attract international teaching staff.

II - "Environmental Science" ASSESSMENT

II - "Environmental Science" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

3.1.1. The Bachelor’s study programme “Environmental Science” demonstrates strong compliance with the study field Environmental Protection, as evidenced by its well-structured curriculum, and clearly defined learning outcomes. This alignment is critical for ensuring that the study programme meets both academic and professional standards. The degree awarded, a Bachelor’s of Natural Sciences in Environmental Science, is directly aligned with the scientific subfield, reflecting the study programme's emphasis on equipping students with a robust understanding of environmental protection (SAR, p.138). This degree title is not just a formality; it signifies that the graduates are adequately prepared to contribute to the field with the knowledge and skills they have acquired.

The study programme's objectives, tasks, and learning outcomes are meticulously crafted to correspond with the standards expected of bachelor's level studies in environmental science. This careful alignment ensures that students gain the necessary competencies to effectively address environmental challenges. The curriculum's design is comprehensive, covering essential topics in environmental protection that are crucial for the students' future professional roles. This is particularly important as the environmental science field demands a blend of theoretical knowledge and practical skills, which the study programme effectively provides (SAR, p.138; Expert panel analysis).
Furthermore, the study programme code (43431) plays a vital role in maintaining coherence between the academic level and the study field. This coding not only categorizes the study programme accurately within the broader educational framework but also ensures that the academic qualifications conferred are in line with the established standards for environmental science education. This alignment with the educational framework is essential for the study programme's credibility and recognition, both within Latvia and internationally. By adhering to this coding system, the study programme ensures that it meets the expectations of both academic institutions and potential employers, thereby enhancing the employability of its graduates (Expert panel insight).
The integration of such structured alignment within the study programme highlights its compliance with both national and international educational standards. This compliance is not merely administrative but translates into real-world applicability, ensuring that graduates are well-prepared to enter the workforce and contribute effectively to the field of environmental protection (SAR p.138). The experts' conclusion is that the study programme's adherence to these standards is a testament to its quality and its capacity to produce competent professionals who can meet the evolving demands of the environmental sector.

3.1.2. The Bachelor's study programme in Environmental Science effectively aligns with the study field Environmental Protection, with coherence between its title, code, degree, and learning outcomes. The study programme code (43431) accurately reflects the bachelor's level and the environmental science field, ensuring proper categorization within the educational framework. This alignment supports the study programme's recognition and credibility.
Admission requirements, including exams in Latvian, foreign language, and mathematics, along with a strong background in Geography, ensure that students have the foundational knowledge necessary for success. These criteria align with the study programme's goal of preparing students for the interdisciplinary demands of environmental science.
The three-year study programme, spanning six semesters, balances comprehensive academic training with the need to quickly transition graduates into the labor market. The curriculum covers fundamental and specialized aspects of environmental science, providing both up-to-date knowledge and practical skills (SAR Section 3.2.1). Key courses such as "Environmental Planning" and "Sustainability and Innovation" are central to this objective, while a bridging course ensures all students meet required standards.
The study programme's bilingual approach, with Latvian as the main language and some courses in English, enhances its accessibility and relevance globally. Additionally, its alignment with the Lisbon Convention and Bologna Declaration ensures compliance with international higher education standards, supporting student mobility and recognition of qualifications.
In summary, the bachelor's study programme in Environmental Science is well-structured and fully compliant with the Environmental Protection study field. The study programme title, code, and degree are coherently aligned with its objectives and learning outcomes, providing a comprehensive education that prepares students effectively for careers in environmental science.

3.1.3. During the reporting period, the bachelor's study programme "Environmental Science"

underwent significant revisions to align with regulatory updates, labor market demands, and evolving student interests. These changes, detailed in SAR p.137, reflect a proactive approach to maintaining the study programme's relevance and quality.
New study courses, such as "Sustainability and Innovations" and "Climate Change Management: Approaches and Tools," were introduced to address contemporary scientific challenges and trends in sustainable development. These additions ensure that students are exposed to the latest advancements in the field, equipping them with the knowledge needed to tackle current environmental issues. The inclusion of new courses demonstrates the study programme's commitment to addressing region-specific environmental challenges and promoting innovative solutions.
To enhance competencies in information technology and environmental data management, the study programme now includes courses such as "ArcGIS Pro, Cartography and Spatial Representations" and "Environmental Project Management" (SAR Section 3.1.1). These updates are crucial for preparing students with modern tools and methodologies essential for contemporary environmental science careers. By integrating "European Environmental Policy: Theory and Practice," the study programme also ensures that students understand the broader policy context in which environmental science operates.
Responding to employer feedback and educational trends, the study programme restructured its learning outcomes to more clearly distinguish between knowledge, skills, and competencies. This restructuring aligns the study programme with industry needs, ensuring that graduates are well-prepared for the workforce. Additionally, courses like "Environmental Chemistry - Basics" and "Soil and Soil Sustainable Management" were added to strengthen the core curriculum in essential environmental science areas, further enhancing the academic rigor of the study programme.
To streamline the curriculum and eliminate redundancy, several courses were either merged or removed. For example, content from "Introduction to Environmental Science Studies" was integrated into "Introduction to Environmental Science," optimizing the learning experience (SAR Section 3.1.1). These adjustments reflect a strategic effort to refine the study programme's structure, ensuring a more efficient and cohesive educational journey for students.
The appointment of the new study programme director brings fresh leadership to the study programme, positioning it for continued success (meeting with the study programme director). Looking ahead, further changes are planned in response to the Law on Higher Education Institutions and the transition to ECTS, ensuring ongoing compliance and relevance by the 2024/2025 academic year. These forward-looking measures are indicative of the study programme’s commitment to staying ahead of regulatory and industry shifts.
Overall, the revisions to the bachelor’s study programme "Environmental Science" are well-justified and strategically implemented. These changes not only ensure regulatory compliance but also align the study programme with current scientific and labor market trends, enhancing the quality of education provided. The introduction of new study courses, updates to existing ones, and restructuring of outcomes contribute significantly to maintaining the study programme’s effectiveness and appeal.

3.1.4. The bachelor’s study programme "Environmental Science" at UL FGES is one of only two similar study programmes in Latvia, alongside Daugavpils University. The content of this study programme is highly relevant to the labor market, reflecting its broad applicability across various sectors (SAR p.139). This study programme is instrumental in preparing specialists for roles in state management, environmental quality control, research institutions, and private enterprises requiring expertise in environmental science for consulting, production, and environmental technologies. Additionally, it serves as a crucial pipeline for young scientific personnel in research institutions.
Graduates of the study programme find employment in a wide range of sectors, including state and local government bodies like the Ministry of Environment and Regional Development, and private

companies specializing in environmental services, production, and GIS (SAR Section 3.1.3). Research and educational institutions, such as the Institute of Biology, and the Latvian State Forests Research Institute "Silava," also employ many graduates, indicating the study programme's strong alignment with industry needs.

Surveys among graduates consistently show high satisfaction with the knowledge and skills acquired. A November 2022 survey revealed that 81.1% of respondents were employed shortly after graduation, with 66.6% working directly in environmental science or related fields (SAR p.140). However, some graduates noted the challenge of low remuneration in the environmental sector and the preference of some employers for candidates with a master's degree. Despite these challenges, graduates generally rate their theoretical knowledge, analytical skills, and decision-making abilities highly.

Employer feedback, gathered in January 2023, reinforces the study programme's strengths, particularly in graduates' abilities to learn, process information, and use computer technologies. However, employers identified decision-making skills as an area needing improvement and recommended increasing the practical orientation of study courses, expanding specialization options, and involving more field-related organizations in the educational process.

Based on feedback from both graduates and employers, several enhancements have been recommended for the study programme. These include increasing practical work in courses, expanding elective options for specialization, and regularly updating study course content to reflect the latest industry developments. Additionally, promoting up-to-date computer skills and strengthening partnerships with field-related organizations are seen as critical steps for maintaining the study programme's relevance.

The bachelor's study programme "Environmental Science" at UL FGES is well-justified both economically and socially. Its interdisciplinary approach and high employability rates underscore its quality and relevance. Continuous feedback from graduates and employers ensures that the study programme evolves to meet labor market demands and stays aligned with current scientific and environmental trends .

3.1.5. Not applicable.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The bachelor's study programme "Environmental Science" at UL FGES exhibits a strong alignment with the study field "Environmental Protection," effectively preparing students for careers in this critical area. The study programme's comprehensive and well-structured curriculum is designed to provide students with the knowledge, skills, and competencies essential for success in environmental protection roles. This alignment ensures that the study programme is not only relevant to national and international educational standards but also meets the specific demands of the labor market.

Graduates from this study programme have demonstrated high employability across various sectors, including state and local government institutions, private enterprises, and research organizations. This indicates that the study programme effectively prepares students for the diverse opportunities within the field of environmental protection.

However, to further enhance the study programme's effectiveness, areas for improvement have been identified, such as increasing the emphasis on practical work, expanding opportunities for specialization, and enhancing decision-making skills. By addressing these areas, the study programme can strengthen its alignment with the dynamic needs of the labor market and ensure it continues to maintain high educational standards.

These recommended strategies, both short-term and long-term, will help the study programme remain responsive to industry changes, thereby sustaining its relevance and excellence in the field

of environmental protection.

Strengths:
1. The bachelor's study programme "Environmental Science" at UL FGES aligns well with the study field Environmental Protection, as evidenced by the curriculum design, learning outcomes, and competencies conferred upon graduation. Graduates obtain a Bachelor's degree of Natural Sciences in Environmental Science, which matches the scientific subfield and study field.
2. The study programme's objectives, tasks, and study outcomes are well-defined and correspond to the bachelor's level of environmental science studies, ensuring students acquire the necessary knowledge, skills, and competences. This alignment is supported by the study programme code (43431), which accurately reflects the academic education level and the study field.
3. The study programme is completed within three years, an optimal duration that allows students to enter the labor market as qualified specialists relatively quickly. This timely completion is also facilitated by social processes that encourage young people to join the workforce promptly.
4. The title, code, degree, and competences are coherently aligned with the study programme's objectives and learning outcomes. The study programme's structure, content, and assessment methods are in accordance with national and international education standards, guaranteeing its quality and relevance.
5. The study programme has undergone significant and justified changes to stay compliant with regulatory updates and better align with labor market demands and student interests. New study courses have been introduced, and existing ones have been updated to include current scientific findings and issues, enhancing the study programme's relevance and effectiveness.
6. Graduates of the study programme find employment in various sectors, including state and local government institutions, private environmental enterprises, production companies, and research and educational institutions. High satisfaction rates among graduates and positive employer feedback underscore the study programme's effectiveness in preparing specialists for the labor market.

Weaknesses:
1. Employer feedback has identified decision-making skills as an area where graduates could improve. Enhancing the practical orientation of study courses and increasing collaboration with field-related organizations could address this gap, thereby better preparing students for real-world challenges.
2. The study programme could benefit from offering a broader range of electives and more frequent updates to course content. This would help ensure that graduates are equipped with the latest knowledge and skills, keeping them competitive in the rapidly changing environmental sector.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1. The study programme's structure comprehensively divides study courses into compulsory (A), limited electives (B), and free electives (C) (SAR , pp. 145-147, Annex BSP The curriculum of the study programme (for each type and form of the implementation of the study programme)). The organisation ensures foundational knowledge acquisition in environmental fields during the initial two semesters and Part A. Subsequent studies allow students to specialise by selecting study courses from Part B, supplemented by field-specific study courses within Part A. The curriculum ensures students gain a solid understanding of earth and environmental sciences, encompassing fundamental aspects of chemistry, biology, soil science, ecology, climatology, hydrology, and practical skills such as field research methods, data analysis, and GIS-related geospatial data analysis, reflecting a contemporary approach.

Part B and the Bachelor's thesis facilitate student specialisation through a diverse array of study courses covering various subfields of environmental sciences during the second and third years of study. Part C offers students opportunities to expand their knowledge and enhance individual skills based on their interests.
Regarding the study programme structure, the BSP Environmental Science spans 3 years and comprises 180 ECTS (SAR pp. 145-147), meeting the minimum requirements of national legislation (Cabinet of Ministers regulations No. 240 of 13.05.2014, (prot. No 28 18.§)). According to SAR, the study programme's duration is considered optimal, facilitating swift entry into the job market for graduates. This approach likely increases application numbers, intensifies competition among candidates, and attracts talented students to enroll in the study programme. However, further justification for this statement is not available.
Simultaneously, the three-year study period is relatively brief, potentially contributing to the lower readiness of graduates for the labor market, as noted in SAR (pp. 138-143). This suggests a possible need for graduates to pursue a Master's degree. Graduates and employers have highlighted a lack of applicable skills, as discussed in meetings and surveys. Therefore, it is advisable to collaborate closely with employers to strike a balance that attracts knowledgeable students and equips them with appropriate skills for the diverse labor market. Promoting the Bachelor and Master's study programmes as cohesive entities, emphasising practical skill acquisition within the labor market, is crucial. In this context, close collaboration within the study field, ongoing communication with the labor market, exploration of future prospects, and alignment with the Master's study programme are essential.
The importance of acquiring a Master's degree is already evident, as up to 70% of graduates pursue further studies at the Master's level (SAR pp. 138-143).
The topicality of the study programme's content is validated by the survey (provided in SAR pp. 138-143 and supported by answers from field representatives). For instance, employers rate graduates' theoretical skills highly, achieving an average rating of 4.1 on a 5-point scale. However, surveys also identify weaknesses in practical skills, the ability to propose innovative solutions, make well-founded decisions, and justify them. According to SAR (Annex Analysis of the results of surveys of students, graduates and employers) the majority of final-year students (82.8%) are satisfied with the study process and content, which indirectly indicates the relevance of the study programme. However, the studies are perceived as relatively challenging, which could be attributed to a lack of previous knowledge, motivation, as well as factors outside of academic interests. This perception might also highlight potential weaknesses in the study programme content, teaching methods, and organisation of the study process. Further investigation would be beneficial to explore these aspects more deeply.

2.2.2. Not applicable.

2.2.3. Within the study course implementation, different methods have been applied which are detailed in study course descriptions (SAR BSP Annex Descriptions of the study courses/ modules) and also indicated by the students during the expert meeting at UL. SAR (pp.147-149) highlights that lecturers are using methods that encourage students' active participation, critical thinking, and reflection. While the mentioned approaches most likely are effective and potentially attract the students attention, it is not well documented which methods teaching staff are practicing when interacting with the students and how the teaching staff learn about the good lecturing practice. From the expert meetings some of the methods were proposed by the students which they found as being effective, for example: discussions, targeted questions, work in the small groups, debates, role games, game of resource planning, examples where the knowledge can be applied practically. Students don't suggest for lecturers to just read the presentation without involving students actively as they have experienced that and evaluated it as less effective. So it could be suggested to inform,

and emphasise it to the teaching staff about good lecturing practice.
Different types of lectures are in place including introductory lectures, interactive lectures, consolidating lectures, and problem-oriented lectures. Practical assignments, seminars, individual, pair and group work, discussions and project development, study tours to industry organisations, field studies are implemented within the study process.
The variety of methods for knowledge acquisition have been mentioned within the study course descriptions, for example, seminars and students' presentations, individual reading, theoretical lecturing, working in a laboratory.
Acquired knowledge is evaluated through the results of written or oral exams and diagnostic tests, tests within the Moodle environment, written reports and essays, assessment of the quality of practical, laboratory works, seminars, and assessment of the students' knowledge and answers throughout the study work defence process.
Study course mapping (SAR BSP Annex Mapping of the study courses/ modules for the achievement of the learning outcomes of the study programme) indicates that most of the study courses cover the study outcome ''Selects, analyses information, makes decisions in solving environmental problems (...).'' However, the survey results (SAR pp. 138-143, and additional information from field representatives) suggest that graduates have relatively low abilities to make and justify decisions, and also to propose new ideas and solutions. These could be the abilities that students should acquire within the labour market. But also this could indicate that individual problem analysis and decision-making and solution finding are either insufficiently incorporated into the study content, or that the issues addressed and the methods used do not effectively develop comprehensive situation analysis and decision-making skills.
The principles of student-centred studies are implemented within the study process. Besides individual study course content acquisition methods, student-centred principles also involve academic freedom to choose from the list of study courses within parts B and C (SAR pp. 145-147) and available mobility options and internships (SAR Annex Statistical data on the incoming and outgoing mobility of students (by specifying the study programmes) and list of cooperation agreements, including the agreements for providing internship. SAR (pp. 147-149 and pp. 36-42) describes students' involvement within evaluating the study process, thus provoking improvements. Procedures and regulations for submitting student proposals and complaints and reviewing student appeals are in place. Student representatives are also involved in the quality assurance system, thus being able to participate in discussing the issues and finding solutions.
Student-centred learning and teaching are provoked by organising independent work and individual tasks such as seminars within the study courses where students should study literature independently and prepare presentations for the seminars. Also the individually and within the groups performed tasks for investigating lecturers-suggested issues could be examples that are indicated within the study course descriptions (SAR Annex Descriptions of the study courses/ modules). Video lectures can also be used in the studies for various study courses (SAR pp. 147-149). The easily accessible library, contemporary environment, and impressive laboratory equipment (presented during the expert meetings at UL) might also be among the aspects that ensure and provoke the individual learning process. From the meetings at UL, experts can consider that different study materials are provided within the Moodle environment. At the same time, the situation differs between the study courses according to the information provided by the students. It is also mentioned that student-centred learning involves engagement in academic research and social activities, but examples are not sufficiently provided within the SAR (pp. 147-149).

2.2.4. No data on internship are provided within the SAR for the BSP Environmental Science. However, the study programme, according to SAR (pp. 145-147) incorporates practical experiences and industry interactions that simulate internship-like exposure. As relevant activities have been mentioned:

· Professionals from various institutions are invited to deliver individual lectures in study courses to promote the unity of theory and practice.
· Field study courses (Field Methods of Environment and Earth Sciences, Field Methods in Environmental Science and Hydrology and Hydrometry).
The study course Principles of Applied Studies of Environmental Sciences involves students in internships and work assignments within companies or organisations relevant to their field. As they have been indicated as a weak point within the surveys (provided in SAR pp. 138-143, and supported by answers from the field representatives), this study course among others could also be necessary for improving the practical skills through experience at the companies of the labour market.
The answers provided by the Environmental Protection field representatives highlighted the positive experience when employers were involved in the study process and suggested that employers might be involved more. That could provoke improvements implemented considering the reflection on the skills and knowledge where students succeed and which subjects should be elaborated on.

2.2.5. Not applicable.

2.2.6. According to SAR (pp.150-152), the requirements that must be fulfilled within the final thesis are demonstrated as follows:
· Scientific research in one of the subfields of environmental science;
· The result of the work is based on field or chamber research data of the environmental object, information from literature and other information sources, and independently conducted research materials;
· The process of the research is logical and successive, the results are generalisable and unambiguous;
· Terminology is approved and applied in the field, and abbreviations according to standards are used in the work;
· Within the work, the views of the author are distinguished from those of other authors;
· The work is written in the literary correct state language;
The requirements set by the university (https://www.lu.lv/fileadmin/user_upload/LU.LV/www.lu.lv/Dokumenti/Dokumenti_EN/3/nr_183_nosleguma_parbaudijumi_eng.pdf), as well as the Faculty's adapted requirements (https://www.geo.lu.lv/fileadmin/user_upload/lu_portal/projekti/gzzf/Veidlapas/LU_GZZF_Nosleguma_darba_nolikums_2018.pdf) regarding the procedures that regulate the aspects of thesis development and defence, as well as the formatting rules, are available and well understandable.
The topics explored in the Bachelor's theses cover a wide range of current issues in environmental science. These include changes in the landscape, electric vehicle charging infrastructure, air quality improvement measures, bird distribution in city parks, practical uses of parasitic fungi, changes in the hydrological regime, cyanobacteria development in the Baltic Sea, and grassland restoration (SAR pp.150-152). The research addresses questions with results that can enhance environmental quality, improve the effectiveness of implemented measures, and include practical applicability aspects.
The inclusion of selected topics in scientific projects and topics initiated by employers is recognised within the SAR and was confirmed in expert discussions with employers. It can be suggested that students' involvement in research projects should be promoted, and the connection with employers should be strengthened in the selection of subjects and the development of final theses.
According to the requirements defined in the SAR, the Bachelor's thesis calls for results that could be generalisable. However, considering some examples provided in the SAR, the definition of Bachelor's thesis topics such as Small landscape elements and their changes in Ukri parish at the juncture of the 20th and 21st century and Long-term and seasonal changes in the hydrological

regime of the Bārta, Ogre, Pededze rivers under climate change conditions do not lead to the development of generalisable results, suggesting that the results are case-specific and are applicable to the area included in the experiment. Undoubtedly, the selected research objects likely provide sufficient data, and the research questions are very relevant. However, in the future, when defining Bachelor's thesis topics, experts could suggest carefully considering the topic definitions, emphasising the problem to be solved rather than highlighting a specific object. If necessary, an addition can be made, indicating that the research is based on a case study.
The quality of the final theses undergoes continuous enhancement during the preparation process and rigorous evaluation by reviewers and the defense committee. The University of Latvia (UL) conducts a centralised plagiarism check in the week before the defense to ensure the originality and academic integrity of the theses (SAR, pp. 30-34). This procedure further bolsters the quality and relevance of the students' work.
Final grades for the Bachelor's theses are notably high, as reported in SAR (pp. 150-152), and information provided by field representatives, with 49% to 71% of theses achieving grades 9 and 10. Grades ranging from 8 to 10 were awarded to 81% to 92% of the final theses. Concurrently, a proportion of theses received slightly lower grades.
These high results suggest that the study programme maintains stringent standards for thesis preparation and assessment. It also implies that students receive effective guidance and support throughout their thesis preparation. However, SAR does not explicitly detail whether the grading standards are adequately challenging and truly reflect excellence.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The BSP Environmental Sciences offers a highly relevant and well-structured curriculum that addresses critical areas in the labor market, such as state management, environmental quality control, and private enterprise consulting. Graduates benefit from diverse employment opportunities, with a significant portion securing jobs in related fields shortly after graduation. The study programme's comprehensive structure, spanning three years and 180 ECTS, provides a solid foundation in environmental sciences, though the duration may necessitate further education at the Master's level for full labor market readiness.
Employer feedback and student satisfaction indicate the study programme's strengths, particularly in theoretical skills, but highlight areas for improvement in practical skills and innovative problem-solving abilities. Various teaching methods and student-centered learning principles are effectively incorporated, though there is room for better documentation and consistency across study courses.
The study programme's emphasis on final thesis development, with clear requirements and diverse topics, ensures rigorous academic standards, supported by a centralized plagiarism check and high grading outcomes. However, some thesis topics may benefit from broader applicability, and the rigor of grading standards could be more explicitly detailed.
Overall, the study programme's alignment with labor market needs, strong pathways to advanced studies, and supportive learning environment make it a robust choice for students pursuing careers in environmental sciences, with potential for further enhancement through closer collaboration with employers and a focus on practical skill development.

Strengths:
1. Timely and relevant study content addressing state management functions, environmental quality control and protection, private enterprise consulting, production development, and environmental technologies.
2. High graduate employment rates in government institutions, private environmental enterprises, production companies, and research institutions, with 66.6% securing employment in the environmental field or related sectors shortly after graduation.

3. Positive employer feedback, with an average rating of 4.1 out of 5 for graduates' theoretical skills and 82.8% final-year student satisfaction.
4. Well-structured study programme meeting national legislation requirements, spanning three years with a comprehensive and versatile curriculum covering fundamental areas in environmental sciences and practical skills like field research methods, data analysis, and GIS-related geospatial data analysis.
5. Strong pathway to advanced studies, with up to 70% of graduates pursuing a Master's degree.
6. Innovative learning approaches, including interactive lectures, practical tasks, seminars, and project development, with employer involvement enhancing practical relevance.
7. Diverse teaching methods encouraging active participation, critical thinking, and reflection, such as discussions, small group work, debates, role-playing, resource planning games, and practical examples.
8. Comprehensive evaluation methods, including written or oral exams, diagnostic tests, MOODLE-based tests, written reports, essays, practical and laboratory work assessments, seminar participation, and study work defence assessments.
9. Student-centered learning, with academic freedom to choose study courses, participate in mobility options and internships, and engage in independent work through seminars, literature reviews, and group investigations.
10. Clear and accessible requirements for final thesis development, defence procedures, and formatting rules, with a wide range of diverse and relevant thesis topics covering current environmental science issues.
11. Integration of thesis topics with scientific projects and employer-initiated topics, promoting student involvement in research and strengthening connections with employers.
12. Centralised plagiarism check ensures originality and academic integrity, with a significant proportion of theses receiving high final grades, indicating stringent standards and effective guidance.

Weaknesses:
1. Perception of the study programme as relatively challenging, potentially due to a lack of previous knowledge, motivation, or factors outside academic interests, suggesting possible weaknesses in the study programme's content, teaching methods, and organization.
2. The three-year study period may contribute to lower readiness for the labor market, necessitating further education at the Master's level for many graduates.
3. Need for stronger collaboration with employers to ensure the curriculum aligns with labor market demands and equips students with appropriate skills, promoting the Bachelor and Master's study programmes as cohesive entities with a focus on practical skill acquisition.
4. Lack of detailed documentation on teaching methods, indicating a need to inform and stress the importance of effective lecturing practices to the teaching staff.
5. Graduates' deficiencies in practical skills, decision-making abilities, and their capacity to propose innovative solutions.
6. Although different study materials are provided within the Moodle environment, the student-centred learning differs between the study courses according to the information provided by the students.
7. Some thesis topics do not lead to generalizable results, suggesting they are case-specific and only applicable to the areas included in the experiment.
8. Unclear grading standards, with the SAR not explicitly detailing whether the high grading standards are adequately challenging and truly reflect excellence, raising questions about the rigor of the evaluation process.

Assessment of the requirement [5] (applicable only to master's or doctoral study

programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Not relevant

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1. The availability of diverse databases, electronic resources, and specialised literature accessible to students for research purposes indicates adequate scientific provision to support academic endeavours within the UL FGES “Environmental science”.
As mentioned in the self-assessment report and as observed by the experts, the bachelor’s study programme “Environmental Science” at the University of Latvia (UL) is supported by modern facilities and comprehensive resources. The study programme is conducted at the UL Academic Centre, which offers contemporary auditoriums and well-equipped laboratories. The UL Natural Sciences Library provides students with extensive access to printed materials and electronic resources, both locally and through other Latvian libraries, enhancing the research capabilities of the students.
The material and technical resources are extensive and up-to-date, including equipment for fieldwork, laboratory experiments, and thesis development. Equipment available includes Soxhlet extractors, microwave facilities, spray dryers, ultrasonic facilities, lyophilizers, vacuum ovens, rotary evaporators, and various advanced spectrometers and chromatographs. This range of tools ensures students can engage in practical, hands-on learning and research.
During the assessment visit, these factors were confirmed as the experts observed the impressive infrastructure and modern laboratories. Students have access to these facilities for project work by scheduling visits. The experts observed supporting learning environment with an accessible library, contemporary facilities, impressive laboratory equipment, and study materials provided through the Moodle environment.
Additionally, the study programme is enhanced by e-study courses available on the Moodle platform, giving students access to study materials, assignments, and lecture videos. Continuous updates to the material and technical resources ensure the study programme remains current and effective, supporting high-quality education and research outcomes.
During the assessment visit, students highlighted the accessibility of libraries and designated study areas, which facilitate group work and peer interaction. However, they noted a shortage of specialized books in the main library.
Students also mentioned that they greatly enjoy field visits. However, they expressed a desire for more opportunities to engage in fieldwork, and indicated that they would be open to these activities being conducted within Latvia or the Baltic region. They noted that the university typically covers the costs of fieldwork, but students are required to partially cover some expenses for larger fieldwork trips abroad, which can be mandatory for successfully completing the study course.

2.3.2. Not applicable.

2.3.3. The funding for the bachelor’s study programme “Environmental Science” at the University of Latvia is sufficient to ensure the complete implementation of the study process. The study programme's financial resources are derived from a mix of university funding, government grants, and potentially external funding sources such as research grants and industry partnerships and tuition fees from students. The table (SAR p. 154, Table 3.3.3.1) outlines the distribution of students

and annual income generated from different categories of students.
The study programme maintains a minimum number of enrolled students, which guarantees its financial viability and profitability. This enrollment threshold ensures that the study programme can continue to operate without financial deficits and supports the continuation and improvement of the study programme.
As written in SAR (p. 51) “With the UL Rectors Order the norms of the formation of the remuneration of the teaching staff are determined in the Planning and Accounting Regulations for Academic Personnel’s Workload (the UL Order No 1/469 of 07.12.2016).”
For the study programme to remain financially viable, it requires a minimum number of paying students. According to the analysis, at least 160 paying students or 75 state-funded students are needed. This threshold ensures that the revenue generated from tuition fees (€ 279,966) surpasses the total expenditure (€ 276,967), resulting in a positive financial outcome (€ 2,999 surplus) and a profitability rate of 1%. This profitability demonstrates that the study programme is economically sustainable without additional financial support.

Conclusions on this set of criteria, by specifying strengths and weaknesses

In summary, the University of Latvia's approach to funding and managing the "Environmental Science" study programme demonstrates a strategic commitment to financial sustainability, operational efficiency, and ongoing development, ensuring its viability and quality in higher education provision.

Strengths:
1. Contemporary facilities and laboratory equipment.
2. Hands-on learning opportunities: The study programme provides extensive equipment for practical, hands-on learning, supporting students' research and fieldwork capabilities.
3. Access to a wide range of comprehensive databases, electronic resources, and specialized literature for research purposes.
4. Well-equipped laboratories across faculties providing practical learning experiences aligned with study programmes.

Weaknesses:
1. Limited specialized literature: Despite extensive library resources, students have noted a shortage of specialized books in the main library, which could hinder in-depth research in certain areas.
2. Potential challenges related to declining student numbers, which may impact resource allocation and study programme sustainability.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Fully compliant

The University of Latvia ensures the provision of essential material, informational, and technical resources, maintains an adequate annual budget for these needs, and manages these resources effectively to support the high-quality implementation of the study programme.

2.4. Teaching Staff

Analysis

2.4.1. The qualification of the teaching staff members involved in the implementation of the study programme complies with the requirements for the implementation of the study programme and the requirements set forth in the regulatory enactments, and it enables the achievement of the aims and learning outcomes of the study programme and the relevant study courses.
The implementation of the study programme is provided by involvement of 6 professors (18% of the total study load provision), 8 associate professors (19%, respectively), 16 assistant professors (51%), 4 university lecturers (6%), 9 university teachers (5%) and 2 researchers (1%). All the staff involved in teaching the study courses have a doctor's or master's degree. In total, 14 associate professors and professors are involved in the implementation of the study programme, that corresponds to Article 55, Part 1, Clause 3 of the Law on Higher Education Institutions, stipulating that no less than five professors and associate professors elected at a given higher education institution must participate in the implementation of the mandatory and restricted elective part of the academic study programme.
In 2019-2021, teaching staff of the bachelor's study programme "Environmental Science" were actively involved in the project No 8.2.2.0/18/A/010 "Renewal of Academic Staff and Development of Competencies at the University of Latvia" as participants of various training programmes offered within this project. The significant course is "English language" (216 hours), attended by seven university lecturers of the study programme: The 36-hour course "Development of competencies of academic staff in the field of leadership" was completed by six lecturers. (SAR p. 157).
Current research, as well as participation in scientific conferences and other events ensure the inclusion of up-to-date knowledge in the field in study courses. For example, the inclusion of research results in theoretical lessons, practical demonstrations of research methods or the application of new methods in practical works. Regular enhancement of pedagogical, digital, and leadership skills enables the incorporation of the latest methods and higher-quality digital materials into the study programme.
The qualification of the teaching staff members involved in the implementation of the study programme complies with the requirements for the implementation of the study programme and the requirements set forth in the regulatory enactments.

2.4.2. Since 2013/2014, the composition of the teaching staff has changed, the qualification of the teaching staff has increased, and the renewal of the teaching staff has also taken place. The evolution is presented in table Comparison of teaching staff in 2017 and 2022 involved in the bachelor's study programme "Environmental Science'' (SAR p. 158) which shows a dynamic of the number of the teaching staff positions in the last 4 years. The commendable fact is that the number of the associate professors and researchers increased in the last 4 years, which means that the balance between higher teaching positions and the entry level teaching positions is kept in a good balance.
The inclusion of new assistant professors and professors as the study programme implementers ensures that students acquire the current issues of the field during the learning process. Basic information about the teaching staff involved in the implementation of the study direction is included in the Annexes: Basic information – Annex 11; CV of teaching staff (in Europass format). The professionalism, academic growth, and continuous development of the teaching staff in the bachelor study programme "Environmental Science" positively impact its development. In total, 14 associate professors and professors are involved in the implementation of the programme, that corresponds to Article 55, Part 1, Clause 3 of the Law on Higher Education Institutions, stipulating that no less than five professors and associate professors elected at a given higher education institution must participate in the implementation of the mandatory and restricted elective part of the academic study programme.

The UL regulations regarding the academic careers permit periodical changes on the position of the teaching staff level in order to increase the qualification of the faculties involved in teaching process.

2.4.3. Not applicable.

2.4.4. All senior members (professors and associate professors) and some of the junior members of the academic staff have published in the last six years in peer-reviewed journals quoted in Q1 and/or Q2, Q3 quartile (Annexes CV_Eng.docx). The research activities of the faculties are illustrated by the Annex 16P_Publicat_of_staff.docx as well as 15P_Research performance staff (ENG).docx which both show a great number of the published studies in last 4-5 years with a spectacular increasing number of so-called popular science publications. All members of the staff published at least one study in peer-reviewed journals quoted in the first 3 quartiles at the international level. The criterion is fulfilled.

2.4.5. In the academic year of 2022/2023, 44 teaching staff members participated in the implementation of the bachelor's study programme "Environmental science"; therefore, the current ratio of teaching staff to one student is 1:2.45, which is adequate to guarantee quality education (SAR p. 159). The proof of the mutual cooperation is provided by teaching of interdisciplinary or joint study courses. In the study courses such as "Fundamentals of spatial analysis in environmental science" or "Environmental economics and sustainability", teaching staff collaborate, with each university lecturer contributing to the implementation of a part of the course content. In the field study course "Field methods in environmental and Earth sciences", teaching staff concur on consistent principles for course implementation and performance evaluation, helping students better understand the development and assessment aspects of their field study courses. (SAR p. 159, and Annexes 25-27).
Based on conversations with teaching staff, students and alumni, the experts can say that the evaluations of study courses provided by students and/or economical collaborators offer various opportunities for the improvement of study courses, or there have also been developed new study courses and included in the study programme's plan (SAR p. 159 and 26P_BSP_Env_Sc_prog_plan.docx)

Conclusions on this set of criteria, by indicating strengths and weaknesses

The qualification of the teaching staff members involved in the implementation of the study programme complies with the requirements for the implementation of the study programme, and the requirements set forth in the regulatory enactments, and it enables the achievement of the aim and learning outcomes of the study programme and the relevant study courses. The teaching staff has a high level of qualification, and the dialogue between faculties, students and/or state agencies or private sector ensures the development or introduction of new study courses.
A significant part of the academic staff participate in the international projects and/or published in international journals or foreign publishing houses, which creates premises for a good internationalization of the study programme.

Strengths:
1. The teaching staff exhibits a high level of qualification, particularly in terms of their professional competence within the relevant areas of the study programme.
2. The teaching staff and students are provided with opportunities to engage in scientific activities.

Weaknesses:

None.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

The academic staff are compliant with implementing both the study programme and legislative requirements.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Fully compliant

According to SAR pp. 134-159 and Annexes (Annex 24P_BSP_Compliance with HE standarts (ENG).docx) in SAR (p. 160) study programme is compliant with Academic Education Standard. Experts have concluded that all requirements are met.

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Not relevant

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

The study course descriptions are available in Latvian which is the language of instruction, and also in English. Materials are available in the UL website and in Annex 27P_Cours_description(1).docx. Study course descriptions are compliant with the Law on Higher Education Institutions.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Fully compliant

The sample of the diploma (Annex 22P_Bsc_Diploma.docx) is in accordance with state standards defined in Regulations of the Cabinet of Ministers No.202.

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Confirmation by the Head of the study field (Annex J_55.3_pants_ENG.pdf) that academic staff of the study programme is compliant with the Law on Higher Education Institutions Section 55, Paragraph one, Clause 3 (The implementation of the compulsory part and the limited elective part of academic study programme shall be carried out by a total of at least five professors and associate professors elected by the respective higher education institution.)

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

According to the teaching staff list in Annex J_55.3_pants_ENG.pdf, all staff members are proficient. In Annex Valsts_val_ENG.zip, the declaration No. 29-15/47 states that the teaching staff is proficient in Latvian language.

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Not relevant

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Fully compliant

The sample of the study agreement provided in Annex Agreements.zip (8P_Liguma paraugs.docx) is compliant with Regulations of the Cabinet of Ministers No.70.

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

In Annex Declaration.zip (RECTOR_S_DECLARATION_Bsc_env) UL has provided confirmation about students' opportunities to continue their education in another study programme or another higher education institution. UL undertakes to provide students with the opportunity to continue their studies in the study programme Geography (43442) of the study field Geography

and Earth sciences.

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

In Annex JD_compensation_policy_statement_environmental_protection.docx, UL has provided confirmation that students are guaranteed compensation for losses.

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Not relevant

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Fully compliant

According to SAR, its annexes and UL webpage, all criteria and requirements are met.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

The Bachelor's study programme "Environmental Science" at UL FGES demonstrates a strong alignment with the study field "Environmental Protection." It provides a comprehensive and well-structured curriculum that equips students with the necessary knowledge, skills, and competencies. Graduates are well-prepared for various sectors, including state and local government institutions, private enterprises, and research institutions, with high employability rates. The study programme content provides a comprehensive learning experience through a mix of natural science study courses, specialized study courses, and interdisciplinary study courses. However, certain areas for improvement have been identified, such as increasing practical work, expanding specialization opportunities, and enhancing decision-making skills.

Employer feedback and student satisfaction indicate the study programme's strengths, particularly in theoretical skills, but highlight areas for improvement in practical skills and innovative problem-solving abilities. Various teaching methods and student-centered learning principles are effectively incorporated, though there is room for better documentation and consistency across study courses.

The study programme's emphasis on final thesis development, with clear requirements and diverse topics, ensures rigorous academic standards, supported by a centralized plagiarism check and high grading outcomes. However, some thesis topics may benefit from broader applicability, and the rigor of grading standards could be more explicitly detailed. Need for stronger collaboration with employers to ensure the curriculum aligns with labor market demands and equips students with appropriate skills, promoting the Bachelor and Master's study programmes as cohesive entities with a focus on practical skill acquisition. Also, lack of detailed documentation on teaching methods has been noticed, indicating a need to inform and stress the importance of effective lecturing practices

to the teaching staff.
The University of Latvia's approach to funding and managing the "Environmental Science" study programme demonstrates a strategic commitment to financial sustainability, operational efficiency, and ongoing development, ensuring its viability and quality in higher education provision.
Hands-on learning opportunities, access to a wide range of comprehensive databases, electronic resources, and specialized literature for research purposes, and well-equipped laboratories are great opportunities and tools for qualitative learning. However, concerns related to declining student numbers, which may impact resource allocation and study programme sustainability should be dealt with.
The qualification of the teaching staff members involved in the implementation of the study programme complies with the requirements for the implementation of the study programme and the requirements set forth in the regulatory enactments, and it enables the achievement of the aim and learning outcomes of the study programme and the relevant study courses. The teaching staff has a high level of qualification, and the dialogue between faculties, students and/or state agencies or private sector ensures the development or introduction of new study courses.
A significant part of the academic staff participate in the international projects and/or published in international journals or foreign publishing houses, which creates premises for a good internationalization of the study programme. However, the number of the foreign lecturers invited to deliver presentations to the students are concerning and should be dealt with.

Evaluation of the study programme "Environmental Science"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Environmental Science"

Short-term recommendations

To address the identified weaknesses, the study programme should increase the proportion of practical work in study courses and involve more field-related organizations through guest lectures, applied study places, and excursions. This would enhance the practical orientation of the study courses and provide students with real-world insights and experiences
Expanding the range of electives offered within the study programme would allow students to specialize in areas of interest and increase their competitiveness in the labor market. This could be achieved through collaboration with other study programmes at the University of Latvia
Define Bachelor’s thesis topics with a focus on solving broader problems rather than specific case studies. However, the addition could be included, indicating that the research is based on a case study to clarify the scope and applicability.
Ensure that the grading standards for the Bachelor's thesis are rigorous and reflect genuine excellence.
Conduct a needs assessment to identify specific areas where specialized literature is lacking. Gather input from faculty and students to prioritize acquisitions.

Long-term recommendations

To ensure the study programme remains relevant and up-to-date, the content of study courses should be regularly updated to include the latest developments and current issues in the field of environmental science. This would keep the curriculum aligned with industry trends and employer expectations.
Evaluate whether increasing the focus on practical skills development within the curriculum would be beneficial to better prepare students for the labour market.
Promoting the acquisition of up-to-date computer skills and the use of modern software tools related to environmental science should be emphasized. This could involve integrating more ICT and data analysis tools into the curriculum, ensuring graduates are proficient with the technologies used in the field.
Enhancing decision-making skills among students could be achieved through specific study courses or modules focused on critical thinking, problem-solving, and decision-making processes. These skills are crucial for effective professional practice and should be a key component of the curriculum.
Emphasise the connection between the Bachelor's and Master's study programmes, highlighting the importance of improving skills that may be lacking after Bachelor's graduation, such as practical skills and the ability to develop and justify innovative solutions.
Evaluate the necessity for integrating more practical skills training, problem analysis, decision-making, and solution-finding exercises into the curriculum.
Foster a collaborative environment where students feel comfortable proposing changes and participating in quality assurance discussions.
Continue to promote student involvement in research projects and strengthen connections with employers to align thesis topics with real-world needs and enhance practical skills.
Develop a structured advising system that guides students in selecting elective study courses, ensuring alignment with industry needs and career goals.
Collaborate with stakeholders to evaluate the need and approaches for enhancing practical skills training by integrating more hands-on experiences and real-world applications into the curriculum. When updating content, consider that study courses should also include subjects of innovations and issues from a future perspective.
Explore ways to improve student well-being by addressing potential gaps in prior knowledge, motivation, and external factors. Evaluate if changes are necessary, and review and adjust the study programme content, teaching methods, and organisation to support student success better.
Promote more opportunities for the students and teaching staff to participate in international exchange programmes.
Develop targeted marketing campaigns aimed at attracting new students. Highlight unique aspects of the study programme and career opportunities for graduates.

II - "Environmental Science" ASSESSMENT

II - "Environmental Science" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1. The Master's study programme in Environmental Science at UL is compliant with the study field "Environmental Protection," as demonstrated by its curriculum design, learning outcomes, and the degree it confers. This alignment is crucial for ensuring that the study programme meets both academic and professional standards in the environmental sector.
The primary objective of the study programme is to develop highly qualified specialists in environmental science, equipping them with the theoretical knowledge, research skills, and competencies essential for success in this field. This objective is fully aligned with the national education standard as outlined in Cabinet Regulations No. 240, which governs the state standard for academic education (Annex 30). The curriculum is designed to foster deep knowledge, advanced problem-solving abilities, and the responsible use of modern technologies in professional practice, which are all key components in shaping competent environmental professionals.
A significant aspect of the study programme is its focus on preparing graduates who are not only competitive in the national labor market but also capable of performing at an international level. The study programme offers students the opportunity to specialize in subfields of environmental science that are of both national and international relevance, with a strong emphasis on research and innovation. This interdisciplinary approach is designed to promote the development of new solutions to complex environmental issues, reflecting the study programme’s commitment to fostering innovation and addressing global environmental challenges (SAR p.105).
In summary, the Master's study programme in Environmental Science is well-aligned with the study field "Environmental Protection," offering a curriculum that meets national education standards while preparing students for the demands of both national and international labor markets. This alignment ensures that graduates are well-equipped to contribute effectively to the field, particularly in areas requiring high levels of expertise and innovative problem-solving.

2.1.2. The Master's study programme in Environmental Science at UL FGES is structured to ensure an alignment between its title, code, degree, and competences, effectively supporting the study programme’s objectives and outcomes. Specifically, the study programme code (45431) is designed to reflect the academic level of a master's degree and its focus on Environmental Protection, which is crucial for maintaining coherence and alignment with the study programme’s goals, as detailed in the SAR (p.105). A central aim of the study programme is to prepare highly qualified specialists in environmental science who are competitive both nationally and internationally. By focusing on subfields with significant research and innovation potential, the study programme promotes interdisciplinary development, ensuring that students acquire the in-depth knowledge and advanced research skills needed to meet labor market demands, a priority outlined in the SAR (p.105).
The admission criteria are carefully designed to select candidates with a robust background in relevant fields such as natural sciences, environmental science, engineering, agriculture, or forestry. The SAR explains that graduates from UL bachelor’s study programme in Environmental Science, who have demonstrated strong academic performance, are admitted directly, reflecting the study programme’s commitment to high standards (SAR p.105). For other applicants, a competitive entrance exam evaluates their motivation, understanding, and potential research topics, ensuring that the study programme admits well-prepared students.
The study programme spans two years (four semesters), during which students must complete 80 CP (120 ECTS), including a 20 CP (30 ECTS) Master’s thesis. This structure aligns with both the Lisbon Convention and Bologna Declaration standards, providing comprehensive training within an appropriate timeframe, as noted in the SAR (p.105). The study programme also adopts a bilingual approach, with Latvian as the primary language of instruction and some courses available in English, which enhances accessibility and relevance for international students, as discussed in SAR Section 3.1.2.

In conclusion, the Master's study programme in Environmental Science is effectively designed, ensuring a coherent alignment between its title, code, degree, and objectives. The well-balanced curriculum integrates theoretical and practical training, thoroughly preparing students for both the labor market and further academic pursuits.

2.1.3. Several significant changes have been made to the master's study programme "Environmental Science" during the reporting period to ensure its compliance with updated regulatory acts and to align with labor market demands and student interests (SAR, p.104).
The study programme has incorporated new scientific findings and current issues, reflecting the latest trends in sustainable development and innovation. New study courses have been introduced to cover topics such as the European Green Course, climate change management, adaptation options, Baltic Sea management, and sustainable waste management within the context of the circular economy. These study courses include:
- "Sustainability and Innovations" (4 CP/ 6 ECTS)
- "Environmental Protection Tools for the Baltic Sea" (2 CP/ 3 ECTS)
- "Climate Change Management: Approaches and Tools" (4 CP/ 6 ECTS)
- "Sustainable Waste Management in the Context of Circular Economy" (4 CP/ 6 ECTS) (SAR, p.104).
To enhance student skills and competencies, particularly in the application of information technologies, the study programme has updated existing study courses and introduced new ones. These changes focus on improving the use of specific computer programmes related to the field (e.g., ArcGIS), ICT tools, environmental data acquisition methodologies, data quality control algorithms, and the processing of large data sets. Additionally, study courses have been designed to cover the development and implementation of environmental projects, European environmental policy, and environmental communication. Key study courses include:
- "ArcGIS Pro, Cartography and Spatial Representations" (4 CP/ 6 ECTS)
- "Environmental Communication" (2 CP/ 3 ECTS)
- "Environmental Project Management" (4 CP/ 6 ECTS)
- "European Environmental Policy: Theory and Practice" (2 CP/ 3 ECTS) (
For students with a bachelor's degree in fields indirectly related to environmental science, a knowledge leveling study course titled "Environment and Civil Defense" (4 CP/ 6 ECTS) has been introduced in the first semester. This study course ensures that these students can fully grasp the specific environmental science study courses that follow.
These changes are justified as they ensure the study programme remains relevant and comprehensive, addressing the evolving needs of the labor market and incorporating the latest scientific advancements. By updating the curriculum to include new scientific findings and current issues, the study programme enhances its alignment with the European Green Course and other contemporary environmental strategies. The introduction of study courses aimed at improving student competencies in information technology and project management prepares graduates to meet the current and future demands of the environmental science sector. Additionally, the knowledge leveling study course ensures all students have a strong foundational understanding necessary for advanced studies in environmental science.
The modifications to the Master's study programme in Environmental Science are well-analyzed, justified, and supportive of the study programme's overall objectives. These updates ensure the study programme's compliance with regulatory standards, align it with current scientific and labor market trends, and enhance the quality of education provided to students.

2.1.4. In Latvia, the master's level study field "Environmental Protection" is offered by several universities, including the University of Latvia (UL), Riga Technical University (RTU), Latvia University of Life Sciences and Technologies (LBTU), and Daugavpils University (DU). Among these institutions, the UL academic master's study programme in Environmental Science stands out for its popularity

and interdisciplinary approach, which integrates fields such as intelligent technologies, circular economy, and spatial development planning (SAR p.107). This comprehensive curriculum equips graduates with a diverse skill set, including proficiency in industry-specific computer programmes and ICT, enhancing their competitiveness in the labor market.
The dynamic of student enrollment in UL study programme reflects its strong appeal. Over the years, UL has consistently attracted the highest number of students in the Environmental Protection field, underscoring its reputation and the perceived value of its interdisciplinary focus. The study programme's success is further evidenced by the high employability of its graduates across various sectors, including legislative institutions like the European Commission and the Saeima of Latvia, as well as environmental management bodies, research institutes, and private enterprises (SAR p.108).
Feedback from graduates, as captured in a survey conducted in January-February 2023, reinforces the study programme's alignment with labor market demands. An impressive 96% of respondents reported being employed in roles related to their field of study, with 90% acknowledging that their education significantly contributed to their employment opportunities (SAR p.108). However, the survey also highlighted a potential area of concern: two graduates cited low salaries as a reason for not working in the field, suggesting that while the study programme prepares students well, external economic factors might influence career decisions.
The UL study programme’s emphasis on research is another key strength. It prepares specialists for scientific research in environmental science and its subfields, supported by a range of funding sources, including grants from the Latvian Council of Science and the European Union (SAR Section 3.1.3). This focus on research not only enhances the academic rigor of the study programme but also ensures that graduates are well-equipped to contribute to scientific advancements and practical applications.
Feedback from Annex Feedback.zip (MSc_Env_Feedback) further highlights the study programme’s effectiveness in adapting to student needs and labor market trends. Graduates praised the study programme for its interdisciplinary nature and the practical skills acquired, particularly in areas like data management and environmental planning. However, some suggestions for improvement included the need for more hands-on experience and stronger industry connections, which could enhance graduates’ readiness for specific job roles.
In conclusion, the academic master's study programme in Environmental Science at the University of Latvia is both economically and socially justified. Its interdisciplinary approach, high employability rates, and strong alignment with market needs affirm its relevance and quality. The study programme’s continuous adaptation to feedback and its emphasis on research ensure that it remains a leading choice for students pursuing careers in environmental protection.

2.1.5. Not applicable.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The Master’s study programme in Environmental Science at the University of Latvia effectively aligns its title, code, degree, objectives, learning outcomes, and admission requirements, ensuring comprehensive theoretical and practical training. The study programme is economically and socially justified, meeting the demands of the labor market and preparing graduates for successful careers in various sectors. Its interdisciplinary approach, high employability rates, and alignment with current scientific and labor market trends underscore its relevance and quality. The study programme’s strengths, including its comprehensive curriculum, hands-on learning opportunities, and robust teaching methods, ensure it remains a leader in environmental science education.

Strengths:
1. Well-structured study programme highly aligned with the "Environmental Protection" study field.

Coherent integration of the study programme title, code, degree, objectives, learning outcomes, and admission requirements, ensuring compliance with national and international education standards.
2. Prepares highly qualified environmental science specialists for national and international labor markets. Emphasizes specialization in various subfields of environmental science with high research and innovation potential, promoting interdisciplinary development.
3. Bridging study course for students lacking foundational knowledge.
4. Maintains principles of transparency and fairness in assessments.
5. Significant updates to align with regulatory acts and labor market demands, incorporating new scientific findings and current issues like the European Green Course and climate change management.
6. Graduates find employment in various sectors, including legislative institutions, environmental management, research institutes, and private companies.
7. Regular graduate surveys show high employment rates and positive feedback.

Weaknesses:
No significant weaknesses were identified.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1. The study programme's relevance is highlighted by its popularity among similar study programmes in Latvia, with a significant number of students enrolled each academic year (54 to 66 students from 2017 to 2022) (SAR pp. 107-109). However, there is a slight downward trend in the number of matriculated and graduated students. The SAR of BSP Environmental Sciences notes a decrease in students pursuing a Master's degree, which could be a contributing factor (SAR pp. 138-143). Additionally, the pandemic may have impacted enrollment and graduation rates (SAR pp. 108-109).
Despite these challenges, the academic master study programme (MSP) “Environmental Science” has notable strengths. A survey (SAR Annex Analysis of the results of surveys of students, graduates and employers) shows that 72% of first-year students are satisfied with the study programme, and 73% are pleased with the study environment. These numbers improve among final-year students, with 83% satisfied with the study programme and 93% with the study environment. The higher satisfaction among last-year students may indicate that the most motivated and successful students continue their studies.
However, the survey also indicates that the studies do not promote student well-being. Students find the study programme relatively challenging, which may be due to a lack of prior knowledge, motivation, or factors outside academic interests. This perception could also highlight potential weaknesses in the study programme's content, teaching methods, and organisation. Further investigation into these areas would be beneficial.
The Master's study programme in Environmental Science appears relevant as it is closely related to the bachelor study programme of Environmental Sciences, also included in the UL field of Environmental Protection. The relevance has been approved as up to 70% of BSP Environmental Science graduates pursue further studies at the Master's level (SAR pp. 138-143). It has also been indicated within the SAR and suggested by employers during the expert meetings at UL that a Master's degree is in demand in the labour market. However, working and studying simultaneously might be challenging as employers use to burden students by combining their studies with their work tasks. Working tasks could also be among the reasons why the graduate surveys have been indicating the Master's studies as being hard (SAR Annex Analysis of the results of surveys of students, graduates and employers).
At the Master's level, it may be advisable to enhance the missing knowledge, skills, and

competencies of Bachelor's degree graduates, which can be identified considering survey results provided by Bachelor's degree graduates and their employers. For example, practical skills, abilities to make decisions and justify them, and ability to propose new ideas and solutions could be considered to be improved, as those were low-rated within the surveys (provided in SAR pp. 138-143, and supported by answers from field representatives). The opportunities to improve practical skills already appear in the MSP as implemented throughout the Part B study course Applied Studies in Environmental Sciences, ensuring the internship in the student's chosen enterprise companies (SAR pp. 110-118, and Annex MSP Descriptions of the study courses/ modules). Also the problem solving solutions provision appears in the content of MSP, for example, throughout the following study courses: European Environmental Policy: Theory and Practise; Environmental Planning; Sustainability and Innovation; Environmental Project Management.
The academic Master's study programme Environmental Science demonstrates a comprehensive structure with a clear alignment between study course content, intended learning outcomes, and overall study programme goals. The study programme is structured into three main parts: mandatory Part A, limited elective Part B, and free elective Part C, totalling 120 ECTS credits. Part A primarily focuses on supporting the acquisition of foundational knowledge, skills, and competencies involving environmental protection field-related subjects such as environmental planning, ecosystem ecology, ecotoxicology, field studies and research methods, process modelling, and sustainability and innovations. These subjects collectively ensure that students acquire essential theoretical knowledge, practical skills, and competencies in environmental science.
Study course offerings are categorised into thematic but not strictly separated subfields (SAR pp.110-118): Environmental Management and Environmental Assessment and Technology. This enhances clarity and facilitates understanding of the interconnections between subjects, addressing the diverse needs within the field. The study programme's flexibility and a relatively large number of limited elective study courses under Part B allow students to specialise further in their area of interest, whether it is more oriented toward Environmental Management or Environmental Assessment and Technologies. This flexibility ensures that graduates are potentially well-prepared to meet the varied demands of the labour market upon completion of their studies. However, there is a risk that students, without sufficient support, experience, and knowledge, may select study courses that do not align with industry needs. It is recommended that students are guided in choosing their Part B study courses.
The interrelation between study course content and learning outcomes is clearly articulated in each study course description, detailing specific knowledge and competencies students are expected to gain. The content is in line with the study programme's aims and expected learning outcomes.

2.2.2. There is clear evidence of scientific excellence within the study programme content and implementation (SAR pp.122-123). That appears among the descriptions of individual study courses, the scientific activities of the teaching staff, and the complexity and diversity of the elaborated Master's Thesis. The subjects explored in the Master's thesis cover a wide range of topical scientific issues in the field of Environmental Science and use innovative approaches.

2.2.3. This section in SAR (pp.119-121) is well-documented, providing examples that effectively justify the aspects discussed. Within the study course descriptions (SAR MSP Annex Descriptions of the study courses/ modules) of MSP Environmental Science, the interrelation between study course content and learning outcomes is clearly articulated in each study course description, detailing the specific knowledge and competencies that students are expected to gain. The content aligns with the study programme's aim and expected learning outcomes.
Various techniques for acquiring and reinforcing knowledge, skills and competencies are utilised, including introductory, interactive, summary, and problem-oriented lectures. Practitioners and professionals from different institutions are invited to conduct individual lectures within study

courses, promoting the integration of theory and practice. For example, in the study course ArcGIS Pro, cartography and spatial representations, a representative from Publishing House of Maps Jāņa sēta" Ltd, and in the study course Biotechnology and environmentally friendly technologies, a representative from Schwenk Ltd, participated as guest lecturers. Similarly, a representative from Rail Baltica contributes to the Risk Analysis Basics course (SAR pp. 119-121, and Descriptions of the study courses/ modules).

The study process extensively incorporates practical tasks, seminars, individual, pair, and group work, discussions, project development, and study tours to industry organisations. During the expert meeting at UL, employers also confirmed that they are actively involved in implementing and improving study courses by conducting seminars and organising experience exchange visits to workplaces. For instance, as part of the Risk Analysis Basics study course, students visit the Baldone Radioactive Waste Landfill (SAR pp. 119-121). In Applied Studies in Environmental Science, students predominantly strengthen their practical skills and acquire experience by working in enterprises (SAR pp. 110-118, and Annex MSP Descriptions of the study courses/ modules).

To enhance research competence, research methods are both studied and applied in practice. Students have opportunities to analyse and conduct in-depth research on topics of interest. For example, the study courses Field Studies and Research Methods in Environmental Science, and Sustainable Waste Management in Circular Economy Context facilitate such research (SAR pp. 119-121 and Annex MSP Descriptions of the study courses/ modules).

According to SAR (pp. 119-121 and Annex MSP Descriptions of the study courses/ modules), students' speaking, presenting, and discussion skills are developed through seminars and group work research. The study process emphasises methods where students' active participation is crucial, promoting communication, problem-solving, and situational modelling. For instance, the study courses Modelling of Environmental Processes, Field Studies and Research Methods in Environmental Science, and Environmental Management Systems employ these approaches.

According to SAR (pp. 119-121), teachers mainly use methods that encourage active participation, critical thinking, and reflection. From the expert meetings at UL, some of the methods were proposed by the students, which they found to be effective: discussions, targeted questions, work in small groups, debates, role games, games of resource planning, and examples where the knowledge can be applied practically. Students don't suggest that lecturers read the presentation without involving students actively as they have experienced that and evaluated it as less effective. So it could be recommended that the teaching staff is informed, and good lecturing practices are emphasised.

Student-centred principles are followed within the study process. Study course descriptions (SAR MSP Annex Descriptions of the study courses/ modules) reveal that through independent work, seminars, individually and in small groups, students are required to study mandatory literature, follow recent publications, and perform the individual research activities. Master's students can also participate in the doctoral school "Land Resources and their sustainable use," which offers seminars and guest lectures on various topics. The easily accessible library, contemporary environment, and impressive laboratory equipment (presented during the expert visit at UL) might be among the aspects that ensure and provoke the individual learning process. From the meetings at UL, experts can consider that different study materials are provided within the Moodle environment. At the same time, the situation differs between the study courses according to the information provided by the students.

Student-centred learning and teaching principles are also provided through the study course of limited electives, Applied Studies in Environmental Science, as the content ensures the students' freedom to choose enterprise to develop their knowledge, skills, and competencies according to their interests.

According to SAR (pp. 119-121), personal consultations with teaching staff and communication through the Moodle environment or, in some cases, through social networks are ensured.

Additionally, last-year students engage in peer teaching-learning, managing the study process for first-year students.
Student mobility is encouraged through programmes like Erasmus+ internships and summer schools, with credits counted in the limited elective part (Part B). As provided by the additional information from the Environmental Protection field representatives, the possibility of equalising the acquired mobility credits with the study courses of Part A is somewhat limited. The expert meetings with the students at UL reveal that equalisation can sometimes be an issue, and the acquisition of credits that are lacking is sometimes challenging after mobility.
Internal quality assurance policies ensure that study programmes actively involve students in improving the study process. Procedures for submitting proposals and resolving complaints are in place, and the study programme director informs students about these procedures at the start of their studies. Student survey results are evaluated and considered for study process improvements. Students are encouraged to provide suggestions for improving study programmes and processes through discussions with lecturers and study programme directors.

2.2.4. Not applicable.

2.2.5. Not applicable.

2.2.6. According to the SAR (p.122), the requirements that must be fulfilled within the final thesis are demonstrated as follows:
· scientific research must be implemented in one of the subfields of environmental science;
· the result should be based on the data obtained from field studies, on the relevant literature, other sources of information and the materials of the personally conducted research;
· the course of the research should be logical, consecutive, the result generalisable and unambiguous;
· uniform terminology and standard abbreviations must be used throughout the Master's thesis;
· the Master's thesis must be written in such a way that the opinions of the author of this thesis can be easily distinguished from the opinions of other authors;
· the presentation of the content must be precise, clear, logical, concrete;
· the Master's thesis must be written in the correct literary state language.
The requirements set by the university (https://www.lu.lv/fileadmin/user_upload/LU.LV/www.lu.lv/Dokumenti/Dokumenti_EN/3/nr_183_nosleguma_parbaudijumi_eng.pdf), as well as the Faculty's adapted requirements (https://www.geo.lu.lv/fileadmin/user_upload/lu_portal/projekti/gzzf/Veidlapas/LU_GZZF_Nosleguma_darba_nolikums_2018.pdf) regarding the procedures that regulate the aspects of thesis development and defence, as well as the formatting rules, are available and well understandable.
The topics of the final thesis are well and clearly defined. The subjects explored in the Master's thesis cover a wide range of topical scientific issues in the field of Environmental Science and use innovative approaches (SAR pp.122-123). The research addresses questions with results that can enhance environmental quality, improve the effectiveness of implemented measures, provide new knowledge in the application of innovative approaches, promote effectiveness in data analysis and processing, ensure effective management of natural resources, and address the questions of environmental policymaking and social ecology aspects. The results have the potential for practical applicability and scientific significance. The interdisciplinary approaches are evident, and the complexity of the subject confirms the in-depth skills acquired during the studies. Information provided on the grading suggests that graduates have acquired high-level knowledge, skills, and competencies.
Final grades for the Master's thesis are notably high. According to SAR (pp. 122-124), about 67% of theses achieved grades 9 and 10. Grades ranging from 8 to 10 were awarded to 95 of the final

theses. In total, the performance of the students and their final thesis were evaluated between grades from 5 to 10. Amplitude of assessment could indicate a sufficiently adequate assessment approach. These high results suggest that the study programme maintains stringent thesis preparation and assessment standards. It also implies that students receive effective guidance and support throughout their thesis preparation. However, SAR does not explicitly detail whether the grading standards are adequately challenging and truly reflect excellence.
The quality of final theses is continually enhanced throughout the preparation process and rigorously evaluated by reviewers and the defence committee. The University of Latvia (UL) conducts a centralised plagiarism check one week before the defence to ensure the originality and academic integrity of the theses (SAR pp. 30-34). This procedure further strengthens the quality and relevance of students' work.
The system for preparing, reviewing, and defending final theses appears to be well-developed, although improvements and clarification of information could enhance the process. According to Faculty requirements, "Study programme directors introduce students to available thesis topics and potential supervisors. The list of proposed topics is posted on department bulletin boards and the Faculty's website. The study programme director is responsible for posting thesis topics." However, it is unclear from the SAR whether this specific procedure is consistently followed or if alternative approaches have been adopted. Adjustments to procedures or requirements may be necessary.
In SAR p. 122, it is reported that 130 Master's theses have been completed. However, a different total number is indicated in the figure 3.2.6.1. on page 124.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The Master's study programme in Environmental Science remains highly relevant and popular, despite a slight decline in student enrollment and graduation rates, possibly influenced by external factors like the pandemic. Student satisfaction is generally high, especially among final-year students, indicating strong support and motivation. However, the study programme's perceived difficulty and impact on student well-being warrant further investigation into teaching methods and content. The curriculum is well-structured, offering flexibility and practical experience, though guidance in limited elective study course selection could be improved. The study programme demonstrates scientific excellence and effective integration of theory and practice, with robust mechanisms for quality assurance and continuous improvement. High final thesis grades suggest rigorous standards and strong support, though more explicit grading standards could further ensure academic excellence. Overall, the study programme is well-developed, with clear alignment between study course content, learning outcomes, and study programme goals, though minor procedural clarifications and enhancements could further strengthen it.

Strengths:
1. High enrollment numbers (54-66 students annually from 2017 to 2022) with 72% first-year and 83% final-year student satisfaction.
2. Up to 70% of BSP graduates pursue a Master's degree, recognized by employers as in demand.
3. Comprehensive three-part study course structure (mandatory, limited elective, free elective) totaling 120 ECTS credits, allowing for specialization in Environmental Management or Environmental Assessment and Technology.
4. Strong foundation and scientific activities by teaching staff, with complex and diverse Master's Thesis projects.
5. Clear articulation of specific knowledge and competencies in study course descriptions.
6. Use of interactive, problem-oriented lectures, and practitioner involvement.
7. Incorporation of practical tasks, seminars, and study tours, with a strong focus on developing research competence.

8. Emphasis on seminars, group work, and active participation methods to promote communication and problem-solving skills.
9. Active student involvement and feedback in the study process, with freedom to choose enterprises for practical experience.
10. Clear thesis requirements and well-defined topics, with high final grades indicating stringent standards and continuous quality assurance through evaluations and plagiarism checks.

Weaknesses:
1. Slight decline in matriculated and graduated students, potentially due to the pandemic and fewer students pursuing a Master's degree.
2. Perception of the study programme as challenging, impacting student well-being, with potential weaknesses in content, teaching methods, and organization.
3. Need for improved practical skills, decision-making, and innovation.
4. Difficulty balancing work and studies, contributing to the perception of the study programme as hard.
5. Risk of students choosing study courses not aligned with industry needs without proper guidance.
6. In certain cases, students have observed lectures where they are not actively engaged.
7. Issues with equalizing mobility credits with Part A study courses, requiring better guidance.
8. Lack of clarity on whether grading standards reflect true excellence.
9. Unclear if procedures for thesis topics and supervisors are consistently followed, with a discrepancy in the reported number of completed Master's theses indicating a need for accurate data reporting.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Fully compliant

Master's theses within the study programme cover a wide range of scientific topics within environmental science, including innovative approaches that contribute to environmental quality improvement, effective resource management, and policy development. The consistently high grades received indicate rigorous academic standards and effective support for thesis preparation. This dual emphasis on acquiring fundamental knowledge, practical experience, and addressing contemporary environmental challenges through research ensures graduates are well-prepared for careers in environmental science and sustainability.

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1. The master’s study programme in “Environmental Science” at the University of Latvia (UL) is supported by modern facilities and comprehensive resources, as detailed in the self-evaluation report. Conducted at the UL Academic Centre, the study programme benefits from contemporary lecture halls and well-equipped laboratories. The UL Natural Sciences Library provides students with extensive access to printed materials and electronic resources, both locally and through other Latvian libraries, thus enhancing their research capabilities.
The accessibility of diverse databases, electronic resources, and specialized literature available to students for research purposes reflects a substantial provision of scientific resources to support academic pursuits within the University of Latvia’s Faculty of Geography and Earth Sciences (UL

FGES) "Environmental Science" study programme.
The material and technical resources are both extensive and current, encompassing equipment for fieldwork, laboratory experiments, and thesis development. Available equipment includes Soxhlet extractors, microwave equipment, spray dryers, ultrasonic devices, lyophilizers, vacuum ovens, rotary evaporators, and various advanced spectrometers and chromatographs. This diverse array of tools ensures that students can engage in practical, hands-on learning and research.
The study programme's resource provision and alignment with its implementation are detailed in the SAR chapter where the analysis of the study field resources is provided. An expanded collection of spatial data is accessible through the UL FGES Map Browser, which includes topographic and thematic maps, orthophoto collections, and a relief model of Latvia. This resource is updated annually and encompasses a significant portion of Latvia's territory with topographic maps at a scale of M 1:10,000 from the Latvian Geospatial Information Agency and LiDAR data covering approximately 60% of Latvia. Additionally, the Map Browser uniquely offers soil and land valuation maps for Latvia's agricultural lands, with vector data available through e-Latvia resources. In the academic year 2020/2021, the browser was further enhanced with historical maps, including those of Riga from 1883, Western Russia from 1915-1920, and Soviet-era collective farm maps. Access to the Map Browser is granted to registered UL network users.
Students have the opportunity to conduct research in several specialized laboratories, including: Soil Physical Research Laboratory; Soil and Sediments Chemical Research Laboratory; Natural Resources Research Laboratory and more.
Moreover, students have access to various portable or semi-mobile measurement devices for environmental studies, including: DT-9880 solid particle counter for atmospheric pollution; Libelium Plug & Sense for measuring odour and solid particle pollution; Electromagnetic radiation measuring devices (E0546; PCE-EM29) and more. These resources ensure comprehensive support for the study programme, facilitating advanced academic and research activities.
Furthermore, the study programme benefits from e-study courses available on the Moodle platform, providing students with access to study materials, assignments, and lecture videos. Regular updates to the material and technical resources ensure the study programme remains contemporary and effective, thereby supporting high-quality education and research outcomes.
During the assessment visit, these resources were validated through observations of the impressive infrastructure and modern laboratories. Students can schedule access to these facilities for project work.
The master’s study programme “Environmental science” is fully provided with the information base, material and technical, study and scientific provision, as well as financial provision that comply with the conditions for the implementation of the study programme and developing a master’s thesis.

2.3.2. Not applicable.

2.3.3. The master study programme "Environmental Science" at the University of Latvia (UL) is primarily funded through state public funding from the Ministry of Education and Science, as well as student tuition fees. The financial overview for the 2022/2023 academic year indicates that the study programme generates sufficient income to support its activities and ensure its sustainability. Detailed financial data is provided in SAR.
Based on the total number of students (50), the cost per student (prime cost) is 4,646 EUR annually. To achieve profitability, the study programme requires a minimum of 85 fee-paying students or 43 state-funded students.
The data indicates that the study programme has an annual revenue of 232,291 EUR against an expenditure of 214,024 EUR, resulting in a net surplus of 18,267 EUR. This surplus translates to a profitability level of 8%, signifying that the study programme not only meets its financial obligations but also generates a positive return.

Conclusions on this set of criteria, by specifying strengths and weaknesses

The master's study programme in "Environmental Science" at the University of Latvia is ensuring a high-quality study process. Key strengths include comprehensive modern facilities, extensive resources, advanced technical equipment, and financial sustainability with an 8% profitability level. The study programme is supported by flexible e-study courses and robust student access to research labs and study areas. While there is a need to improve the availability of specialized books, the study programme's overall effectiveness and compliance are not significantly impacted.

Strengths:
1. Comprehensive Resource Provision - modern facilities and extensive resources, including contemporary lecture halls, well-equipped laboratories, and access to a wide range of scientific and informative materials through the UL Natural Sciences Library and various electronic resources. The UL FGES Map Browser offers an extensive and annually updated collection of spatial data, providing students with topographic, thematic, and historical maps essential for research.
2. Advanced Technical Equipment - the study programme boasts a diverse array of advanced laboratory and fieldwork equipment, it ensures that students can engage in practical, hands-on learning and research activities.
3. Financial Viability - The study programme is financially supported through a combination of state funding and student tuition fees, ensuring a steady inflow of financial resources. Financial data for the 2022/2023 academic year indicate a net surplus, with the study programme achieving a profitability level of 8%, demonstrating its financial sustainability and capacity for growth.

Weaknesses:
None.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Fully compliant

The master’s study programme in "Environmental Science" at UL is fully compliant with the specified criteria. The comprehensive resource provision, advanced technical equipment, financial viability, e-study courses, and student accessibility collectively ensure the study programme's high-quality implementation, and support the achievement of learning outcomes.

2.4. Teaching Staff

Analysis

2.4.1. During the academic year 2022/2023, 24 university lecturers from the Department of Environmental Science, Departments of Geography and Geology, including visiting university lecturers, for example, from the University of Klaipeda (Lithuania), have participated in the implementation of the master’s study programme; a total of 4 professors, 4 associate professors, 1 visiting professor, 10 assistant professors, 5 visiting university lecturers. The number of professors and associate professors (13) fully complies with Article 55, Part 1, Clause 3 of the Law on Higher Education Institutions, which states that “not less than five professors and associate professors (counted together), who have been elected to academic positions at the respective university, participate in the implementation of the mandatory part and the limited elective part of the

academic study programmes'' (SAR p. 129). The teaching staff are specialized in various subfields of environmental science as well as in other branches of science, which allows students to be provided with the latest scientific findings in natural sciences.
During the reporting period, the academic staff has been involved in important international projects, the Latvian Council of Science financed projects, as well as applied research commissioned by state institutions and commercial companies, the subject of which corresponds to the content of the study programme and thus the obtained results are successfully used to improve the study process.
According to the information provided in SAR, Annex 13P_Staff.xlsx, and Annex CV_ENG.docx, the qualification of the teaching staff members involved in the implementation of the study programme complies with the requirements for the implementation of the study programme and the requirements set forth in the regulatory enactments.

2.4.2. During the reporting period, the qualifications of teaching staff have improved considerably, and the teaching staff has been supplemented. According to SAR p.130, several university lecturers have been elected as associate professors, while several young researchers after obtaining a doctoral degree have started working as university lecturers. According to the information provided in the table where changes in the composition of the teaching staff are compared between 2016/2017 and 2021/2023, it can be concluded that the number of professors has remained unchanged - 5, the number of associate professors has increased by one, the number of assistant professors has decreased by 4, the number of university lecturers has grown from 1 to 4, and the number of university teachers has decreased from 2 to 1. According to the analysis provided in SAR, the changes in the number and structure of teaching staff involved in the study programme can be evaluated positively and the education quality is increasing.
Several professionals of the fields also participate in the implementation of the study programme, for example, 2 lecturers from the employers are involved in teaching GIS technologies.
In the academic year 2022/2023, 24 university lecturers were involved in the implementation of the master's study programme "Environmental science", 23 of them holding doctoral degrees, which makes the ratio of the number of students and teaching staff as 2.2.

2.4.3. Not applicable.

2.4.4. All professors and associate professors involved in the teaching process in the Environmental Science master have published in the last six years in peer-reviewed journals quoted in Q1 and/or Q2, Q3 quartile (Annexes CV_Eng.docx). The results of the project developed by the faculties create the possibilities for each of the academic staff members to reach the very well quoted journals in order to have a good contribution to the development of the study field in general and to the study programme in particular. There is visible growth of the scientific productions of the faculties in the last 2-3 years.

2.4.5. In many cases, several teaching staff members jointly teach one study course. At the meetings of the Study Programmes Councils and, since May 2020, at the meetings of the Study Direction Council, proposals for improving the study process are discussed and considered for improving the study process, taking into account the students' assessment of the study course (SAR p. 131).
Meetings of the Study Direction Council are convened regularly (SAR p. 132), where issues related to studies and methodical work (improvement of the content of study courses, e-study environment, etc.) are discussed. If one study course is taught by several university lecturers, then one particular person is responsible for updating the content in ULIS, as well as for coordinating the subject matter and time allocations, according to the study course description and other current issues.

During the expert meeting with the academic staff, it was pointed out that it is mandatory to have good cooperations between the faculties because most of them are involved in teaching in the same study course. All the matters concerning the teaching process are discussed with the director of the study programme and through him, if necessary, it is sent to the Study Direction Council.
In conclusion, it can be said that there are both a mutual and institutional mechanism for cooperation among the faculties in order to improve the quality of the study process.

Conclusions on this set of criteria, by indicating strengths and weaknesses

The qualification of the teaching staff members involved in the implementation of the study programme complies with the requirements for the implementation of the study programme and the requirements set forth in the regulatory enactments, and it enables the achievement of the aims and learning outcomes of the study programme and the relevant study courses.
The teaching staff has a high level of qualification and the dialogue between faculties ensures the development or introduction of new study courses. Almost all the academic staff participate in the international projects and/or published in international journals or foreign publishing houses which is a proof of the quality of the scientific research carried out by the faculties.

Strengths:
1. The teaching staff exhibits a high level of qualification.
2. The teaching staff involved in the study programme has a very good image among the students.

Weaknesses:
1. There are faculties who are not involved in the last 2 years in a relevant research project at the national level.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

The academic staff is compliant for both implementing the study programme, and legislative requirements.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Fully compliant

According to Annex 30P_MSc_Compliance with HE standarts (ENG).docx, the study programme is compliant with Academic Education Standard. See also respetive sections in the expert report above.

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Not relevant

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Descriptions are available in Latvian which is the language of instruction, and in English. Materials available in Annexes (33P_Kursu-apraksti-MSC-Vide_LV.docx and 33P_Kursu-apraksti-MSC-Vide-ENG.docx) testify that study course descriptions are compliant with the Law on HEI.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Fully compliant

According to Annexes (28P_VidZ_mag_Diploms_ar_pielikumu.docx and 28P_Msc_Diploma.docx), the sample of the diploma complies with the Cabinet of Ministers Regulations No 202.

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Confirmation is available in SAR chapter 3.4. page 129-133, and in Annex CV_ENG.docx. There are 13 professors and associate professors teaching at MSP “Environmental Science”.

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

According to Annex (13P_Staff.xlsx) and Annex (Valsts_val_ENG.zip (BSP_MSP_Environmental Scence_ENG)), all staff members are proficient in the Latvian language in accordance with the Cabinet of Ministers Regulations No 157.

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Not relevant

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Fully compliant

The provided sample of the study agreement (Annexes Agreements.zip/ 8P_Liguma paraugs.docx) is in accordance with the Cabinet of Ministers Regulations No.70.

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

According to Annex Declaration.zip/Agreement amendments translation LU-LMA, UL confirms the students will be provided with opportunities to continue their education in another higher education institution. UL undertakes to provide students with the opportunity to continue their studies in the study programme Geography (code 4544) of the study field Geography and Earth Sciences.

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

According to Annex JD_compensation_policy_statement_environmental_protection.docx, UL confirms that students are guaranteed compensation for losses if the study programme is not accredited or its license is revoked, and the students do not wish to study in another study programme.

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Not relevant

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Fully compliant

All criteria set forth in the Law on Higher Education Institutions and other regulatory enactments, are met, and the study programme is compliant with the set requirements.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

The Master’s study programme in Environmental Science at the University of Latvia effectively aligns its title, code, degree, objectives, learning outcomes, and admission requirements, ensuring comprehensive theoretical and practical training. The study programme is economically and socially justified, meeting the demands of the labor market and preparing graduates for successful careers in various sectors. Its interdisciplinary approach, high employability rates, and alignment with current scientific and labor market trends underscore its relevance and quality. The study programme’s strengths, including its comprehensive curriculum, hands-on learning opportunities, and robust teaching methods, ensure it remains a leader in environmental science education.
It remains highly relevant and popular, despite a slight decline in student enrollment and graduation rates, possibly influenced by external factors like the pandemic. Student satisfaction is generally high, especially among final-year students, indicating strong support and motivation. However, the study programme's perceived difficulty and impact on student well-being warrant further investigation into teaching methods and content. The curriculum is well-structured, offering flexibility and practical experience, though guidance in limited elective study course selection could be improved. The study programme demonstrates scientific excellence and effective integration of theory and practice, with robust mechanisms for quality assurance and continuous improvement. High final thesis grades suggest rigorous standards and strong support, though more explicit grading standards could further ensure academic excellence. Practical skills, decision-making, and innovative thinking should be improved. Also guidance should be improved to reduce risk of students choosing study courses not aligned with industry needs.
Key strengths include comprehensive modern facilities, extensive resources, advanced technical equipment, and financial sustainability with an 8% profitability level. The study programme is supported by flexible e-study courses and robust student access to research labs and study areas. While there is a need to improve the availability of specialized books, the study programme's overall effectiveness and compliance are not significantly impacted.
The qualification of the teaching staff members involved in the implementation of the study programme complies with the requirements for the implementation of the study programme and the requirements set forth in the regulatory enactments, and it enables the achievement of the aims and learning outcomes of the study programme and the relevant study courses.
The teaching staff has a high level of qualification, and the dialogue between faculties ensures the development or introduction of new study courses. Almost all the academic staff participate in the international projects and/or published in international journals or foreign publishing houses which is a proof of the quality of the scientific research carried out by the faculties. However there are faculties who are not involved in the last 2 years in a relevant research project at the national level.

Evaluation of the study programme "Environmental Science"

Evaluation of the study programme:

Excellent

2.6. Recommendations for the Study Programme "Environmental Science"

Short-term recommendations

It is recommended that the study programme enhances its monitoring and adaptation processes to evolving scientific trends and labor market demands. This can be achieved by establishing a quarterly review committee tasked with tracking these trends and making necessary adjustments to the curriculum. The committee should utilize existing faculty expertise and resources to ensure the study programme remains current and relevant.

Explore ways to improve student well-being by addressing potential gaps in prior knowledge, motivation, and external factors. Evaluate if changes are necessary and review and adjust the study programme content, teaching methods, and organisation to support student success better.
Provide support for students balancing work and studies, possibly through flexible scheduling and additional resources.
Increase the number of guest professors or visiting professors especially from heritage and cultural fields.

Long-term recommendations

For long-term improvement, the study programme should focus on increasing multidisciplinary integration by developing new interdisciplinary modules that incorporate emerging fields such as climate change economics and environmental health.
The study programme should strengthen international collaboration by fostering international partnerships to facilitate student exchange programmes and joint research projects. International exposure will enhance the study programme’s prestige and provide students with a richer educational experience.
Investigate the causes of the downward trend in enrollment and develop strategies to attract and retain students.
Collaborate with stakeholders to evaluate the need and approaches for enhancing practical skills training by integrating more hands-on experiences and real-world applications into the curriculum. When updating content, consider that study courses should also include subjects of innovations and issues from a future perspective.
Develop a structured advising system that guides students in selecting limited elective study courses, ensuring alignment with industry needs and career goals.
For the long term, it is necessary to develop a regular study programme in order to have the possibility to invite more guest lecturers or visiting professors using especially the tools provided by Forthem Alliance.

III - Assessment of the Requirements for the Study Field and the Relevant Study Programmes

III - Assessment of the Requirements for the Study Field and the Relevant Study Programmes

Assessment of the Requirements for the Study Field

Requirements	Requirement Evaluation		Comment
R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:		Partially compliant	The regulations and procedures for developing study programmes and ensuring performance improvements within the study field are generally in place and detailed within SAR Part 2. However, there is a lack of clear evidence how stakeholders evaluate the efficiency of the mechanisms.
R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)	Fully compliant		The scientific research is well represented by the international and national scientific programmes carried on by the faculties.
R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.		Partially compliant	The cooperation with Latvian and foreign organizations within the study field ensures the achievement of the study field aims through robust international partnerships and active participation in global networks. However, there are areas for improvement in the detailed structuring of domestic cooperation and the direct attraction of foreign students and academic staff.

Requirements	Requirement Evaluation			Comment
R4 - Elimination of deficiencies and shortcomings identified in the previous assessment of the study field, if any, or implementation of the recommendations provided.	Fully compliant			The University of Latvia has made substantial progress in implementing the recommendations from previous assessment procedures, resulting in notable improvements in infrastructure, curriculum, and research integration. The university's proactive approach to addressing expert feedback and its commitment to continuous improvement underscore its dedication to providing high-quality education in environmental science and related fields. However, ongoing efforts and attention to pending recommendations are crucial to maintain and further enhance the quality and relevance of its study programmes.

Assessment of the Requirements for the Relevant Study Programmes of the Study Field

No.	Study programme	R5	R6	R7	R8	Evaluation of the study programme (excellent, good, average, poor)
1	Research and Protection of Cultural and Environmental Heritage (43431)	Not relevant	Partially compliant	Fully compliant	Partially compliant	Good
2	Environmental Science (43431)	Not relevant	Fully compliant	Fully compliant	Fully compliant	Good
3	Environmental Science (45431)	Fully compliant	Fully compliant	Fully compliant	Fully compliant	Excellent

The Dissenting Opinions of the Experts

None