



B Forest and Nature Conservation
M Forest and Nature Conservation
Wageningen University

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Summary

Standard 1. Intended learning outcomes

The panel reviewed the ILOs and profile of the BSc programme, highlighting its interdisciplinary approach that integrates societal, political, biological, and ecological aspects of forest and nature management. The panel commends the programme's broad approach, recognizing its importance in addressing complex ecological challenges. They found that both the profile and ILOs provide a solid foundation of knowledge appropriate for a BSc level. The panel also praises the skills profile, noting that it clearly outlines the skills taught throughout the programme. Faculty members are familiar with the skills profile and actively engaged with it. However, the panel points out that the skills profile is not explicitly integrated into the ILOs, and many skills-related objectives were not explicitly specified as such. They recommend making these skills more explicit in the ILOs and to formulate them more precisely. Additionally, the panel strongly advises incorporating more attention to climate change and related issues in the programmes' profiles, stressing the need for graduates who can address the impacts of these challenges in an interdisciplinary way.

The panel is enthusiastic about the dual degree with SLU, emphasizing the value of the exchange for enhancing the international and global aspects of the programme. This collaboration broadens students' perspectives and offers learning in diverse contexts.

For the MFN programme, the panel found its profile to be well-defined and distinct, with clearly differentiated specializations. The combination of deepened expertise in specific disciplines, along with a focus on the thesis and internship are of an appropriate level for a master programme. The panel praises the programme for its interdisciplinary focus and its aim to develop professionals capable of working in collaborative, interdisciplinary settings.

Standard 2. Teaching-learning environment

The panel reviewed the curricula of the bachelor's and the master's programme Forest and Nature Conservation, and found them to be coherent and well structured. The *bachelor's curriculum* strikes a good balance between foundation courses, domain related courses, and the integration needed for an interdisciplinary approach that is in line with the profile and aims of the programme. Courses of the BSc programme are of an appropriate bachelor level, although some students seem to desire more in depth knowledge. The panel concluded that a high number of contact hours covering various disciplines increases the study load. The panel recommends bringing down the number of compulsory contact hours to better allow students to absorb the material. Interviews revealed content overlap between courses likely due to insufficient alignment between chair groups. The panel advises better coordination among teaching staff to improve programme coherence. The *master's curriculum* is coherent, with a clear interdisciplinary approach and an emphasis on the thesis. The panel appreciates that the master's curriculum is appropriate for the master level and feasible. The panel noted that the MSc programme, although already having a certain focus on climate change-related issues, not always addressed sector uncertainties sufficiently, like managing forests in a changing climate. It recommends emphasizing adaptive management, climate change and critical reflection in the curriculum more explicitly to better equip students for tackling current challenges. This more explicit and emphasized focus would enhance both students' future careers and the program's effectiveness in the sector. The panel appreciates the various teaching methods and learning activities included within both the BSc and the MSc programme, such as the field practicals, the internships, tutorials and lectures.

The panel values the study guidance that students of both the BSc and the MSc programmes receive. It is especially positive about the number of study advisors and values the amount of time that study advisors have for each student. Information for students is clear and easy to be found through the study guides. Students with impairments are offered sufficient extra guidance. Supervision throughout the theses and internships are satisfactory. The panel commends the programmes on the study advisors and the guidance system in general. The panel concludes that in principle, the programmes are feasible within three and two years respectively, although students regularly do have study delay. The panel recommends the programme's management to further analyze the reasons for study delay in order to adapt where necessary.

Standard 3. Student assessment

The panel concludes that the assessment system that the programmes have in place is solid and reliable, and compliments the assessment policy. The implementation of this policy, although well underway, does not seem to be completed yet. The panel urges the programmes and the Examining Board to speed up the process of implementation in order to align all assessment practices within the programmes.

The panel commends the programmes on the thesis assessment forms for the theses, which it deems clear and transparent. It concludes that thesis assessment is done in a reliable and transparent and independent manner. Some of the teaching staff noted that the forms and the rubrics might have a more egalitarian grading as an effect. The panel, who also noted this in more than one of the theses assessment they had studied, recommends both programmes to look into this potential decrease in discriminatory power of the thesis assessment and adapt if necessary. It encourages the programmes to continually discuss and refine their assessment methods, including the use of rubrics and the integration of generative AI in education. The panel concludes from interviews and documentation that the Examination Board of the BBN and MFN programmes is fully capable to perform their legal duties. It was happy to find that the checks and balances that are in place are sufficient to ensure the reliability of the assessment both formally and in practice. Even though the Examining Board seems to have a high workload, they perform their duties well and safeguard the quality of the assessment of both programmes to satisfaction.

Standard 4. Achieved learning outcomes

The panel concludes that the theses of both programmes show that students achieve the intended learning outcomes. The panel was impressed with the quality of theses and considered them clearly of the level and quality that may be expected from a bachelor's and master programme respectively. The BSc programme prepares graduates sufficiently for a variety of master programmes and the MSc programme prepares graduates sufficiently for the professional field. Alumni find employment in relevant jobs, both inside and outside academia.

Score table

The panel assesses the programmes as follows:

Bachelor's programme Forest and Nature Conservation

Standard 1: Intended learning outcomes	meets the standard
Standard 2: Teaching-learning environment	meets the standard
Standard 3: Student assessment	meets the standard
Standard 4: Achieved learning outcomes	meets the standard

Master's programme Forest and Nature Conservation

Standard 1: Intended learning outcomes	meets the standard
Standard 2: Teaching-learning environment	meets the standard
Standard 3: Student assessment	meets the standard
Standard 4: Achieved learning outcomes	meets the standard

General conclusion positive

Prof. dr. Jacqueline van Muijlwijk, panel chair

Sarah Boer MA, panel secretary

Date: 27/03/2025

Introduction

Procedure

Assessment

On 18 and 19 November 2024, the bachelor's and master's programmes Forest and Nature Conservation of Wageningen University were assessed by an independent peer review panel as part of the cluster assessment WO Life Sciences and Natural Resources 3. The assessment cluster consisted of ten programmes, offered by Wageningen University. The assessment followed the procedure and standards of the NVAO Assessment Framework for the Higher Education Accreditation System of the Netherlands (September 2024).

Quality assurance agency Academion coordinated the assessment upon request of Wageningen University. Jessica van Rossum acted as coordinator and panel secretary. Anne-Lise Kamphuis, Rik Ligthart and Sarah Boer also acted as panel secretaries in the cluster assessment. They have been certified and registered by the NVAO. Sarah Boer acted as panel secretary for the site visit in which the bachelor's and master's programmes Forest and Nature Conservation were assessed.

Preparation

Academion composed the peer review panel in cooperation with the institutions and taking into account the expertise and independence of the members, as well as consistency within the cluster. On 6 September 2024, the NVAO approved the composition of the panel. The coordinator instructed the panel chair on her role in the site visit according to the Panel chair profile (NVAO 2016). In preparation for the site visit, the programme instructed the panel on the governance system of the WU, as it differs from the regular governance structure found at most universities.

The programmes composed a site visit schedule in consultation with the coordinator (see appendix 3). The programmes selected representative partners for the various interviews. They also determined that the development dialogue would be made part of the site visit. A separate development report was made based on this dialogue.

The programmes provided the secretary with a list of graduates over the academic years 2021-2022, 2022-2023 and 2023-2024. In consultation with the secretary, the panel chair selected 15 theses of the bachelor's programme and 15 theses of the master's programme. From the bachelor's programme 6 theses were selected from the specialization Society and Policy and 9 theses from the specialization Ecology and Conservation. From the master's programme 4 theses were selected from the specialization Society and Policy, 4 from the specialization Management and 7 from the specialization Ecology. They took the diversity of final grades into account. Prior to the site visit, the programmes provided the panel with the theses and the accompanying assessment forms. They also provided the panel with an information file and additional materials (see appendix 4).

The panel members studied the information and sent their findings to the secretary. The secretary collected the panel's questions and remarks in a document and shared this with the panel members. In a preliminary meeting, the panel discussed the initial findings on the information file and the theses, as well as the division of tasks during the site visit. The panel was also informed on the assessment framework, the working method and the planning of the site visit and report.

Site visit

During the site visit, the panel interviewed various programme representatives (see appendix 3). The panel also offered students and staff members an opportunity for confidential discussion during a consultation hour. No consultation was requested. The panel used the final part of the site visit to discuss its findings in an internal meeting. Afterwards, the panel chair publicly presented the preliminary findings.

Report

The secretary wrote a draft report based on the panel's findings and submitted it to the coordinator for peer assessment. Subsequently, the secretary sent the report to the panel for feedback. After processing this feedback, the secretary sent the draft report to Wageningen University in order to have it checked for factual irregularities. The secretary discussed the ensuing comments with the panel chair and changes were implemented accordingly. The panel then finalized the report, and the coordinator sent it to Wageningen University.

Panel

The following panel members were involved in the cluster assessment:

- Prof. dr. J.E. (Jacqueline) van Muijlwijk-Koezen, Chief Education Officer and professor in Innovations in Human Health and Life Sciences at the Vrije Universiteit Amsterdam (chair);
- Ir. M.L. (Margot) Kok, Director of the Department for Education Policy at the Faculty of Science at Utrecht University;
- Dr. A.A.J. (Annik) Van Keer, Deputy Head of the Department for Education Policy at Utrecht University;
- Dr. Ir. L.G.J. (Luc) Boerboom, associate professor at the Faculty of Geo-Information Science and Earth Observation at the Universiteit Twente;
- Dr. G.M. (Garrett) Broad PhD, associate professor in Communication Studies at Rowan University (United States of America);
- Prof. V.B. (Vilis) Brukas, professor in Forest Planning at the Swedish University of Agricultural Sciences (Sweden);
- Prof. dr. M. (Marleen) De Troch, associate professor in Marine Ecology at Ghent University (Belgium);
- Prof. dr. M.P. (Michael) Gilek, professor in Environmental Science at Södertörn University (Sweden);
- Prof. dr. Ing. B.J.J.M. (Bart) van der Hurk, Scientific Director at Deltares and professor in Climate Interactions with the Socio-Ecological System at the Vrije Universiteit Amsterdam;
- Prof. dr. P.L. (Pierre) Ibsch, professor in Socio-ecology of Forest Ecosystems at Eberswalde University for Sustainable Development (Germany);
- Dr. T.K. (Torsten) Krause, associate professor at the Lund University Centre for Sustainability Studies of Lund University (Sweden);
- Em. prof. dr. B.A. (Bruce) Lankford, professor emeritus in Water and Irrigation Policy at the University of East Anglia (United Kingdom);
- Prof. dr. T. (Tatiana) Loboda, professor at the Department of Geographical Sciences of the University of Maryland (United States of America);
- Prof. dr. ing. S. (Steffen) Nijhuis, professor in Landscape-based Urbanism at the Delft University of Technology, Department of Urbanism, Section Landscape Architecture (referee panel member);
- Dr. M.A.F. (Mirjam) Ros-Tonen, researcher and former associate professor at the Faculty of Social and Behavioural Sciences of the University of Amsterdam;
- Prof. dr. S.T. (Sabine) Timpf, professor in Geoinformatics at the University of Augsburg (Germany);

- Prof. dr. V.B. (Veerle) Van Eetvelde, professor in Landscape research at Ghent University (Belgium);
- Prof. C.W. (Christian) Werthmann, professor in Landscape Architecture and Design at Leibniz University Hannover (Germany);
- J.A. (Job) Tuinder BSc, master's student Earth Sciences at the University of Amsterdam (student member);
- F. (Finn) van der Straaten BSc, master's student International Development Studies at the University of Amsterdam (student member).

The panel assessing the bachelor's and master's programmes Forest and Nature Conservation at Wageningen University & Research consisted of the following members:

- Prof. dr. J.E. (Jacqueline) van Muijlwijk-Koezen, Chief Education Officer and professor in Innovations in Human Health and Life Sciences at the Vrije Universiteit Amsterdam (chair);
- Dr. A.A.J. (Annik) Van Keer, Deputy Head of the Department for Education Policy at Utrecht University;
- Prof. V.B. (Vilis) Brukas, professor in Forest Planning at the Swedish University of Agricultural Sciences (Sweden);
- Prof. dr. P.L. (Pierre) Ibsch, professor in Socio-ecology of Forest Ecosystems at Eberswalde University for Sustainable Development (Germany);
- F. (Finn) van der Straaten BSc, master's student International Development Studies at the University of Amsterdam (student member).

Information on the programmes

Name of the institution:	Wageningen University
Status of the institution:	Publicly funded institution
Result institutional quality assurance assessment:	Positive
Programme name:	B Bos- en Natuurbeheer (<i>in English: B Forest and Nature Conservation</i>)
CROHO number:	56219
Level:	Bachelor
Orientation:	Academic
Number of credits:	180 EC
Specializations or tracks:	A. Society and Policy B. Ecology and Conservation
Location:	Wageningen
Mode(s) of study:	Fulltime
Language of instruction:	Dutch
Submission date NVAO:	1 May 2025
Programme name:	M Forest and Nature Conservation
CROHO number:	66219
Level:	Master
Orientation:	Academic
Number of credits:	120 EC
Specializations or tracks:	A. Society and Policy B. Management C. Ecology

Location:	Wageningen
Mode(s) of study:	Fulltime
Language of instruction:	English
Submission date NVAO:	1 May 2025

Description of the assessment

Organization

Wageningen University consists of one faculty with five science groups, also known as departments. These science groups are Agrotechnology and Food Sciences, Animal Sciences, Environmental Sciences, Plant Sciences and Social Sciences. The science groups deliver education through chair groups. The science groups are responsible for the management of the activities of the chair groups and the research institutes of Wageningen Research (WR). Chair groups are usually clustered according to similarities under the broad field of a particular science group. A chair group is the organizational component within Wageningen University to give shape to academic teaching and research and create societal value in a specific field. There are about ninety chair groups, each of them led by a professor to conduct research in the specific domain. Despite the exclusiveness of every chair group, they all work under the thematic area of healthy food and living environment. A chair group can be involved in the education of more than one programme. The involvement of chair groups in a programme is evident in the courses and the specialization. Regarding a programme, the Board of Education oversees that the programme director and the programme committee, consisting of students and teachers, develop and update bachelor's and master's curricula and align with the chair group(s) on whether new courses and specializations are needed or existing courses or thesis specializations have to be enhanced.

Recommendations previous accreditation panel

The previous accreditation of the bachelor's and master's programmes Forest and Nature Conservation of Wageningen University took place in 2019. In the documentation for the current assessment, the programme described the actions taken in response to the recommendations. In addition, several improvements were discussed during the site visit. The panel concludes that programme management has taken the recommendations seriously. The panel is satisfied with the improvement measures taken. Among other things, the programme has included an internship in the bachelor's programme to prepare students who wish to enter the professional field after their degree instead of proceeding with a master's degree. They also made clear to students what flexible options there are in the programme, created tailor-made courses for the bachelor's programme, and minimized the variation in assessment policy at the chair group level by implementing the use of Osiris for all chair groups. Some examples of changes in response to the previous accreditation are discussed under the relevant standards.

Standard 1. Intended learning outcomes

The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.

Findings

Both the bachelor's and the master's programme of Forest and Nature Conservation (BBN and MFN) have an interdisciplinary profile. The programmes complement thorough knowledge of ecological topics with knowledge of the social, economic and political context of these topics. They aim to equip students with the skills and knowledge necessary to conserve, protect and manage natural resources and species populations. Forest and nature areas play an increasingly important role in society at large, not only as they provide natural resources, but also in order to conserve biodiversity and combat climate change. The programmes want to train students to become scientists or professionals who can critically analyze the processes that shape socio-ecological systems, and who can contribute to sustainable nature conservation on a global scale. The programmes therefore aim to provide students with profound knowledge and understanding of the ecological functioning of ecosystems and the skills to navigate the socio-political and economic contexts of these ecosystems.

To help align the aims of the programme with the expectations and developments within the professional field, the programmes organize regular meetings with the External Advisory Board. This board consists of members from a variety of organizations and companies in the professional field. During the meetings, the programme management and the board members discuss questions surrounding recent developments within the field. The board members advise the programme on how to proceed with this. Their advice is integrated into the programme if needed.

Profile and aims Bachelor Forest and Nature Conversation

The BBN programme aims to equip students with sufficient knowledge of the social and ecological aspects of forest and nature conservation around the globe to prepare them for the next stage of their academic career or the professional field. The programme places equal importance on ecological and social sciences, and aims to translate this into its curriculum. The programme's goal is to train students academically on theories related to the ecology and biology of natural and semi-natural ecosystems and populations both within and outside of the Netherlands. Additionally, it focuses on social and political theory that educates students on the management-processes regarding these ecosystems and populations. Students can follow a specialization within one of two subdomains: Society and Policy (A), or Ecology and Conservation (B). Within each specialization, the programme aims to pay explicit attention to the inherent multidisciplinary nature of the domain of Forest and Nature Conservation. This is done by the implementation of compulsory integration courses in which the different disciplines are being linked.

Moreover, the BBN programme aims to equip students with a certain skillset to prepare them for their continuing academic or professional path. The skills in question have been compiled in the programme's *skills profile* (see appendix 2). This skills profile delineates three types of skills: core skills, supportive skills and implicitly taught skills. The *core skills* are explicitly instructed, trained and evaluated, and graduates should possess these demonstrably. Examples of these skills are argumentation and research design. *Supportive skills* are explicitly addressed in the programme with the aim to reinforce other skills. These are skills like collaborating and presenting. Finally, *implicitly taught skills* shape the development of the student and their point of view. These skills are not taught explicitly but they are covered within the programme, such as academic English, reflection and entrepreneurial skills. These three different types of skills are

distributed over the three BSc years, with the core skills all set at level three. This means that the core skills are eventually to be achieved at the highest level, namely that of a third-year bachelor's student.

The 11 intended learning outcomes (ILOs) of the bachelor's programme are divided into three categories (see appendix 1). The first category is *domain specific learning outcomes*, which focus largely on socio-ecological knowledge and skills. The second category, *general learning outcomes*, has to do with more generic and academic skills and knowledge like presentation and reflection. Lastly the *major-specific parts* are two ILOs, one of which focused on the knowledge and skills belonging to specialization A, the other on those belonging to specialization B. All 11 ILOs are aligned with one or more Dublin descriptors.

The panel studied the ILOs and the profile of the BSc, including the skills profile. It was positive about the interdisciplinary approach of the profile, focussing on the societal and political context of forest and nature management as well as the biological and ecological aspects of it. The panel commended the programme on this broad approach and found it to be of crucial importance in solving the wicked problems that ecologists are facing. It noted that both the profile and the ILOs are aimed to provide a foundation of knowledge on these topics, appropriate for a BSc level. The panel was enthused by the skills profile, and found it to be a great way to make the skills that are taught throughout the programme explicit and insightful. During the interviews with the teaching staff of the BBN programme, the panel concluded that teachers were familiar with the skills profile and working with it.

Having examined the ILOs and the profile of the BBN programme, the panel concludes that although sustainability is already a focus within the programme's mission, it could be emphasized more explicitly. Compared to other, similar programmes, the BBN programme is already focussing more on climate change-related issues, which the panel has noted. However the panel thinks that given the current state of the field, still more explicit attention should be given to the problem. The panel found that the field of forest and nature conservation is in need of graduates who understand the impact of these problems on their field, and are equipped to come up with interdisciplinary ways to approach them. The world needs change agents, able to adapt to the effects of a rapidly changing climate. The urgency with which the sector of forest and nature conservation needs to transform and adapt reflects this too. This is why the panel strongly recommends focusing on these adaptive strategies with regards to climate change-related issues with more emphasis in their profile and ILOs.

The panel concluded that the skills profile was not explicitly integrated into the ILOs of the BSc programme. Most of the skills-learning objectives were mentioned but not explicitly differentiated as part of the skills learning line. The panel recommends the programme to make the skills from the skills profile more explicit in the ILOs and to formulate these skills more precisely.

Dual degree with the Swedish Agricultural University (SLU)

The programme offers a dual degree with the BSc Forest and Landscape programme at the Swedish Agricultural University in Uppsala. SLU students from that programme are offered the opportunity to conduct their third year at the BSc Forest and Nature Conservation programme and vice versa. This means that students enrol with the respective programme they are exchanging to, and receive diplomas for both BSc programmes from the SLU and the WU. The intended learning outcomes for the dual degree are the ILO's of the two involved programmes (see appendix 1)

The panel was enthusiastic about the dual degree with Sweden, and convinced that it adds value to the programme. The panel saw the opportunity for students to go abroad and study at the SLU as greatly beneficial, since the global aspect of the programme is enhanced by this exchange. The global approach of

the programme benefits from its collaboration with the SLU, which offers students to learn this approach in different contexts. Since there is only a relatively small part of the Netherlands reserved for forest and nature areas, the international aspect of the programme is quite important. Having this dual degree with the Sweden University is one of the ways in which the programme aims to bring international perspectives on forest management and nature conservation into practice.

Profile and aims master Forest and Nature Conservation

The MFN programme aims to offer students a specialist education in the ecological functioning of natural areas in terrestrial ecosystems all over the world. Students study this ecological functioning from a plant-, forest-, or wildlife perspective and are educated on the social, economic and political context of the nature areas in question. The programme aims to educate interdisciplinary system thinkers within the entire breadth of the forest and nature conservation domain. It builds on the knowledge and skills that students are taught in the BSc programme, and expands on them.

The programme means to prepare students to function as academics in a professional and academic environment. It wants to provide them with the knowledge and skills necessary to develop nature conservation schemes, design sustainable management options for natural resource use, or play an effective role in policy development related to conservation or resource use. Students can specialize in one of three subdomains: Ecology, Management, or Society and Policy. These specializations are thesis-oriented, meant to prepare students for their role as academics in a professional environment or in a PhD programme. The thesis trajectory takes up 4 of the 6 periods in the second year of the programme, and students can follow many research-oriented courses in the first year, one of which is compulsory.

Within the Society and Policy specialization students can follow the Sustainable Development Diplomacy track (SSD). This special track is only available for students who do the specialisation Society and Policy. It was designed together with the Fletcher School of Law and Diplomacy of Tufts University, Cambridge, Mass., USA, the World Bank from Washington DC, USA, the Dutch Ministry of Economic Affairs, the Hague, and the Sustainability Challenge Foundation from the Netherlands. The purpose of the track is to provide students with theory and practice of (inter)national diplomacy in the field of sustainable development. This track enables SDD students to understand, analyse and tackle the world's most challenging problems with regard to sustainability. SDD has an intake capacity of 16 students per academic year for which a separate selection procedure is in place.

The panel examined the profile and the ILOs of the MFN programme and concluded that the profile is well-defined and distinctive. The specializations are clearly differentiated and have their own focus, which provides a deepening aspect in an otherwise broad programme. The enhanced expertise in the specific disciplines with which students engage, coupled with a focus on the thesis and internship, sets the MFN programme apart from the BBN programme. The panel commends the programme for its interdisciplinary profile and its clear objective of educating professionals with the skills and knowledge necessary to collaborate in interdisciplinary settings.

Considerations

The panel reviewed the ILOs and profile of the BSc programme, highlighting its interdisciplinary approach that integrates societal, political, biological, and ecological aspects of forest and nature management. The panel commends the programme's broad approach, recognizing its importance in addressing complex ecological challenges. They found that both the profile and ILOs provide a solid foundation of knowledge appropriate for a BSc level. The panel also praises the skills profile, noting that it clearly outlines the skills taught throughout the programme. Faculty members are familiar with the skills profile and actively engaged

with it. However, the panel points out that the skills profile is not explicitly integrated into the ILOs, and many skills-related objectives were not explicitly specified as such. They recommend making these skills more explicit in the ILOs and to formulate them more precisely. Additionally, the panel strongly advises incorporating more attention to climate change and related issues in the programmes' profiles, stressing the need for graduates who can address the impacts of these challenges in an interdisciplinary way.

The panel is enthusiastic about the dual degree with SLU, emphasizing the value of the exchange for enhancing the international and global aspects of the programme. This collaboration broadens students' perspectives and offers learning in diverse contexts.

For the MFN programme, the panel found its profile to be well-defined and distinct, with clearly differentiated specializations. The combination of deepened expertise in specific disciplines, along with a focus on the thesis and internship are of an appropriate level for a master programme. The panel praises the programme for its interdisciplinary focus and its aim to develop professionals capable of working in collaborative, interdisciplinary settings.

Conclusion

The panel concludes that the bachelor's and master's programme Forest and Nature Conservation meets standard 1.

Standard 2. Teaching-learning environment

The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.

Findings

Curriculum

The curricula of both the bachelor's and the master's programme Forest and Nature Conservation are based on a WU-wide fixed set of blocks throughout the year. Each year is divided into six periods, of which periods 1, 2, 5 and 6 have a duration of eight weeks and consist of 12 EC. Periods 3 and 4 have a duration of four weeks and consist of 6 EC.

Curriculum BSc Forest and Nature conservation

The programme consists of a compulsory part (150 EC) and an elective part (30 EC). The compulsory part focuses on the ecological and social aspects, as well as knowledge of mathematics, statistics, research methodology, environmental sciences and biology. This way, the programme wants to ensure that all students are on the same level concerning those topics when they graduate. Depending on which specialization students choose, they are further educated on either the societal aspects of forest and nature conservation (A) or the ecological aspects that are related to nature management (B). The programme aims to integrate the disciplines in which students are educated by differentiating between three types of mandatory courses. The *foundation* courses take place in the first year and provide students with a basis of mathematics, statistics, ecology and physical geography on which more in depth knowledge can be built. *Domain-related* courses run throughout the three years of the programme, and educate students on the social and ecological aspects of forest and nature conservation. Lastly, the *integrating* courses, at the end of each year and the beginning of the first year, integrate knowledge from different disciplines. These courses are mostly field practicals where students work on interdisciplinary topics.

The elective part of the programme gives students the opportunity to further develop their knowledge and skills in one particular area by choosing a minor from the WU or from another university. Students can also opt to design their own elective part by choosing several courses and/or do an internship of 12 – 18 EC. If students choose to design their own elective space, this happens in consultation with a study advisor and approval of the Examination Board. At the end of the second year, students can choose to follow a self-assessment course in which they take a professional assessment test and use the outcome to design their minor in a way that aligns with their future plans. The third year ends with the bachelor thesis (12 EC). Students can only start their thesis after meeting the admission requirements. This means that students have to have passed 102 EC of the common part and major of their programme. Students have to check this with their study advisor, after which they sign their contract with their thesis supervisor.

The panel studied the curriculum of the BSc Forest and Nature Conservation programme and interviewed students, staff and management during the site visit. It found the curriculum to be well structured, with a good balance between domain related courses, foundation courses and the integration needed for an interdisciplinary approach. The diversity of topics throughout the courses are also in line with this approach, according to the panel. The panel was happy to find the self-assessment course in which students are guided in their choice for a master programme or career choice and it considers it to be a helpful tool to guide students in the path toward their future plans. It considers the curriculum to be coherent, and appreciates the way in which the specializations are set up. The two specializations offer students the opportunity to deepen their knowledge in different directions, preparing them for a variety of master programmes. The panel compliments the programme on their course guide, which they thought to be very clear and informative for the students.

Dual Degree SLU

The programme has not yet had any Swedish exchange students following the dual degree. The curriculum of the dual degree is added in appendix 2, and would provide exchange students with three compulsory courses that focus on Forest and Landscape of 15 EC each. The programme also provides the exchange students with a thesis supervisor. The curriculum for Swedish exchange students depends on which specialization they choose. Both specializations offer the students 24 EC in free elective space, 6 EC in restricted elective space, two compulsory courses of 6 EC each and the thesis of 18 EC.

From documentation and their interview with the bachelor students, the panel concluded that there are a lot of contact hours in the bachelor programme, which cover many different concepts and a variety of topics within different disciplines. Some students experienced the study load as quite high because of the amount of contact hours, not necessarily because of the material itself. The panel recognises this as an ambitious and interdisciplinary curriculum, but also advises the programme management to review and diminish the amount of compulsory contact hours to better balance the study load while respecting individual learning styles.

During the interviews with the programmes and by studying the documents provided, it became clear to the panel that some students experience an overlap in content between several of their courses. By interviewing students and staff, the panel discovered that the reason for this probably has to do with the alignment between different chair groups when it comes to the coherence of the programme. The teachers align their course goals with the ILOs and within their own chair group, however the alignment of the content on programme level is not something that teachers are doing. The panel notes that this is to the detriment of the coherence of the programmes' curricula and advises the teaching staff and programme management to align the content of their courses not just within chair groups or with the ILOs of the programme, but also on

programme level. Teachers should be aware what the learning lines are and what knowledge they are building on with their course, in order to enhance the coherence of the programmes and avoid too much overlap between them.

During interviews with the teaching staff and after studying the documentation on the curriculum and the course content of several courses, the panel concluded that the material offered to the students was of an appropriate BSc level. However, during the interview with the students, some mentioned they would like more depth in the curriculum since the material was experienced as very doable. The panel suggests that the programme further discusses how to better balance the amount of different concepts and compulsory contact hours with students' wishes to gain more in depth knowledge.

Curriculum MSc Forest and Nature Conservation

The MFN programme consists of 120 EC divided over 2 years, and is offered as a full time programme. The *first year* is made up of courses related to the three specializations: Society and Policy (A), Management (B) and Ecology (C). In order to provide common ground to students from all specializations, the year starts with a common introductory course of 6 EC 'Trends in Forest and Nature Conservation' which focuses on the multidisciplinary of the domain and introduces the students to the programme. The specializations A and C each have an additional set of compulsory courses, free electives and restricted electives that focus on domain-specific skills, and on the development of professional and academic skills. In addition to the compulsory courses, students select a set of courses that prepare them for their thesis, complemented by elective courses related to their own personal interests. These choices are always made in consultation with a study advisor. The amount of elective space and compulsory courses differs per specialization, as does the amount of restricted elective space. The restricted electives in all specializations include the Academic Master Cluster courses; a WU-wide set of courses which are meant to help students develop professional and academic skills. An example of this is the Academic Consultancy Training course (9 EC) where students from different master programmes work in a multidisciplinary group on a project assignment for a real-world commissioner. Project management, self-reflection and communication skills form an important aspect of this course. The SSD track offers students courses that are geared towards research or industry like the course International Environmental Policy Consultancy (12 EC).

The *second year* of the MFN programme is entirely dedicated to a thesis (36 EC) and an internship (24 EC). Students can write their thesis with one of the following chair groups: Forest and Nature Conservation Policy group (FNP), Forest Ecology and Forest Management group (FEM), Plant Ecology and Nature Conservation group (PEN), Wildlife Ecology and Conservation group (WEC). Each Chair Group has a thesis coordinator who functions as a contact person. Students are under direct supervision of their main and administrative supervisor, who is responsible for guiding the thesis project and are employed by the Chair Group. If the main and administrative supervisor is a PhD candidate, there is also a second supervisor, usually the person who is supervising the PhD candidate in question. Students are informed of the learning goals, the requirements, research integrity and rules surrounding the use of generative AI via the MSc Thesis course guide. They write a proposal, carry out the research project and write the report in a period of approximately 25 weeks, which spans across the first 4 periods of year two. After finishing their thesis they start their internship, which takes up the last 2 periods of the second year.

The panel studied the curriculum of the MSc Forest and Nature Conservation programme, and concludes that it is well-structured and coherent, with a clear interdisciplinary approach in line with the profile and the ILOs. It appreciates the implementation of the Academic Master Cluster courses, which it finds to be a valuable addition in teaching students the skills needed for their professional or academic career. The panel noted that the uncertainty of the sector, for instance how to plan ahead for a forest within a rapidly changing climate, was not always addressed sufficiently. Even though the programme is already doing more than

similar programmes to address these climate change-related issues, which the panel appreciates, there is still room for more explicit emphasis on the challenges that the field is facing and the rigorous change in approach that is needed to this. The panel is of the opinion that more adaptive management and critical reflection is needed in order to tackle the wicked problems that are dominant in the sector right now. It recommends the programme to increase the attention in the curriculum to this adaptive and reflective attitude that students will need in their future careers. This will only help the students to better tackle these wicked problems, and increase the effectiveness of the programme's role within the sector.

Feasibility and guidance

The BBN programme admits students with a Dutch VWO diploma or an international equivalent, provided they have graduated with Mathematics A or B and Geography or Biology. The MFN programme directly admits BBN graduates, and judges applicants individually, based on a dossier which prospective student have to supply. This file includes all relevant diplomas, grade transcripts, their CV, a motivation letter, and any letters of recommendation. The MFN admission committee consists of a study advisor and the programme director. If prospective students lack the appropriate knowledge to be admitted to the programme, they can follow a premaster programme of 30 EC depending on the deficiency. If the deficiency is larger than 30 EC, the prospective students can repair an additional 30 EC on top of the pre-master programme in their bachelor programme. The premaster programmes are tailor-made, discussed and evaluated with the students in advance.

In accordance with the university's overarching policy, the programmes accommodates a wide range of students. To improve accessibility and ensure a supportive learning environment, students with functional impairments can reach out to the student deans, psychologists, and study advisors for assistance in minimizing any potential barriers. The student deans provide information on regulations, facilitate requests for study adjustments, and offer advice on selecting an appropriate academic path. Study advisors help students adapt their study plans and organize additional support services, such as enabling students with impairments to participate in field trips. These accommodations require approval from the Examining Board and are documented in Osiris. Student psychologists offer counseling, behavioral therapy, performance anxiety management, and interest assessments. The programme always tries to find tailored solutions for students with impairments, such as the Examining Board (EB) approved measure to use a GoPro camera to record fieldwork and excursions for students who, due to illness, are not able to participate in compulsory fieldwork or excursions. There is a university wide student support group for students with impairments like ASD, ADHD or anxiety called No WURries. Here students can find support from peers and talk about the ways in which they are affected by these impairments, or what other reasons might come up that make student life more difficult for them.

In both the bachelor's and master's programme in Forest and Nature Conservation, students play an active role in shaping their own learning path. Faculty staff and study advisors support this process by encouraging students to consistently assess and reflect on their progress. They assist students in selecting the learning path and specialization that align with their personal interests and future career goals, including helping to choose elective courses, thesis topics, and internship opportunities that best support their aspirations. There are 4 study advisors available for the students, who maintain an ongoing connection with them throughout the programmes. They regularly communicate important information, offer individual guidance on academic choices, provide support, or refer students to specialized resources when needed.

The panel examined the documentation on student guidance and interviewed students of both the BBN and the MFN programme, as well as teaching staff and study advisors. During these interviews, the panel was told that students often struggle with eco-anxiety and the current crisis in nature conservation. It also learnt that

this is on the radar of the study advisors, who often give counsel to students dealing with these issues. The panel commends the study advisors on the attention they give to this. It concludes that with the current system in place, students of both the BBN and the MFN programme are sufficiently guided throughout their studies. They specifically note the amount of study advisors as a positive point in this guidance, giving students ample space and opportunity to find council with them. Students seem to be well informed on the ways in which they can find guidance. Examining the student SWOT analysis and during discussions with the BBN students, the panel found that some students struggle with the study load of their programme. The amount of contact hours seem to be the main issue for these students. This was addressed by the panel in the interview with the programme management and teaching staff, who recognised the issue. The panel recommends to look into the amount of contact hours in relation to the feasibility of the curriculum, and bring it down if necessary (see 'curriculum').

The Education Monitor 2024 shows that the nominal completion rate for the 2016 cohort of the BSc is on 26%. After four years the percentage increases to 68%. For the MSc, the nominal completion for the 2016 cohort is 13% and increases to 65% after three years. These rates, the panel found, are lower than the WU average. Based on this conclusion, the panel discussed their findings with staff and students to ascertain where these rates come from. It did not find any clear obstacles within the programmes' curricula or student support system that would delay students severely. During the interviews with students, they did find out that many students take on many additional elective courses, which could be one of the reasons for their delay. It was also mentioned in several interviews with both staff and students of the bachelor's programme that the amount of contact hours, specifically tutorials, add to the study load and likely also play a role in some of the delays shown in the rates above.

By studying the curriculum interviewing students, the panel got the impression that in principle, the programme is feasible. It speculates that the delays are likely due to a combination of a certain ambitious culture amongst students and staff, the amount of contact hours in the bachelor's programme and other varying factors. To complete the picture about the reasons for study delay, the panel recommends the programme's management to analyze this in order to adapt where necessary. The panel concludes that in principle, the programmes are feasible within three and two years respectively, and emphasizes that it is possible to complete the curriculum nominally. It also encourages the programme to stimulate students to indeed graduate timely.

Teaching staff

The teaching staff of the BBN and MFN programmes are supplied by a broad range of different chair groups within the university. In total, there are 129 teachers of whom most have either acquired or are in the process of acquiring their UTQ, which is mandatory for all. Further professionalization of the teaching staff is optional, and provided in several ways. The Teaching and Learning Centre (TLC) offers several courses such as the Education in Nature course, and a course on dealing with eco-anxiety, in which teachers can develop further didactical skills specified to the domain of Life Sciences. All teaching staff either has a PhD or is a PhD-candidate, and are considered experts in their area.

The panel spoke to the teaching staff of both programmes during the interviews at the site visit, and was enthused by the commitment that they encountered. They found the teachers to be very engaged with their students and the education, spending time well outside of the assigned 35% of their time on it. Many teachers are also involved in plenty of other programmes via their chair groups, within which the education they give is coordinated and are also supervising theses among other teaching related tasks. The panel considered the teaching staff to be of very high quality, and was pleased to meet very involved teachers during the site visit.

Language

The bachelor's programme is taught in Dutch. The MFN programme is taught in English, as outlined in the Wageningen University Code of Conduct. During the site visit, the panel discussed the use of English. They explained that this programme has a global focus, as forest and nature conservation are international issues requiring students to be prepared for a global workforce. The focus throughout the programme shifts from local to global and back to local, as students have to learn the relation between these two perspectives when it comes to the management and conservation of forest and nature areas. Proficiency in English is a requirement for both students and staff, especially with the many research thesis topics performed abroad. Courses are available to improve language skills if needed. The panel finds the use of the Dutch language for the bachelor's programme appropriate; and the use of English for the master's programme appropriate given the international scope of the field and job market. The panel considers that since the master's programme is taught in English, it is appropriate that the name of the programme is also in English.

Considerations

The panel reviewed the curricula of the bachelor's and the master's programme Forest and Nature Conservation, and found them to be coherent and well structured. The *bachelor's curriculum* strikes a good balance between foundation courses, domain related courses, and the integration needed for an interdisciplinary approach that is in line with the profile and aims of the programme. Courses of the BSc programme are of an appropriate bachelor level, although some students seem to desire more in depth knowledge. The panel concluded that a high number of contact hours covering various disciplines increases the study load. The panel recommends bringing down the number of compulsory contact hours to better allow students to absorb the material. Interviews revealed content overlap between courses likely due to insufficient alignment between chair groups. The panel advises better coordination among teaching staff to improve programme coherence. The *master's curriculum* is coherent, with a clear interdisciplinary approach and an emphasis on the thesis. The panel appreciates that the master's curriculum is appropriate for the master level and feasible. The panel noted that the MSc programme, although already having a certain focus on climate change-related issues, not always addressed sector uncertainties sufficiently, like managing forests in a changing climate. It recommends emphasizing adaptive management, climate change and critical reflection in the curriculum more explicitly to better equip students for tackling current challenges. This more explicit and emphasized focus would enhance both students' future careers and the program's effectiveness in the sector. The panel appreciates the various teaching methods and learning activities included within both the BSc and the MSc programme, such as the field practicals, the internships, tutorials and lectures.

The panel values the study guidance that students of both the BSc and the MSc programmes receive. It is especially positive about the number of study advisors and values the amount of time that study advisors have for each student. Information for students is clear and easy to be found through the study guides. Students with impairments are offered sufficient extra guidance. Supervision throughout the theses and internships are satisfactory. The panel commends the programmes on the study advisors and the guidance system in general. The panel concludes that in principle, the programmes are feasible within three and two years respectively, although students regularly do have study delay. The panel recommends the programme's management to further analyze the reasons for study delay in order to adapt where necessary.

Conclusion

The panel concludes that the bachelor's and master's programme Forest and Nature Conservation meets standard 2.

Standard 3. Student assessment

The programme has an adequate system of student assessment in place.

Findings

System of assessment

The system of assessment for both programmes is designed along the lines of the WUR assessment policy, which was revised in 2022/2023. The assessment policy has three main principles:

1. Assessment and education are well aligned.
2. The assessment policy is scientifically grounded.
3. Assessment is our shared responsibility.

One of the goals of the new assessment policy is to integrate more formative assessment methods into the programmes. Feedback is used as an integrative part of the assessment procedure, helping students to understand what they are already good at and which areas need more attention. Through a combination of formative and summative assessment the programmes aim to help students to become increasingly capable of evaluating their own performance and managing their learning process.

The Programme Committee keeps track of whether the intended learning outcomes for the programme as a whole are covered in the programme's courses, and that these learning outcomes are assessed at a sufficient level. Each learning activity, whether a course, project study, internship or thesis, has an assessment strategy that aligns with the intended learning outcomes. Using constructive alignment, the programmes relate the assessment per course to the programme ILOs and teaching methods. Most courses use a variety of assessments to address different (levels of) learning outcomes. These include written exams, presentations and papers, an excursion or an assignment poster. The course guides also provide information about the assessment strategy so that students know how and when they will be assessed during the course. Both programmes make use of rubrics when assessing theses and internships to help ensure reliable testing procedures. Students are given the opportunity to inspect their exams to see how they scored, and ask for feedback on their performance in order to learn. Teachers have to enter the final results, grades and feedback into Osiris, which helps regulate the reliability and transparency of the assessment. The programmes each have an assessment matrix that shows how the course specific ILOs line up with the programmes' ILOs and what assessment method is being used to test the acquired knowledge and skills. This way, the programmes ensure that all ILOs are sufficiently covered and assessed throughout the 3 or 2 years respectively.

The panel studied the new assessment policy and found it excellent in its ambitions and the procedures to realise them. It recognises that the implementation of this policy is underway, and encourages the programme to accelerate this process. The panel also examined the assessment matrixes and considers them to be an insightful and clear way to ensure the ILOs are covered and assessed. It is happy to conclude that there is sufficient variation in the different assessment methods throughout both programmes. The panel also studied assessment plans used in several courses and the study guides. It notes that these are transparent and clear in informing students on how they will be assessed. The panel concludes that both the BBN and the MFN programme have solid assessment systems in place that sufficiently safeguard the reliability and transparency of the assessment.

Thesis assessment

Both programmes follow the guidelines of the WUR assessment policy on thesis assessment. The programmes each use rubrics to assess the theses. The MSc theses are all assessed using the WU-wide rubric, whereas the BSc theses have their own, programme-specific rubrics. The reason for this is that the bachelor's programmes of the WU vary too much in both content and structure to make a rubric that would suffice for all of them. The theses are assessed using the 'four eye principle', which means that two assessors independently assess and grade the students' products, performance and progress using the thesis rubric. For both programmes, as a rule, these assessors are the thesis supervisor and an examiner who is the second to review the thesis. The assessment outcome is registered on the online thesis assessment forms in Osiris and discussed with the student.

For both programmes, the rubrics for thesis assessment assign 40% of the grade to research competences and 50% to the thesis report. For the master's programme, the other 10% of the grade are based on colloquium (5%) and the oral defence (5%). For the bachelor's programme, this is 10% for the presentation. These criteria are shared with students at the start of their thesis and signed for in the thesis learning agreement.

The panel studied the thesis assessment and spoke with teaching staff and students of both programmes on the topic of assessment. It also read 15 theses and their assessment forms per programme. The panel was happy to conclude an overall high quality of the theses and the way in which the assessment forms were used. The marks in the assessment forms were sufficiently commented on and the forms themselves were transparent. The comments of the supervisors were overall well elaborated and meaningful, however there was some variation in the extent to which this was the case. The panel considers the theses assessment procedures for both programmes to be adequately organized. During interviews with the teaching staff, the panel concluded that the MSc theses' rubrics and the subcriteria of the assessment form could be contributing to more egalitarian and less discriminatory grading. The criteria which are graded to make up the final grade, might have the undesired side-effect that the parts that are graded with a higher grade compensate with the lower graded parts and vice versa. This could mean that the criteria even each other out which would pull the final grade toward the average. The panel recognised that in one of the theses they read, this might have played a role in the final grading of the thesis. It therefore recommends the programme to analyze the effects of the updated rubrics and assessment form in order to adapt it if necessary.

Examining Board

The Forest and Nature Conservation programmes fall under the Examining Board Environment and Landscape (EBEL), one of the four Examining Boards of Wageningen University. The chair groups facilitate the courses and assign the examiners for each course, who must be approved by the EB's. The EB also monitors compliance with the assessment policy on programme- and on course level. It checks whether assessment strategies have been prepared for all courses, evaluates the quality of the tests, monitors the quality of the thesis assessments and consults at least once a year with the Programme Director and the Programme Committee on these topics. EBEL organizes reviews of theses samples for the various programmes on a regular basis. Reviewers are members of the Examining Board or examiners in the Forest and Nature Conservation domain. EBEL conducts regular and follow-up visits to each of the chair groups contributing to the International Forest and Nature Conservation programmes every three to five years.

During a regular visit, EBEL reviews the assessment procedures of the group, in particular regarding the validity, reliability and transparency of the examinations. In order to ensure that all individual curricula cover all ILO's, EBEL has to approve each study programme for both the BBN and the MFN students. Their individual curricula are studied by the study advisers before approval, and adjustments can be imposed if

necessary. Eventually, EBEL decides on the validity of the individual curricula and either approves or denies them.

The panel conducted an interview with the Examining Board and studied the documentation provided, like the annual report of the Examining Boards and its' rules and regulations. The findings of the Examining Boards are not documented per programme, their annual report covers the University as a whole. After each review, the Programme Committee writes a report which the EB also receives, however the EB does not archive this or document the findings themselves. Although the panel was provided with enough information and impressed by the annual report itself, it feels that the Examining Board should document its findings per programme. It recognises that the EB has plenty of tasks and might not get enough hours to fulfil those tasks. The workload of the EB is quite high, they have many responsibilities. Despite this, the panel concludes that they perform their duties well and are very committed. According to the panel, reliability of the assessment on programme- and course level is sufficiently ensured by the EB, and checks and balances are in place.

Considerations

The panel concludes that the assessment system that the programmes have in place is solid and reliable, and compliments the assessment policy. The implementation of this policy, although well underway, does not seem to be completed yet. The panel urges the programmes and the Examining Board to speed up the process of implementation in order to align all assessment practices within the programmes.

The panel commends the programmes on the thesis assessment forms for the theses, which it deems clear and transparent. It concludes that thesis assessment is done in a reliable and transparent and independent manner. Some of the teaching staff noted that the forms and the rubrics might have a more egalitarian grading as an effect. The panel, who also noted this in more than one of the theses assessment they had studied, recommends both programmes to look into this potential decrease in discriminatory power of the thesis assessment and adapt if necessary. It encourages the programmes to continually discuss and refine their assessment methods, including the use of rubrics and the integration of generative AI in education.

The panel concludes from interviews and documentation that the Examination Board of the BBN and MFN programmes is fully capable to perform their legal duties. It was happy to find that the checks and balances that are in place are sufficient to ensure the reliability of the assessment both formally and in practice. Even though the Examining Board seems to have a high workload, they perform their duties well and safeguard the quality of the assessment of both programmes to satisfaction.

Conclusion

The panel concludes that the bachelor's and master's programme Forest and Nature Conservation meets standard 3.

Standard 4. Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings

Theses

The panel read a selection of 15 recent theses per programme to determine the exit level of the students. The selection of these theses was properly distributed across grades and specializations. The panel concludes that the bachelor's and master's theses it read were of an appropriate level, and was impressed by the overall quality of the theses. The panel found that the theses of both programmes clearly reflected the interdisciplinary approach of the programmes. It was impressed with the level of some of the bachelor

theses it read, considering them to be of bachelor level or some even higher. It found the master theses quality to be indicative of the high commitment and ambition of both the students and supervisors. The variety of themes, research methods, scope and scientific approaches is in line with the interdisciplinarity of the programme and the variations between specializations.

Alumni

Most of the bachelor's students continue with a master programme after they graduate, a number of whom chose the MFN programme. Some bachelor students were asked by their internship organisation to apply and found a job there. The panel found this to be indicative of the skills and knowledge that bachelor students had already obtained.

The programme has provided the panel with statistics about the different sectors in which their alumni ended up and in what type of organisation they work. Of the MFN alumni of the past five years, 29% is working for a civil society organization, 37% is working for a company, 23% found a government job and 11% continued in research and education. Among others, they find jobs as a consultant, policy maker, project manager, researcher or advisor.

As to the field in which alumni continued: 20% ended up working in forest and nature conservation, recreation, the cultural sector and sport. Graduates also qualify for relevant PhD programmes or positions as researcher; 17% of all graduates has obtained a PhD and 6% is a PhD-candidate. This includes graduates who got their degree more than 5 years ago. Many international alumni find jobs outside of the Netherlands after they graduate: 93% of the international alumni against a 15% of the Dutch graduates who find jobs internationally.

The panel studied this documentation and interviewed alumni of both programmes. MFN alumni told the panel they felt mostly well prepared for their current profession. The panel was happy to read fact sheets which provided them with the information found above, and from it concludes that the MFN programme succeeds in their aim to educate students interdisciplinary. Alumni find jobs in a great variety of sectors and fields, both public and for companies. The panel was positive about this and concludes that the programmes prepare graduates adequately for the professional field.

Considerations

The panel concludes that the theses of both programmes show that students achieve the intended learning outcomes. The panel was impressed with the quality of theses and considered them clearly of the level and quality that may be expected from a bachelor's and master programme respectively. The BSc programme prepares graduates sufficiently for a variety of master programmes and the MSc programme prepares graduates sufficiently for the professional field. Alumni find employment in relevant jobs, both inside and outside academia.

Conclusion

The panel concludes that the bachelor's and master's programme Forest and Nature Conservation meets standard 4.

General conclusion

The panel's assessment of the bachelor's and master's programme Forest and Nature Conservation is positive.

Recommendations

BSc and MSc Forest and Nature Conservation programme

1. Increase the attention in the curriculum to the adaptive and reflective attitude that students will need in their future careers to tackle wicked problems.
2. Ascertain the reasons behind the study delays and adapt accordingly.
3. Analyze the effects of the updated rubrics and assessment form and adapt them if necessary, since they might have an egalitarian effect on the grading and a potential decrease in discriminatory power of the thesis assessment.

Bachelor programme.

1. Integrate the skills profile into the ILOs more explicitly.
2. Incorporate more attention to climate change and related issues in the programmes' profiles.
3. Review and reduce the amount of compulsory contact hours to better balance the study load.
4. Align the content of courses on programme level, not just within chair groups or with the ILOs of the programme.

Master programme

1. In the curriculum, emphasize the importance of adaptive management and the interdisciplinary and systemic approach more explicitly, in order to deal with uncertainties within the professional field.

Appendix 1. Intended learning outcome

Bachelor's programme Forest and Nature Conservation

			Dublin descriptors				
			Have knowledge and understanding	Apply knowledge and understanding	Make judgements	Communication	Learning skills
After successful completion of this BSc programme graduates are expected to be able to:							
Domain specific learning outcomes	1	explain the functioning of forests and natural areas as social-ecological systems at different temporal and spatial scales;	x				
	1	analyse the major biotic and abiotic components of terrestrial ecosystems and identify the most important dominant and indicator species from North-Western Europe;		x			
	1	analyse the different actors and institutions related to forests and natural areas;		x			
	1	analyse the effects of actions and interventions on the main socio-ecological processes and components;		x			
	1	apply theoretical concepts, scientific approaches and research methods in the context of sustainable nature conservation and resource use from a local to global scale;		x			
	1	analyse a problem in the field of forest and nature conservation by applying elementary skills in research planning, collecting, processing and interpreting data and scientific literature and placing results in a wider context;		x	x		
	1	evaluate the process of decision-making incorporating ecological, economic and social aspects in resource use;			x		
General learning outcomes	8	present results of scientific analyses to experts and non-experts both orally and in writing, and demonstrate the ability to work in a multidisciplinary team;				x	
	9	explain the relationships between science and practice and reflect on the role of science in society, including a reflection upon own thinking and work;	x		x		x
	10	design and plan their own learning path (under supervision);					x
Major-specific parts	11a	(Specialisation Policy and Society) assess the key components of social systems in relation to forests and natural areas;	x		x		

Skills profile BBN

Core skills	Supportive skills	Implicitly taught skills
What are the core skills of the programme? What skills should every graduate demonstrably possess? What skills are explicitly instructed, trained and evaluated?	What are the main supportive skills? What skills are explicitly addressed within the programme to reinforce other skills, subjects or learning goals in the curriculum?	What are the supportive skills that shape students' development and point of view, but are only implicitly addressed within the programme? What skills are covered but not explicitly taught?

		attain. level											
		I	L	F	A	I	L	F	A	I	L	F	A
Communication													
Acad. English	1										√	√	
Argumentation	3	√	√	√	√								
Presenting	2					√	√	√	√				
Writing	3					√	√	√	√				
Research													
Researching	3	√	√	√	√								
Inform. literacy	3					√	√	√	√				
Data science	2					√	√		√				
Personal development													
Collaboration	3					√	√	√					
Feedback	1					√	√	√	√				
Pers. leadership	2										√		
Reflection	3									√	√	√	√
Entrepreneurial	1					√	√	√	√				
Responsibility													
Diversity	1									√	√		√
Ethics	2					√	√		√				
Philosophy of science	2					√	√		√				
Social embeddedness	3	√	√	√	√								

I = Instruction; L = Learning activities; F = Feedback; A = Assessment

Core skills
Argumentation
Research Design
Social embeddedness

Supportive skills
Presenting
Writing
Data Science
Entrepreneurial
Information Literacy
Diversity
Ethics
Collaboration

Implicitly taught skills
Academic English
Pers. Leadership
Feedback
Reflection
Philosophy of science

Master's programme Forest and Nature Conservation

			Dublin descriptors				
			Have knowledge and understanding	Apply knowledge and understanding	Make judgements	Communication	Learning skills
After successful completion of this Msc programme graduates are expected to be able to:							
Domain Specific	1	analyse the functioning of forests and natural areas within their social-ecological context at different temporal and spatial scales	x	x			
	2	(specialization policy and society) evaluate social and policy practices with regard to the use, management and conservation of forest and natural areas		x	x		
	3	(specialization management) design and asses realistic and feasible management options for forests and natural areas, based on specific knowledge and understanding of wildlife management, management of forests or other terrestrial vegetations		x	x		
	4	(specialization ecology) create and asses new contributions to the knowledge of ecological processes and functioning in terrestrial ecosystems		x	x		
	5	formulate and execute research in the field of forest and nature conservation in accordance with academic standards		x			
General learning outcomes	6	communicate clearly - both orally and in writing - the project outcomes and discuss these with specialists and non-specialists				x	
	7	function effectively in international multidisciplinary teams and contribute from their expertise towards multidisciplinary or interdisciplinary issues		x		x	x
	8	recognise, understand and apply new concepts and approaches in the field of forest and nature conservation as they emerge		x	x		
	9	demonstrate understanding of the moral and ethical dimensions of scientific research and its applications, and the importance of intellectual integrity	x		x	x	
	10	can critically reflect on their own performance and results, as well as on those of colleagues	x	x	x		x
	11	design a learning path, and developing personal competences, with a balance between domain knowledge and preparation for career opportunities					x

Appendix 2. Programme curriculum

Bachelor's programme Forest and Nature Conservation

	#week	Period 1 8	Period 2 8	Period 3 4	Re-exams 1	Period 4 4	Period 5 8	Re-exams 1	Period 6 8
BSc 1	MO	PEN-10503 Ecology I PEN-20503 Ecology II	* MAT-14803 Mathematics 1 MAT-14903 Mathematics 2 * MAT-15303 Statistics 1	HWM-10303 Water 1		FNP-24806 People's Contributions to Forest and Nature Conservation	FEM-10306 Ecology of Forests		BIS-10306 Biodiversity of The Netherlands PEN-10806 Forest and Nature Conservation I: Introductory Field Course
	AF	FEM-11306 Introduction to Forest and Nature Conservation	FNP-11806 Forest, Nature, Society	MAT-15403 Statistics 2			SGL-13806 Introduction to Geology, Soils and Landscapes		
BSc 2	MO	PAP-20806 Public Administration And Environmental Law FEM-22306 Forest Resources	GRS-10306 Introduction Geo-Information Science	FNP-24306 Governance for Forest, Nature and Biodiversity			** YRM-21306 Research Methodology for Human Environment Interactions ** MAT-20306 Advanced Statistics		
	AF	GEO-20406 Human Geography: Theory and Practice	** CPT-22306 Communicating for Sustainability and Responsible Innovation ** PAP-21306 Global Institutions for Sustainable Development	PPH10306 Biology of Plants		FNP-21306 Management of Forest and Nature Organisations	FNP-23303 Forest and Nature Conservation Approaches: Theories, tools and practices PEN-21803 Ecology of Communities, Ecosystems and Landscapes: Theory		PEN-22303 Ecology of Communities, Ecosystems and Landscapes: Field Excursion FEM-20909 Forest and Nature Conservation II – Management Planning and Tools
			FEM-22806 Habitat Analysis for Ecologists	EZO-21803 Basic Principles of Vertebrate Zoology WEC-20803 Applied Animal Ecology			*** YFN-20301 Self Assessment for Forest and Nature Conservation students		
BSc 3	MO	Minor/Free Electives 30 ECTS					ENR-20306 Environmental Economics and Environmental Policy		
	AF					FNP-32806 Science and Expertise in Nature and Environment	WEC-20306 Climate Change Ecology PEN-80812 BSc Thesis Forest and Nature Conservation		PEN-80812 BSc Thesis Forest and Nature Conservation FNP-30306 Strategic Planning in Forest and Nature Conservation

Compulsory Courses
Courses Specialisation Ecology and Conservation
Courses Specialisation Society and Policy
BSc-thesis
Self-assessment for BBN students

	foundation courses
	domain-related courses
	integrating courses

#wks	= number of weeks of the period
BSc 1	= Bachelor year 1
MO	= Morning
AF	= Afternoon

*	Choose either Statistics I or Mathematics I depending on your background in Mathematics
**	Choose one of the two courses
***	Non-compulsory optional course

Curriculum SLU exchange students track Society and Policy

Year 3	Course 3.1	Course 3.2	Course 3.3	Course 3.4	
Course name	Free Choice	Free Choice	Science and Expertise in Forest and Nature Conservation (6 ECTS, FNP32806)	Bachelor thesis in Forest and Nature Conservation (18 ECTS, PEN81318)*	Strategic Planning in Forest and Nature Conservation (6 ECTS, FNP30306)
	RO1: choose at least 6 ECTS from: 1. Human Geography: Theory and Practice (6 ECTS, GEO20406) 2. Communicating for Sustainability and RI (6 ECTS, CPT22306) 3. Global Institutions (6 ECTS, PAP21306) 4. Forest and Nature Governance (6 ECTS, FNP24306)				

The thesis has to be supervised by the Chair group Forest and Nature Conservation Policy Group (FNP)

Curriculum SLU exchange students track ecology and conservation

Year 3	Course 3.1	Course 3.2	Course 3.3	Course 3.4	
Course name	Free Choice	Free choice	Science and Expertise in Forest and Nature Conservation (6 ECTS, FNP32806)	Bachelor thesis in Forest and Nature Conservation (18 ECTS, PEN81318)*	Strategic Planning in Forest and Nature Conservation (6 ECTS, FNP30306)
	RO1: choose at least 6 ECTS from: 1. Applied Animal Ecology (3 ECTS, WEC20803) 2. Resource Dynamics (6 ECTS, FEM30806) 3. Wildlife Ecology and Conservation (WEC32806)				

Master's programme Forest and Nature Conservation

Society and Policy

		Period 1	Period 2	Christmas Holidays	Period 3	Resit A (P1+2)	Period 4	Period 5	Resit B (P3+4)	Period 6		Resit C1 (P5)	Resit C2 (P6)
	# wks	8	8	2	4	1	4	8	1	4	4	1	1
	Calendar weeks	36-43	44-51	52-01	2-5	6	7-10	11-18	19	20-23	24-27	28	29
MSc 1	MO	YRM20306 Research Methodology in Environmental Science	MAT20306 Advanced Statistics	Christmas Holidays	FNP31306 Communities Conservation and Development (MO + AF)	YRM 31306 Interviews and Questionnaire (MO + AF)	MAT20306 Advanced Statistics (MO + AF)	FNP31806 Social & Political Theory for FNC Research (mandatory) (MO + AF)	FNP32306 Decision-Making in For. & Nat. Management: Theory & Practice	SDC33306 Methodology for Field Research in the Social Sciences (MO + AF)	ENP39306 Advanced International Environmental Politics (MO+AF)		
	AF	WEC31306 Trends in Forest and Nature Conservation	Free choice						ENP33306 Environment and Development				
MSc 2	FNP80436 MSc Thesis Forest and Nature Conservation Policy								FNP70224 MSc Internship Forest and Nature Conservation Policy				
									FEM70224 MSc Internship Forest Ecology and Forest Management				
								WEC70224 MSc Internship Wildlife Ecology and Conservation					
								PEN70224 MSc Internship Plant Ecology and Nature Conservation					

Society and Policy SSD track

		Period 1	Period 2	Christmas Holidays	Period 3 MO + AF1	Resit A (P1+2)	Period 4 MO + AF1	Period 5	Resit B (P3+4)	Period 6		Resit C1 (P5)	Resit C2 (P6)
	# wkn	8	8	2	4	1	4	8	1	4	4	1	1
	Calendar weeks	36-43	44-51	52-01	2-5	6	7-10	11-18	19	20-23	24-27	28	29
MSc 1	MO	YRM20306 Research Methodology in Environmental Science OR other methodology course	ENP60312 International Environmental Policy Consultancy AND ELS65300 MOS Negotiations Skills	Christmas Holidays	FNP31306 Communities Conservation and Development		FNP31806 Social and Political Theory for Forest and Nature Conservation Research	Electives		SDC33306 Methodology for Field Research in the Social Sciences (MO+AF)	ENP39306 Advanced International Environmental Politics (MO+AF)		
	AF	WEC31306 Trends in Forest and Nature Conservation OR other course						Electives					
								Capita selecta SDD (FNP 50802)					
MSc 2	SDD Internship FNP-70224				SDD thesis FNP 80436								

Management specialization

		Period 1	Period 2	Christmas Holidays	Period 3 MO+AF!	Resit A (P1+2)	Period 4 MO+AF!	Period 5	Resit B (P3+4)	Period 6A	Period 6 B	Resit C1 (P5)	Resit C2 (P6)
# wks		8	8	2	4	1	4	8	1	4	4	1	1
Calendar weeks		36-43	44-51	52-01	2-5	6	7-10	11-18	19	20-23	24-27	28	29
MSc 1	MO	WEC31806 Ecological Methods 1 OR YRM20306 Research Methodology in Environmental Science	WEC32806 Wildlife Ecology and Conservation YRM20306 Research Methodology in Environmental Sciences MAT20306 Advanced Statistics		FNP31306 Communities, Conservation and Development (MO + AF) YRM 31306 Interviews and Questionnaires (MO + AF) MAT 20306 Advanced Statistics (MO + AF)		PEN30806 Restoration Ecology (MO+AF) FEM32306 Agroforestry (MO+AF) ENR31306 Natural Resource Economics (MO + AF) FNP31806 Social and Political Theory FNC Research (MO + AF)	FNP32306 Decision-Making in For. & Nat. Management: Theory and Practice		WEC33306 Disease Ecology (MO+AF) SDC33306 Methodology for Field Research in the Social Sciences (MO+AF)	WEC30306 Animal Ecology (MO+AF)	PEN30306 Plant Vegetation and Systems Ecology (MO+AF)	
	AF	WEC31306 Trends in Forest and Nature Conservation	FEM30806 Resource Dynamics and Sustainable Utilization										

Ecology specialization

		Period 1	Period 2	Christmas Holidays	Period 3 MO+AF!	Resits A (P 1+2)	Period 4	Period 5	Resit B (P3+4)	Period 6		Resit C1 (P5)	Resit C2 (P6)
	#wks	8	8	2	4	1	MO + AF!	8	1	8		1	1
Calendar week		36-43	44-51	52-01	2-5	6	7-10	11-18	19	20-23	24-27	28	29
MSc 1	MO	WEC31806 Ecological Methods	Free choice		FEM31806 Models for Ecological Systems (MO+AF) (mandatory)		Free choice	Free choice		WEC32306 Experimental Design for Ecology (MO+AF) OR WEC33306 Disease Ecology (MO+AF)	WEC30306 Animal Ecology (MO+AF) OR PEN30306 Plant, Vegetation and Systems Ecology (MO+AF)		
	AF	WEC31306 Trends in Forest and Nature Conservation	Free choice										
MSc 2	FEM80436 MSc Thesis Forest Ecology and Forest Management												
	WEC80436 MSc Thesis Wildlife Ecology and Conservation												
	PEN80436 MSc Thesis Plant Ecology & Nature Conservation												
	FNP70224 MSc Internship Forest and Nature Conservation Policy												
FEM70224 MSc Internship Forest Ecology and Forest Management													
WEC70224 MSc Internship Wildlife Ecology and Conservation													
PEN70224 MSc Internship Plant Ecology and Nature Conservation													

Appendix 3. Programme of the site visit

Monday 18 November 2024

11.30	12.15	Welcome and lunch
12.15	13.15	Interview programme management
13.15	13.30	Break
13.30	14.15	Interview BSc students
14.15	14.30	Break
14.30	15.15	Interview BSc teaching staff
15.15	15.45	Break
15.45	16.30	Interview MSc students + alumni
16.30	16.45	Break
16.45	17.30	Interview MSc teaching staff

Tuesday 19 November 2024

09.00	09.30	Panel preparation
09.30	10.15	Board of Examiners + study advisors
10.15	10.30	Break
10.30	12.00	Thematic sessions (2x 45 minutes; BBN and MFN)
12.00	13.30	Internal panel session (incl. lunch)
13.30	14.00	Concluding session programme management
14.00	15.30	Concluding panel session
15.30	16.00	Oral report panel

Appendix 4. Materials

Prior to the site visit, the panel studied 15 theses of the bachelor's programme Forest and Nature Conservation and 15 theses of the master's programme Forest and Nature Conservation. Information on the theses is available from Academion upon request.

The panel also studied other materials, which included:

- Administrative data of the programmes
- WU Vision for Education
- EER WU
- Assessment policy documents, both WU wide as programme specific
- Academic calendar WU 2024 -2025
- Education Monitor BBN/MFN October 2023
- Student SWOT BBN
- Student SWOT MFN
- NSE factsheets of both programmes
- Joint letter of Agreement Dual Degree SLU – WU
- BBN and MFN Admission requirements and procedures
- Provisions for students with impairments
- Information on the extra SSD track, brochure 2024 – 2025
- Documents of the Io's, Dublin Descriptors and profile of both programmes
- BBN Skills profile
- External Advisory Board composition and reports from 2019 – 2023
- Curriculum overviews of both programmes, including the Dual Degree with SLU
- List of teaching staff BBN/MFN
- MFN factsheet on alumni
- Assessment matrices of both programmes of 2024 – 2025
- Documents of a selection of courses of both programmes
- Thesis and internship course guides of both programmes
- Thesis and internships assessment forms of both programmes
- Rules and Regulations Examining Boards
- Annual reports Examining Boards 2020 – 2023