



M Governance of Sustainability  
Leiden University

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## Summary

### Standard 1. Intended learning outcomes

The master's programme Governance of Sustainability of Leiden University aims to educate change agents who are able to develop governance solutions to complex environmental sustainability challenges. A key characteristic of the programme is its transdisciplinary approach, focussing on socially relevant sustainability problems that are studied from scientific as well as non-scientific perspectives. The programme is also interdisciplinary, as students learn to integrate various scientific perspectives from the disciplines of environmental sustainability and governance. The panel considers the intended learning outcomes (ILOs) to be well formulated, well aligned with the fields of governance and sustainability, and appropriate for the academic master's level. The ILOs reflect the programme's ambition to educate change agents, which is much appreciated by the panel. The panel also strongly values the programme's transdisciplinary approach as well as its interdisciplinary focus, which is enabled by the cooperation between the two faculties that offer the programme (the Faculty of Science and the Faculty of Governance and Global Affairs).

To further improve the programme's profile, the panel thinks that some key concepts, specifically 'governance' and 'natural science', could be elaborated. This was already discussed during the initial accreditation, and the panel acknowledges that this is an inherent challenge associated with the high ambitions of the programme. The panel recognizes that the definition and scope of these concepts have been improved since the initial accreditation but thinks the programme would benefit from further development in this area. To help the programme in this process, the panel recommends focusing on the further operationalization of the concepts of governance and natural science as used in the programme. According to the panel, at the moment, the concept of governance is addressed in a predominantly instrumental way: policies are primarily seen as tools to solve environmental sustainability problems. The panel advises the programme to address governance with more attention for the specific governance challenges connected to environmental sustainability problems. Students would benefit from being offered a more comprehensive, systemic framework on the governance of sustainability, to gain a deeper and higher-level understanding of governance and a more critical perspective on governance. In relation to this, the panel advises to communicate the programme's focus more clearly to prospective students. The definition and scope of natural science also need to be clarified, as there does not seem to be an entirely clear and consistent understanding of these among students at the moment. The panel recommends to explore this issue and communicate the focus and expectations regarding natural science more explicitly to (prospective) students. Throughout the programme and on various levels, there are many interactions with the professional field, allowing for good alignment with the demands and needs of the professional field. Interactions and alignment with the professional field include relations with alumni, guest lectures, and the involvement of external commissioners in the course 'Sustainability Challenge'.

### Standard 2. Teaching-learning environment

According to the panel, the curriculum is well structured and coherent. It addresses all ILOs and demonstrates a good integration of the relevant disciplines and skills. Transdisciplinarity is an especially strong feature throughout the curriculum. The panel is pleased with the introduction of a skills learning line, resulting in a clear overview of where skills are addressed. The panel is happy to see that the programme is responsive to feedback from students, as is evident, for example, from the actions taken to improve students' possibilities to combine electives with the compulsory courses in the first semester of the second year. The programme is taught in English, which, according to the panel, follows logically from the international nature of the field of governance and sustainability. The teaching methods applied in the

courses are appropriate and varied. There is a lot of attention for transdisciplinary skills throughout the curriculum. The (real-life) cases used for projects and assignments are relevant and diverse. The panel is positive about the interdisciplinary focus of the programme. Integration of various perspectives is well embedded in the didactic approach, amongst others by means of co-teaching by teachers from the different faculties. Also, the mixed (disciplinary) bachelor backgrounds of the students are used effectively to create an interdisciplinary peer learning environment. The panel considers the admission criteria to be appropriate. The panel appreciates the online preparation module for students to brush up relevant knowledge and skills prior to the start of the programme. Student guidance is well organized, especially thanks to the commitment of the two dedicated study advisors. Additionally, first-year students participate in a mentor group. Although the programme is intensive, it is feasible in two years. The teaching team has sufficient expertise on all aspects of the governance of sustainability. The teachers are didactically qualified and have sufficient proficiency in English. The panel appreciates the strongly student-centred attitude of the teaching team. Also, the teachers are very connected as a team, allowing for an interdisciplinary focus and good alignment of education in the programme.

### Standard 3. Student assessment

Assessment in the programme is elaborated in the assessment plan, which demonstrates the relationship between the ILOs and the courses and assessment methods. For each course, an assessment plan and matrix are developed. The four eyes principle is applied to the development of all written exams, and assessment is performed based on grading models, assessment forms and/or rubrics. The panel considers the assessment system to be clear, robust, and well documented, demonstrating a good balance between group and individual assignments and the use of diverse and appropriate assessments methods. The assessment procedure for the thesis is well thought out. The reliability of thesis assessment is enhanced by the four eyes principle. The assessment forms ensure that all criteria are taken into account and they allow for elaborate feedback. The panel considers the Board of Examiners (BoE) to be competent and in control. The BoE succeeds at safeguarding the quality of assessment and the exit level, amongst others by systematic reviews of assessment in courses and samples of theses.

### Standard 4. Achieved learning outcomes

Based on the sample of 15 theses reviewed, the panel concludes that the level demonstrated in these theses is appropriate for an academic master's programme. The documentation and the interviews indicate that graduates of the programme are well prepared for and prove to be successful in the professional field. They are especially appreciated for their interdisciplinary skills.

### Score table

The panel assesses the programme as follows:

#### *Master's programme Governance of Sustainability*

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

Em. prof. dr. Hans Bressers, panel chair  
Date: 8 October 2024

drs. Anne-Lise Kamphuis, panel secretary

# Introduction

## Procedure

### Assessment

On 14 June 2024, the master's programme Governance of Sustainability of Leiden University was assessed by an independent peer review panel as part of the cluster assessment Environmental Sciences. The assessment cluster consisted of 17 programmes, offered by the institutions Open University, University of Amsterdam, Wageningen University, Radboud University, Vrije Universiteit Amsterdam, University of Groningen, Maastricht University, Leiden University, Utrecht University and Delft University of Technology. The assessment followed the procedure and standards of the NVAO Assessment Framework for the Higher Education Accreditation System of the Netherlands (September 2018).

Quality assurance agency Academion coordinated the assessment upon request of the cluster Environmental Sciences. Peter Hilderling and Jessica van Rossum acted as coordinator and as panel secretaries. Annemarie Venemans, Esther Poort, Anne-Lise Kamphuis, Linda te Marvelde, Carlijn Braam and Jessica van Rossum also acted as secretaries in the cluster assessment. They have been certified and registered by the NVAO. Anne-Lise Kamphuis acted as panel secretary in the assessment of the master's programme Governance of Sustainability of Leiden University.

### 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 the consistency within the cluster. On 15 December 2023, the NVAO approved the composition of the panel. The coordinator instructed the panel chair on his role in the site visit according to the Panel chair profile (NVAO 2016).

The programme composed a site visit schedule in consultation with the coordinator (see appendix 3). The programme selected representative partners for the various interviews. It 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 programme provided the coordinator with a list of graduates from academic years 2021-2022 and 2022-2023. In consultation with the coordinator, the panel chair selected 15 theses from the programme. They took the diversity of final grades and examiners into account. From academic year 2022-2023 9 theses were selected, from academic year 2021-2022 6 theses were selected. Prior to the site visit, the programme provided the panel with the theses and the accompanying assessment forms. It also provided the panel with a self-evaluation report 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 self-evaluation report 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 visits and reports.

### 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 the programme 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 finalised the report, and the coordinator sent it to Leiden University.

## Panel

The following panel members were involved in the cluster assessment Environmental Sciences:

- Em. prof. dr. J.T.A. (Hans) Bressers, emeritus professor in Policy Studies and Environmental Policy at the University of Twente (chair);
- Prof. dr. A.C. (Arthur) Petersen, professor in Science, Technology and Public Policy at the University College London (United Kingdom);
- Dr. A.R. (Ana) Vasques, lecturer at the Erasmus University College of Erasmus University Rotterdam;
- Dr. S.E. (Sarah) Cornell, associate professor at the Stockholm Resilience Centre of Stockholm University (Sweden);
- Em. prof. dr. M.C. E. (Rietje) van Dam-Mieras, emeritus professor in Sustainable Development and Innovation of Education at Leiden University, and member of the Top Consortium for Knowledge and Innovation (TKI) Biobased Circular (focus Human Capacity Agenda);
- Dr. ir. T. (Thijs) Bosker, associate professor in Environmental Sciences at Leiden University;
- Prof. dr. ir. S.E. (Siegfried) Vlaeminck, professor in Microbial Cleantech and Environmental Systems Analyses at the Universiteit of Antwerpen (Belgium);
- Prof. dr. M.P.J. (Maarten) Loopmans, professor in Human Geography and Political Ecology at the KU Leuven (Belgium);
- Dr. ir. S.G. (Gerd) Weitkamp, associate professor in Health Geography, Mobility, and Geospatial Technologies at the University of Groningen;
- Prof. dr. P. (Paquita) Perez Salgado, professor in Natural Sciences at the Open Universiteit Nederland;
- Prof. dr. E. (Esther) Turnhout, professor in Science, Technology and Society at the University of Twente;
- Em. prof. dr. ir. J.T. (Hans) Mommaas, emeritus professor in Regional Sustainability Governance at Tilburg University, chair of the Netherlands Commission for Environmental Assessment and chair of the Netherlands Ecological Authority;
- Dr. P. (Patricia) de Cocq, director Living Environment and Nature at HAS Green Academy;
- Prof. dr. ir. Z. (Zofia) Lukszo, professor in Smart Energy Systems at the Delft University of Technology;
- M. M. (Marisa) Beunk MSc., alumni (March 2023) of the master's programme Environmental Sciences (Policy Track) of Wageningen University (student member);
- F.O. (Fenna) Oostrum, alumni (September 2023) of the master's programme Environment and Society Studies of Radboud University (student member).

The panel assessing the master's programme Governance of Sustainability of Leiden University consisted of the following members:

- Em. prof. dr. J.T.A. (Hans) Bressers, emeritus professor in Policy Studies and Environmental Policy at the University of Twente (chair);

- Prof. dr. A.C. (Arthur) Petersen, professor in Science, Technology and Public Policy at the University College London (United Kingdom);
- Dr. S.E. (Sarah) Cornell, associate professor at the Stockholm Resilience Centre of Stockholm University (Sweden);
- Em. prof. dr. ir. J.T. (Hans) Mommaas, emeritus professor in Regional Sustainability Governance at Tilburg University, chair of the Netherlands Commission for Environmental Assessment and chair of the Netherlands Ecological Authority;
- M. M. (Marisa) Beunk MSc., alumni (March 2023) of the master's programme Environmental Sciences (Policy Track) of Wageningen University (student member).

## Information on the programme

Name of the institution:	Leiden University
Status of the institution:	Publicly funded institution
Result institutional quality assurance assessment:	Positive
Programme name:	Governance of Sustainability
CROHO number:	60965
Level:	Master
Orientation:	Academic
Number of credits:	120 EC
Specializations or tracks:	-
Location:	The Hague
Mode(s) of study:	Fulltime
Language of instruction:	English
Submission date NVAO:	1 November 2024



## Description of the assessment

### Recommendations previous panel

The master's programme Governance of Sustainability (GofS) started in September 2019. In 2018, the programme underwent a positive initial accreditation by the NVAO ('Toets Nieuwe Opleiding'). The panel also gave multiple recommendations. In response to these recommendations, the programme implemented several improvements, including the development of learning lines for governance, environmental sustainability and skills, the elaboration of the concept of transdisciplinarity in relation to assessment and the thesis (by means of evaluations and a report by the Board of Examiners, teacher workshops and a revision of the thesis manual and rubric), making an inventory of external guest speakers/panel members/commissioners to guarantee diverse perspectives, monitoring the student intake and clarifying the entry requirements, and appointing a secretary without managerial or coordinating responsibilities to the Board of Examiners.

The panel examined the programme's response to the recommendations and concludes that they have been seriously acted upon by the programme. The panel is generally content with the improvement measures taken. Regarding the recommendation about clarification of concepts central to the programme, the panel believes the issue was improved but still needs additional attention. This will be described further on in this report.

### 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

#### *Profile*

The master's programme GofS aims to educate change agents who are able to develop governance solutions to complex environmental sustainability challenges. A key characteristic of the programme is its transdisciplinary approach, focussing on socially relevant sustainability problems that are studied from scientific as well as non-scientific perspectives. The programme is also interdisciplinary, as students learn to integrate various scientific perspectives from the disciplines of environmental sustainability and governance. Besides acquiring relevant scientific knowledge, students are trained to engage with non-academic actors, such as policy actors, non-governmental organizations, consultancies, and social actors, in order to co-produce relevant knowledge from this non-academic perspective. The panel highly appreciates the programme's aim to educate change agents and feels that the transdisciplinary approach is a valuable strength of programme. The interdisciplinary nature of the programme is well embedded in the cooperation between the two faculties that offer the programme: the Faculty of Science (more specifically its Institute of Environmental Sciences) and the Faculty of Governance and Global Affairs (more specifically its Institute of Public Administration).

During the site visit, the panel spoke with various stakeholders about the key concepts of the programme. As much as the panel appreciates the programme's ambitions, it thinks that various key concepts need further clarification, especially the operationalization of 'governance' and 'natural sciences'. The panel sees that these concepts have already been elaborated by the programme since the previous accreditation in response to a recommendation from the previous panel, amongst others through the development of

learning lines for governance and environmental sustainability. However, the panel still sees room for improvement in this area.

Firstly, the panel advises the programme to elaborate the concept of governance and to rethink the programme's focus with regard to governance, to better reflect the programme's name. From the interviews during the site visit, the panel learnt that the concept of governance is always addressed in combination with sustainability challenges: relevant policy concepts are connected to the sustainability cases, mainly as instruments to tackle the problems. In that respect, it seems that natural science is the backbone of the programme, and governance is predominantly approached in an instrumental way. Based on the interviews with students and alumni, the panel concludes that, because of this approach, students acquire somewhat fragmented knowledge on governance and do not always achieve in-depth insight in governance at a higher, more systemic level. There seems to be a tendency to see environmental sustainability as the problem and governance/policy as a 'toolbox' to solve it. According to the panel, this does not do justice to the fact that governance in itself has problematic aspects as well. Sustainability problems do not fit easily with the current predominantly nation state based governance structures. There are major higher-level governance challenges associated with the particular nature of environmental sustainability, such as the tension between local (national) and global aspects, the dilemmas connected to short term and long term interests and perspectives, and the multi-sectoral approach required for solutions ('de-siloing'). The panel advises the programme to offer students a more comprehensive framework to reflect on the governance of sustainability, the tensions involved, and the solutions developed (such as global agreements, long-term transition funds, environmental assessment tools), possibly by means of an introductory module at the start of the programme. In this way, students are enabled to gain a deeper (historical and geo-political) understanding of how governance is organized, and thus develop a more critical perspective on governance and the necessity of institutional adjustments in the face of current sustainability challenges. The governance challenges may also inspire the programme to identify relevant cases for sustainability challenges. Moreover, the panel recommends to communicate the programme's focus more clearly to prospective students, in order to better manage expectations and give students a deeper understanding of the rationale and relevance of the programme.

Secondly, the scope of natural science needs to be clarified, according to the panel. The interviews showed that students have varying expectations with regard to the nature and content of natural science in the programme. The definition and scope of natural science in this programme did not become entirely and consistently clear to the panel. For example: what is the depth of knowledge and skills students are expected to achieve, and in which specific areas? The panel advises the programme to explore this issue more deeply and communicate the focus and expectations regarding the scope and content of the natural sciences in the programme more explicitly, amongst others in the intake process.

#### *Intended learning outcomes*

The programme formulated 22 intended learning outcomes (ILOs) to describe the exit level of the programme (see Appendix 1 for an overview). The ILOs are divided into four categories: knowledge and understanding, skills, judgement, and learning skills. The self-evaluation report describes how the ILOs relate to the Dublin descriptors and to the Dutch referential framework for academic programmes in Environment and Sustainability, a document that was developed by the Interuniversity Committee Environmental Sciences. The panel considers the ILOs to be well formulated and well aligned with the master's level as described in the Dublin descriptors. The panel appreciates how the ILOs reflect the programme's vision and ambitions with regard to transdisciplinarity and interdisciplinarity. The panel suggests that the ILO about knowledge and understanding of governance (ILO 2) may be reformulated to

stress more explicitly that students should gain a deep understanding of governance as an institutional context.

#### *Professional field*

According to the panel, the programme is well aligned with the professional field, as the programme management and teaching staff have ample connections in the professional field and strong relations with alumni of the programme. Interactions with the professional field are further increased through regular guest lectures by alumni and professionals from the field. Moreover, in the second-year course 'Sustainability Challenge', students work on a project for an external commissioner from the professional field. Finally, the Faculty of Science's Institute of Environmental Sciences has an Advisory Board, consisting of representatives from research institutes and the professional field. The Advisory Board meets twice a year and advises on the various educational programmes connected to the institute. It is consulted about the overall profile and focus of the programmes in light of societal and political changes. The panel encourages the programme to continue to maintain its connections with the professional field.

#### Considerations

The panel considers the ILOs to be well formulated, well aligned with the fields of governance and sustainability, and appropriate for the academic master's level. The ILOs reflect the programme's ambition to educate change agents, which is much appreciated by the panel. The panel also strongly values the programme's transdisciplinary approach as well as its interdisciplinary focus, which is enabled by the cooperation between the two faculties.

To further improve the programme's profile, the panel thinks that some key concepts could be elaborated. This was already discussed during the initial accreditation, and the panel acknowledges that this is an inherent challenge associated with the high ambitions of the programme. The panel recognizes that the definition and scope of these concepts have been improved since the initial accreditation but thinks the programme would benefit from further development in this area. To help the programme in this process, the panel recommends focusing on the further operationalization of governance and natural science as used in the programme. According to the panel, at the moment, the concept of governance is addressed in a predominantly instrumental way: policies are primarily seen as tools to solve environmental sustainability problems. The panel advises the programme to address governance with more attention for the specific governance challenges connected to environmental sustainability problems. Students would benefit from being offered a more comprehensive, systemic framework on the governance of sustainability, to gain a deeper and higher-level understanding of governance and a more critical perspective on governance. In relation to this, the panel advises to communicate the programme's focus more clearly to prospective students. The definition and scope of natural science also need to be clarified, as there does not seem to be an entirely clear and consistent understanding of these among students at the moment. The panel recommends to explore this issue and communicate the focus and expectations regarding natural science more explicitly to (prospective) students.

Throughout the programme and on various levels, there are many interactions with the professional field, allowing for good alignment with the demands and needs of the professional field. Interactions and alignment with the professional field include relations with alumni, guest lectures, and the involvement of external commissioners in the course 'Sustainability Challenge'.

#### Conclusion

The panel concludes that the programme 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 master's programme GofS consists of 120 EC and is offered as a full-time, two-year programme (see Appendix 2 for a curriculum overview). In the first year, students follow four thematic courses: 'Materials & Circular Economy', 'Biodiversity & Ecosystems', 'Climate Change & Energy Transition', and 'Water & Toxicity'. The thematic courses provide students with the basis of the learning lines 'environmental sustainability' and 'governance'. Besides the thematic courses, students take two skills courses (as part of the skills learning line): 'Transdisciplinary Skills' and 'Qualitative Research Skills'. In the first year, students follow one course at a time. In the interview, the programme management explained that this structure was chosen to increase the focus and to create a strong community among the students. The panel agrees with this choice and sees the benefits of this structure.

In the first semester of the second year, students follow multiple courses at the same time, including two compulsory courses: 'Quantitative Research Skills' and 'Sustainability Challenge'. The Sustainability Challenge is a real-life group project for an external commissioner. Students also have 12 EC in elective space in this semester. The second semester of the second year is dedicated to the 30 EC 'Thesis Research Project', in which students perform an individual, interdisciplinary, scientific research project on a topic relevant for the governance of sustainability. The Thesis Research Project includes a small thesis preparation module. To help students find a topic for their thesis, a thesis market is organized each year, in which supervisors present topics and students can connect with possible supervisors. The programme management checks and approves the thesis topics beforehand. The thesis market takes place well in advance before the start of the second semester, so that students can start preparing for their thesis early on. During the Thesis Research Project, students are placed in peer learning groups based on their research interests, linked to the capstone topics of supervisors. Students are supervised by two supervisors, representing the two different faculties, to emphasize the interdisciplinary nature of the project.

The panel considers the curriculum to be well structured and coherent, addressing all the ILOs and demonstrating clear learning lines and a good integration of the relevant disciplines and skills. Transdisciplinarity is a strong feature throughout all the courses in the curriculum. The panel appreciates the introduction of the skills learning line in 2021, which provides an overview of where skills are addressed and assessed, allowing the programme to better coordinate it and communicate it more explicitly to students. The documentation and interviews showed that some of the students would like more attention for natural science in the curriculum, although it should be noted that students seem to be divided on this issue. The panel agrees with the programme that the current curriculum is well-balanced regarding the attention for natural science and no major revision is needed. The panel was happy to learn how the programme is responsive to feedback from students. For example, there were some scheduling issues in the first semester of the second year that negatively affected students' options for following electives. With the introduction of a new scheduling system, part of this problem will be solved. Also, information and guidance for students with respect to electives were intensified and scheduling agreements were made with providers of electives outside the GofS programme to improve students' possibilities to combine the electives with the compulsory courses in that semester. Furthermore, the programme developed three new dedicated GofS electives.

### *International focus*

The programme has an international focus, is taught in English, and uses an English-language name. According to the panel, this follows logically from the international nature of both the academic field and the professional field of governance and sustainability. Challenges in this field are typically international and English is the common language in this field. The programme has a steady proportion of international students: about half of the students are international. Moreover, half of the teaching staff is non-Dutch. In the programme, a lot of attention is paid to international collaboration and international challenges.

### *Didactic approach*

The panel is positive about the teaching methods used in the programme. It is pleased to see that transdisciplinary skills are addressed throughout the curriculum in various ways, including role plays, action research projects, group assignments, guest speakers, and reflection blogs, and more specifically in the Transdisciplinary Skills course as well as the Sustainability Challenge and the Thesis Research Project. The cases used for projects and assignments are relevant and diverse, according to the panel. Moreover, the programme maintains a good overview on the cases applied in the courses. The panel commends the programme for the way that interdisciplinarity is integrated in the didactic approach. The thematic courses are co-taught by two teachers, one from each faculty. In the interview, these teachers explained they typically comment on each other's lectures in front of the class to provide students with an interdisciplinary experience. The interviews showed that students are well guided by teachers in learning to integrate different perspectives. The programme also effectively draws on the diverse disciplinary backgrounds of the students themselves. Students are deliberately placed in mixed teams, so that they can be made aware of and learn from other students' background, experience, and expertise. A fine example of this process, given in one of the interviews, is an assignment in one of the first courses in the programme in which students are asked to present their favourite paper to the group. This clearly increases students' awareness of and respect for diverse perspectives and helps build an interdisciplinary learning environment.

### *Admission and guidance*

To apply for admission, students need to have a bachelor's degree from a research university and demonstrated knowledge of environmental sustainability issues and experience with inter/transdisciplinary education and research. Moreover, they need to have completed a minimum of 8 EC of courses on statistics, mathematics, and/or programming. Applications are evaluated by the Board of Admissions. The panel considers the admission criteria to be appropriate.

The programme offers an online preparation module to students prior to the start of the programme. This offers students the opportunity to deepen their understanding of topics they are less familiar with based on their bachelor background. The online preparation module covers the relevant topics from the three learning lines in the programme. In the interview, students indicated that the online preparation module was very helpful for gaining sufficient knowledge in all areas. They also mentioned that teachers are of great help when students face challenges with regard to certain topics or skills. Besides that, students learn from each other, which is facilitated by group assignments in mixed teams, debates, peer feedback, and workshops.

The panel considers student guidance to be well organized. The panel appreciates the commitment of the two dedicated study advisors for the programme. In the student chapter, the students indicated that they appreciate the study advisors and feel well-supported by them. The study advisors are already available for upcoming students in the year before the start of the programme. They organize information sessions and experience days and a spring meeting for admitted students. In the months before the start of the programme, they also send newsletters. After the start of the programme, all students have an individual intake meeting with one of the study advisors. Throughout the rest of the programme, the study advisors are

available to students. They also proactively monitor student progress and initiate a meeting when appropriate. In the second year, the study advisors are involved in the thesis market and the thesis preparation module. In addition to the guidance by the study advisors, first-year students are part of a mentor group. The mentor groups meet several times during the first year and are supervised by student-mentors (second-year students). The mentors are supervised by the study advisors.

In the interview, the students explained that the programme is quite intensive, with many (group) projects and contact hours. Because of this, it is a challenge to combine the study with a part-time job, which is considered necessary by some students for financial reasons. The programme management indicated that they recognize the challenge of combining study with work. Although the programme does not encourage students to do this, it intends to support students where possible and keep an extra eye on study progress and student wellbeing. The documentation shows that in the past years, almost two-thirds of the students graduated within two years, and over 85% within three years. Based on the documentation and the interviews, the panel believes that the programme is feasible within two years. Study delay seems to be mainly related to students who (have to) work during their study.

#### *Teaching staff*

The programme is taught by a team of 32 teachers from both faculties. All teachers hold the University Teaching Qualification (UTQ) or are in the process of obtaining one. Teachers are required to obtain a certificate for the Basic Qualification in English, which is assessed as part of the UTQ. The panel considers the teaching team to be qualified, in terms of content as well as didactically. The teachers are all experts in their academic field through their research activities, which ensures a strong connection between research and education. According to the students, teachers are highly responsive and open towards the students. The panel commends the team for its student-centred attitude. Furthermore, the teachers are very connected as a team, making a continuous effort to align education in the programme within the team. This is reinforced by the fact that all courses are taught by two teachers. The panel was pleased to hear that the collaboration in the teaching team has also resulted in more (interdisciplinary) collaboration in research. It sees that the teaching team has clearly grown in its ability to integrate various perspectives over the past few years, and is confident that this development will continue in the coming years.

#### Considerations

According to the panel, the curriculum is well structured and coherent. It addresses all ILOs and demonstrates a good integration of the relevant disciplines and skills. Transdisciplinarity is an especially strong feature throughout the curriculum. The panel is pleased with the introduction of a skills learning line, resulting in a clear overview of where skills are addressed. The panel is happy to see that the programme is responsive to feedback from students, as is evident, for example, from the actions taken to improve students' possibilities to combine electives with the compulsory courses in the first semester of the second year.

The programme is taught in English, which, according to the panel, follows logically from the international nature of the field of governance and sustainability. The teaching methods applied in the courses are appropriate and varied. There is a lot of attention for transdisciplinary skills throughout the curriculum. The (real-life) cases used for projects and assignments are relevant and diverse. The panel is positive about the interdisciplinary focus of the programme. Integration of various perspectives is well embedded in the didactic approach, amongst others by means of co-teaching by teachers from the different faculties. Also, the mixed (disciplinary) bachelor backgrounds of the students are used effectively to create an interdisciplinary peer learning environment.

The panel considers the admission criteria to be appropriate. The panel appreciates the online preparation module for students to brush up relevant knowledge and skills prior to the start of the programme. Student guidance is well organized, especially thanks to the commitment of the two dedicated study advisors. Additionally, first-year students participate in a mentor group. Although the programme is intensive, it is feasible in two years.

The teaching team has sufficient expertise on all aspects of the governance of sustainability. The teachers are didactically qualified and have sufficient proficiency in English. The panel appreciates the strongly student-centred attitude of the teaching team. Also, the teachers are very connected as a team, allowing for an interdisciplinary focus and good alignment of education in the programme.

### Conclusion

The panel concludes that the programme meets standard 2.

### Standard 3. Student assessment

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

### Findings

#### *Assessment system*

Assessment in the programme is elaborated in the assessment plan, which includes matrices demonstrating which ILOs are assessed in each course and which assessment methods are applied. For each course, the course coordinator develops an assessment plan and assessment matrix, which demonstrate the relationship between the course's learning objectives and the assessment methods. All written exams are developed by two examiners. To safeguard the reliability of assessment, grading models, assessment forms and/or rubrics are used by assessors. The panel thinks that the assessment system is clear, robust, and well documented. There is a good balance between group and individual assignments and between formative and summative assessment methods. The assessment methods used are appropriate and diverse, including exams, essays, papers/reports, practical assignments, (group) projects, presentations, participation, peer review, and debate. The panel thinks that the assessment methods used throughout various courses are well aligned and monitored at programme level. The panel is also pleased to see that the assessment of transdisciplinary skills is included in almost all courses. The use of artificial intelligence (AI) tools was discussed in several interviews. The panel learnt that, given the recent rapid developments in this area, the programme is still in the process of finetuning the regulations concerning the use of AI by students. The panel was pleased to hear that the programme recognizes the potential value of AI for students' learning process and aims to integrate AI tools in a responsible way.

In the case of group assessments, students have to keep a logbook and perform a peer review, in order to mitigate the risk of free rider behaviour. In the interview, students mentioned that they are guided in how to work together effectively, for example by making an analysis of personal skills, styles, etc. They also indicated that keeping a logbook is not considered the optimal method by all students, as some prefer using tools such as FeedbackFruits. Based on the interviews, the panel concludes that the programme is well aware of the downsides associated with group assessment and is proactive in monitoring and mitigating the risks. The panel underlines the importance of keeping this in mind.

#### *Thesis assessment*



Assessment of the Thesis Research Project is based on the research project and report, and the oral defence. The Thesis Research Project is assessed by two supervisors, representing the two faculties. The panel appreciates this approach since it enables the assessment of interdisciplinarity. Each assessor fills in the assessment form. Subsequently, the two assessors discuss their findings and determine a final grade. The interviews made clear that a third reader is appointed in case the first and second assessors' grades differ more than one point. The panel considers the thesis assessment procedure to be well thought out. It appreciates the annual supervisor meetings for calibration and the separate course manual for supervisors.

As part of the preparation for the site visit, the panel reviewed 15 theses from the programme, including the completed assessment forms. The panel appreciates the elaborate assessment form as it ensures that all important criteria are taken into account. It is also satisfied with the way the forms were filled out. The grades awarded were consistent and well substantiated by the feedback given.

#### *Board of Examiners*

There is one Board of Examiners (BoE) for the programme, jointly appointed by the two Faculty Boards. Both faculties are represented in the members of the BoE. The BoE also has one external member. Besides appointing the examiners, checking the application of the four-eyes principle in the development of tests, and making sure there is an assessment matrix for each course, the BoE performs systematic reviews of assessment in courses by examining two courses in detail each year. Also, each year, the BoE checks a random sample of 5-6 theses to evaluate the grading reliability and exit level. Based on the documentation and the interviews, the panel is very positive about the BoE. The panel considers the BoE to be in control and aware of issues in the programme. The BoE is proactive with regard to evaluating the quality of assessment in the programme and the level of the theses. The panel also thinks that developments concerning AI are well considered and reflected on, resulting in well balanced policies.

#### *Considerations*

Assessment in the programme is elaborated in the assessment plan, which demonstrates the relationship between the ILOs and the courses and assessment methods. For each course, an assessment plan and matrix are developed. The four eyes principle is applied to the development of all written exams, and assessment is performed based on grading models, assessment forms and/or rubrics. The panel considers the assessment system to be clear, robust, and well documented, demonstrating a good balance between group and individual assignments and the use of diverse and appropriate assessments methods. The assessment procedure for the thesis is well thought out. The reliability of thesis assessment is enhanced by the four eyes principle. The assessment forms ensure that all criteria are taken into account and they allow for elaborate feedback. The panel considers the BoE to be competent and in control. The BoE succeeds at safeguarding the quality of assessment and the exit level, amongst others by systematic reviews of assessment in courses and samples of theses.

#### *Conclusion*

The panel concludes that the programme meets standard 3.



## Standard 4. Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

### Findings

#### *Theses*

The Thesis Research Project is regarded as the final student project, demonstrating the achieved level of students. The panel reviewed a sample of 15 theses from the programme. The panel concludes that the theses reviewed demonstrate a high level, appropriate for an academic master's programme. According to the panel, the theses are clearly products of dedicated students and staff. They demonstrate a good mix of academic literature and engagement with diverse stakeholders. The panel appreciates the diversity of the thesis topics and methodologies used and sees a consistent quality across the disciplines. Also, the interdisciplinary approach is evident in the theses.

#### *Alumni*

The documentation includes an overview of the current positions and employers of alumni. It is clear from the documentation and the interviews that graduates can find a relevant job relatively easily. Alumni are positive about the programme and happy about how it prepared them for their current job. They especially appreciate the inter- and transdisciplinary approach, which proves to be very relevant in the professional field, and the focus on real-life cases and challenges, as these help students prepare for the labour market. The employers that the panel spoke with, appreciate graduates from this programme. They indicated that alumni from this programme are especially valuable because of their interdisciplinary skills. Based on the interviews and the figures included in the documentation, the panel concludes that alumni prove to be successful in the professional field and are able to contribute to society in a meaningful way.

### Considerations

Based on the sample of 15 theses reviewed, the panel concludes that the level demonstrated in these theses is appropriate for an academic master's programme. The documentation and the interviews indicate that graduates of the programme are well prepared for and prove to be successful in the professional field. They are especially appreciated for their interdisciplinary skills.

### Conclusion

The panel concludes that the programme meets standard 4.

### General conclusion

The panel's assessment of master's programme Governance of Sustainability is positive.

## Development points

1. Address the concept of governance on a more systemic level, with attention for the specific governance challenges connected to environmental sustainability problems (their global, long-term, and comprehensive nature vis-a-vis the national, shorter term, and compartmentalized nature of governance). Students would benefit from being offered a comprehensive framework on the governance of sustainability, to gain a deeper and higher-level understanding of and a more critical perspective on governance. Communicate the programme's focus with regard to governance more clearly to prospective students.
2. Clarify the definition and scope of natural science in the programme and communicate the focus and expectations regarding natural science more explicitly to (prospective) students.

## Appendix 1. Intended learning outcomes

### **Knowledge and understanding.**

The student has a thorough knowledge of:

1. The technical and scientific aspects of the key sustainability issues. These issues include, among others, materials and circular economy, biodiversity and ecosystems, climate and energy and toxicity and water.
2. The key concepts and theories that are relevant to understanding governance processes. These concepts and theories include, among others, institutions and policy cycles, decision making and governance networks, global governance and multi-level analysis and policy framing. Furthermore, the student is able to:
3. Recognize normative and cultural positions of all actors involved in the governance of sustainability – both academics and practitioners.
4. Select and apply a variety of social science and natural science methods to evaluate sustainability issues, such as Environmental Input-Output Analyses, Spatial analyses, Network, Stakeholder and Multi-level analyses.
5. Explain why sustainability issues are complex problems, starting from an integrated analysis of both the natural and the social sciences.
6. Understand how sustainability issues are constrained and enabled by multilevel and multi-stakeholder governance settings and policy processes.
7. Explain which theories, concepts, and data from the natural sciences is -or could be- applied in transnational, national and local governance processes.
8. Analyse a complex sustainability issue and combine knowledge and methods from various disciplines to come to an integrated proposal for governance solution for the issue at hand.
9. Formulate integrated and innovative solutions and implementation pathways regarding sustainability issues.

### **Skills.**

The student is able to:

10. Operate within a transdisciplinary and diverse international context.
11. Design and carry out in-depth research on sustainability issues, starting from a set of concepts, theories and research methods based on either the natural or the social sciences, or from a combined approach.
12. Execute integrative scientific research projects (design, organize, execute, analyse and report).
13. Convincingly communicate results from scientific research about sustainability issues to both specialist and non-specialist audiences.
14. Argue a well-considered stance on the governance of sustainability issues, making use of the relevant disciplines.
15. Recognise, respect and use individual and cultural differences within a team.

### **Judgement.**

A student is able to:

16. Make an integral and critical assessment of available scientific knowledge and knowledge about governance processes to make judgements about sustainability issues.
17. Compare different transnational, national and local governance settings, policy approaches and institutions to address sustainability issues and apply the most suitable approach.
18. Critically reflect on ethical and normative dimensions regarding the governance of sustainability issues and the associated questions of complexity and uncertainty.

19. Act according to the different normative and culture positions of all actors involved in the governance of sustainability.

**Learning skills.**

A student:

20. Has a positive attitude and openness towards self-directed and life-long learning.

21. Is able to design and plan their own learning processes by virtue of continuous reflection on personal knowledge, skills, attitudes and performance.

22. Is able to study independently and explore new areas of interest regarding the governance of sustainability issues.

## Appendix 2. Programme curriculum

Semester	Course		
1	<b>Thematic course 1</b> Materials & Circular Economy (12 ECTS)	<b>Transdisciplinary Skills</b> (6 ECTS)	<b>Thematic course 2</b> Biodiversity & Ecosystems (12 ECTS)
2	<b>Thematic course 3</b> Climate change & Energy Transition (12 ECTS)	<b>Qualitative Research Skills</b> (6 ECTS)	<b>Thematic course 4</b> Water & Toxicity (12 ECTS)
3	<b>Quantitative Research Skills</b> (6 EC -> 8 EC)		
	<b>Sustainability Challenge</b> (12 EC -> 10 EC)		
	<b>Electives</b> (12 EC)		
4	<b>Thesis Research Project</b> (30 EC)		

N.B. the study load for Quantitative Research Skills will increase to 8 ECTS, and for Sustainability Challenge will decrease to 10 ECTS, effective 2024-2025.

## Appendix 3. Programme of the site visit

### Friday 14 June 2024, The Hague

08.45	09.00	Arrival and welcome
09.00	09.30	Panel preparation
09.30	10.15	Interview programme management GoS
10.30	11.15	Interview students GoS
11.30	12.15	Interview teaching staff GoS
12.15	13.00	Lunch break
13.00	13.30	Interview alumni + professional field GoS
13.45	14.15	Interview Board of Examiners GoS
14.30	15.30	Thematic sessions GoS
15.30	16.30	Panel deliberation
16.30	17.00	Final meeting with management GoS
17.00	17.30	Panel deliberation
17.30	18.00	Oral feedback and closing

## Appendix 4. Materials

Prior to the site visit, the panel studied 15 theses of the master's programme Governance of Sustainability. Information on the theses is available from Academion upon request. The panel also studied other materials, which included:

- Self-evaluation report, including:
  - Student chapter
  - SWOT analysis
  - Reflection questions for site visit
- Reading guide
- Intended learning outcomes
- Dutch referential framework cluster ICM
- Programme metrics (*Opleidingskaart*) 2022-2023
- Results Nationale Studenten Enquete 2023
- Curriculum overview
  - Short description of core courses
  - Learning lines
  - DID profile
  - Pre-approves electives 2023-2024
  - List of specialisation course 2023-2024
  - Online preparation module
  - Overview guest speakers and commissioners Sustainability Challenge 2021-2023
- Previous accreditation report
- Overview recommendations and actions accreditation 2018 and midterm 2021
- Regulations
  - Course and Examination regulations 2023-2024
  - Rules and Guidelines of the Board of Examiners 2023-2024
- Overview of the teaching team
- Members of Boards and Committees
- Quality assurance
  - Annual report programme 2022-2023
  - Quality assurance cycle
  - Course evaluation example
  - Reflection Programme Committee and course coordinator example
  - Example of minute PC meetings
- Assessment plan
  - Overview of exit qualifications vs. courses
  - Overview of courses and their assessment
  - Rubric Sustainability Challenge
  - Example report Sustainability Challenge
- Quality assurance
  - Annual report Board of Examiners 2022-2023
  - List of IE core examiners 2023-2024
  - Course assessment review procedure
  - Course assessment review form
  - Thesis review procedure

- Thesis review form
  - Course assessment review example
  - Thesis review example
- Thesis
  - Thesis manual
  - Thesis rubric and assessment form
  - List of thesis titles 2021-2023
- Alumni
  - Exit survey
  - Profession after graduation
  - Alumni booklet
  - List of publications based on MSc GofS theses

During the site visit the panel had access to the online learning environment Brightspace. Also, recent results from the National Alumni Survey were made available.