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Onderwerp
Aanvraag verlenging accreditatie research master Spatial Sciences

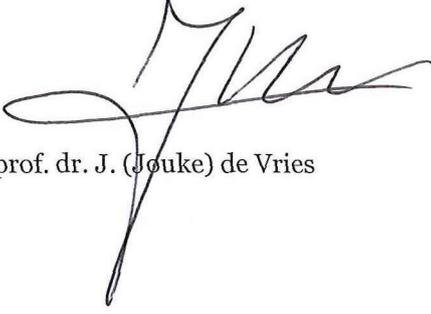
Geacht bestuur,

Hierbij zenden wij u de aanvraag voor verlenging van accreditatie van onze research master spatial sciences. Het visitatierapport is als bijlage toegevoegd. De opleiding heeft van het panel als oordeel 'positief onder voorwaarden' ontvangen. Derhalve is een herstelplan opgesteld. Dit plan, dat wij op korte termijn hopen vast te stellen, sturen wij u zo spoedig mogelijk na.

Wij verzoeken u de rekening voor verwerking van dit dossier te richten aan:

Rijksuniversiteit Groningen, Financial Shared Service Centre (fssc@rug.nl)
t.a.v. Faculteit Ruimtelijke Wetenschappen
Postbus 3
9700 AA Groningen
Onder vermelding van kostenplaats 145111111

Met vriendelijke groet,
namens het College van Bestuur van de Rijksuniversiteit Groningen,


prof. dr. J. (Jouke) de Vries

Assessment report
NVAO Limited Framework Programme Assessment

Research Master Spatial Sciences

University of Groningen

Contents of the report

1. Executive summary	2
2. Programme administrative information.....	5
3. Findings, considerations and assessments per standard	6
3.1 Standard 1: Intended learning outcomes	6
3.2 Standard 2: Teaching-learning environment	9
3.3 Standard 3: Student assessment.....	13
3.4 Standard 4: Achieved learning outcomes.....	15
4. Overview of assessments	17
5. Conditions and recommendations	18
Appendix: Assessment process	19

1. Executive summary

In this executive summary, the panel presents the main considerations which led to the assessment of the quality of the Research Master Spatial Sciences programme of University of Groningen. The programme was assessed according to the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands. The additional NVAO requirements for research master programmes were taken into account.

The programme organisation is adequate and the programme is well-embedded in the Faculty of Spatial Sciences of University of Groningen.

The panel finds the profile of the programme clear. The programme trains students broadly both thematically and methodologically and offers them the opportunities to specialise in areas within spatial sciences. Programme management explained the programme to remain directed towards the spatial sciences including aspects of sustainability, but not to change completely to the sustainability field of study. The panel recommends to keep pursuing this policy.

The programme intended learning outcomes conform to the master level and surpass this level in some respects, aiming at higher levels of knowledge production and adequately preparing students for PhD trajectories.

The comparison of this programme to similar programmes in the Netherlands and abroad, shows the programme to be in line with prestigious programmes in this field.

The panel endorses the English name of the programme and English as the language of instruction. The English language enables students to appropriately prepare for international research positions in this field, and to acquire international and intercultural competencies.

Programme management appropriately followed up on the recommendations made by the previous assessment panel.

Although the intake is rather small, the educational viability of the programme is maintained, allowing students to have meaningful interaction in the class room. The entry requirements and admission procedures assure to admit students, having the capacities to complete the programme.

The courses specifically designed for this programme meet research master requirements. In the panel's opinion, the research master students ought to meet the research master level over the entire curriculum of the programme and, therefore, also when taking the regular master courses. The panel does not see research master students meeting extra requirements to differentiate their learning activities and learning outcomes from those of students in regular master programmes. Also, the panel does not see more complex, in-depth summative examinations or assessments in or clearly related to these regular master courses to account for these extra requirements. The *Scientific Reading Debating* and *Reflecting* course is, in the panel's view, not clearly connected to

the regular master courses. Students' learning activities in this course also largely depend upon their own initiatives. Both these features of this course make it impossible for the panel to establish students reaching the research master level in the regular master courses. In the panel's view, programme management ought to ensure the research master students do meet the research master level in the regular master courses and ought to ensure these students are tested on the research master level using more complex, in-depth summative examinations or assessments in or clearly connected to these regular master courses.

The lecturers involved in the programme have diverse expertise, covering the broad profile of the programme. The lecturers involved in the programme are well-equipped in terms of educational expertise, academic qualifications, and research track records. The Urban and Regional Studies Institute (URSI) of the Faculty, in which all lecturers take part as researchers, obtained as results *very good* or *excellent* in the 2020 research assessment. The panel considers the interaction among lecturers to be adequate.

The educational concept and the study methods are appropriate for this programme. Students are actively involved in the courses. The guidance and supervision offered in the programme are up to standard and very much appreciated by students. The community feeling among students is promoted by regular meetings of all students in the *Scientific Reading Debating and Reflecting* course. The drop-out figures and the study success figures for the programme are adequate.

The rules, regulations and procedures to assure the quality of the examinations and assessments of the programme are adequate. The position and activities of the Board of Examiners are up to standard. The panel is pleased to understand the Board regularly reviews course examinations and master theses. The panel recommends the Board to conduct the programme evaluation with priority, as the Board already intends to do.

The examination methods in the courses are adequate for the knowledge, insights and skills to be tested in these courses, and are satisfactorily varied. The assessment procedures for the course examinations are appropriate. The same applies to the programme rules and regulations for fraud and plagiarism and of the implementation of these.

The supervision and assessment processes for the master thesis meet the requirements. The thesis assessment form is elaborate and contains relevant assessment categories. The thesis assessment procedures, involving two examiners who separately submit their assessments, are up to standard. The panel recommends to consider returning to the involvement of the third examiner in the case of very high marks.

The measures programme management has taken in the Covid-crisis to provide education, organise examinations and assessments, and monitor the quality of these are appropriate. The well-being of students has been guarded adequately as well.

The panel reviewed fifteen master theses of programme graduates of the last five years. No theses were found by the panel to be unsatisfactory. Out of all the theses reviewed, five theses were

graded satisfactory by the panel, seven theses were found to be good, and two theses were considered to be excellent. The marks for six theses were regarded by the panel to be appropriate. The panel found the marks for nine theses to be too high, but less than one point too high. The panel, therefore, regards the average grade for the master theses of 8.0 as relatively high. The proportion of students graduating cum laude, being 37 %, is considered by the panel to be rather high as well.

The panel appreciates the programme preparing for academic or non-academic research positions. Although career preparation activities are organised in the programme, the panel recommends to step up the efforts in this respect by strengthening the relations between students and alumni in order to prepare students for future careers, in particular careers in non-academic research. The panel applauds the results of the programme, 79 % of the graduates having secured PhD positions or positions in non-academic research.

The panel which conducted the assessment of the Research Master Spatial Sciences programme of University of Groningen assesses this programme to meet Standards 1, 3, and 4 and to partially meet Standard 2 of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, judging the programme to be conditionally positive. In the panel's view, programme management will be able to remedy the shortcomings noted by the panel within the period of two years. Therefore, the panel advises NVAO to impose conditions in this respect upon the programme and to grant the programme two years time to fulfil these conditions. The two conditions to be fulfilled are the following.

- To ensure the research master students attain the research master level when taking regular master courses, by meeting the extra, more complex, in-depth requirements as articulated in the intended learning outcomes of the research master programme in order to differentiate their learning activities and learning outcomes in the regular master courses clearly from those of regular master students.
- To ensure research master students are assessed at the research master level when taking regular master courses by requiring more complex, in-depth summative assessments or examinations for them in or clearly connected to these regular master courses.

Rotterdam, 7 September 2021,

Prof. L.J. de Haan PhD
(panel chair)

W. Vercouteren MSc
(panel secretary)

2. Programme administrative information

Name programme in CROHO:	Master Spatial Sciences (Research)
Orientation, level programme:	Academic Master
Grade:	MSc
Number of credits:	120 EC
Specialisations:	Economic Geography Economic Geography: Regional Competitiveness and Trade Real Estate Studies Population Studies Socio-Spatial Planning Environmental and Infrastructure Planning Cultural Geography Cultural Geography: Tourism Geography and Planning Islands and Sustainability
Location:	Groningen
Mode of study:	Full-time
Language of instruction:	English
Registration in CROHO:	21PC-60660
Name of institution:	University of Groningen
Status of institution:	Government-funded University
Institution's quality assurance:	Approved

3. Findings, considerations and assessments per standard

3.1 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

The Research Master Spatial Sciences programme is the research master programme of the Faculty of Spatial Sciences of University of Groningen. The programme carries 120 EC of study load and takes two years to complete. The Director of Education of the Faculty has the responsibility for the quality of the bachelor and master programmes of the Faculty, including this research master programme. The programme is closely connected to the Faculty Graduate School of Spatial Sciences, in which PhD students are supervised in their PhD trajectories. The Graduate School is part of the Urban and Regional Studies Institute (URSI), which is the research school of the Faculty. The programme coordinator manages the programme on the day-to-day basis. The Programme Committee, being composed of lecturers and students, advises the programme coordinator on the quality of the programme. The Board of Examiners works at the Faculty level and has the authority to monitor the quality of examinations and assessments for this and the other programmes of the Faculty.

The objectives of this research master programme are to train students to explore different themes and topics in the spatial sciences and to conduct scientific research in this field. The programme offers students theoretical knowledge and skills as well as methodological training in the spatial sciences. The programme aims to train students to become curious scientists in this field, curiosity being seen as driving students to study subjects creatively, in-depth, seriously and open-minded. The programme is broad and interdisciplinary, covering human geography, demography, regional and urban development and spatial planning, and educating students to address interdisciplinary issues in spatial sciences. Students are broadly trained in methods, being acquainted with both qualitative and quantitative methods. The programme is associated with the Faculty research programme *towards Wellbeing, Innovation and Spatial Transformation* of the Urban and Regional Studies Institute research school of the Faculty, in which all four Departments, being Human Geography, Demography, Regional and Urban Development and Spatial Planning, take part.

Three profiles are offered, being the regular research master programme, eight specialisations and one track. The regular programme allows students to select thematic and methods courses of their preference. The specialisations are Economic Geography, Economic Geography: Regional Competitiveness and Trade, Real Estate Studies, Population Studies, Socio-Spatial Planning, Environmental and Infrastructure Planning, Cultural Geography, and Cultural Geography: Tourism Geography and Planning. The last two will be discontinued from 2021 onwards. Specialisations give students the opportunity to become specialists in one of the areas within spatial sciences. In addition, the track Islands and Sustainability is offered. This track allows students to delve into

sustainable development. The Faculty Board intends to add the track Sustainable Landscapes in the near future.

The intended learning outcomes of the programme address theoretical attitudes and understanding in the spatial sciences domain, research skills, general academic skills, and general work orientation. Theoretical attitudes and understanding and research skills include, among other, turning knowledge of theoretical models and interdisciplinary issues into research questions and research designs, formulation of research questions and implementation of research problems. General academic skills regard, among other, autonomy, creativity and societal orientation. General work orientation refers to the preparation for PhD positions or non-academic research positions. The intended learning outcomes apply to all of the specialisations and tracks.

The programme has been compared to other programmes in the spatial sciences in the Netherlands and abroad. The programme is comparable to these programmes in terms of theoretical depth and in terms of research training. The programme may be said to stand out among these programmes in terms of breadth of subjects offered to students.

Programme management showed the intended learning outcomes to correspond to the Dublin descriptors for the second cycle, as indicators of the master level. The intended learning outcomes partly reach the Dublin descriptors for the third cycle, as this research master programme clearly aims higher and has a much stronger research orientation than regular master programmes in this field and aims to prepare students for PhD positions.

The programme name is in English, and the programme is taught in English as well. These choices correspond to the internationalisation policy of the Faculty. The English name and English as language of instruction are chosen to prepare students for the international labour market for research positions in this field, and to acquire international and intercultural skills beneficial to act in international research contexts. English also allows international students to enrol, bringing in their own, enriching perspectives. The Faculty implemented a range of instruments to monitor the English language skills of staff members. Recordings of lectures of all teachers are checked by the University language centre on the quality of English. Lecturers' English proficiency is one of the items in the standardised student course surveys. The Programme Committee assesses the English language skills of the lecturers. When English language skills of lecturers are below standard, the lecturers concerned are required to improve their skills in this respect by, for instance, taking language courses.

Programme management addressed the recommendations made by the previous assessment panel. Four new courses were introduced to raise the level of the programme, the less effective portfolio of extra assignments was replaced by the integrated *Scientific Reading Debating and Reflecting* course, and the level of the theses was raised by strengthening the research skills in the curriculum. Programme management also made other changes, which included creating the specialisations in the programme.

Considerations

The panel sees the programme organisation as adequate and considers the programme to be well-embedded in the Faculty of Spatial Sciences of University of Groningen.

The panel finds the profile of the programme clear. The programme is broad and interdisciplinary, being directed towards the study of spatial sciences. The panel welcomes students being trained broadly both thematically and methodologically and students being given the opportunities to specialise in areas within spatial sciences. Programme management explained the programme to remain directed towards the spatial sciences including aspects of sustainability, but not to change completely to the sustainability field of study. The Islands and Sustainability and Sustainable Landscapes tracks remain connected to the *towards Wellbeing, Innovation and Spatial Transformation* Faculty research programme and are studied from the perspective of this research programme. The panel recommends to keep pursuing this policy.

The programme intended learning outcomes meet the research master requirements. The intended learning outcomes, so the panel established, conform to the master level and surpass this level in some respects, aiming at higher levels of knowledge production and adequately preparing students for PhD trajectories.

The panel welcomes the comparison of this programme to similar programmes, observing the programme being in line with prestigious programmes in this field both in the Netherlands and abroad.

The panel endorses the English name of the programme and English as the language of instruction. The English language enables students to appropriately prepare for international research positions in this field, and to acquire international and intercultural competencies.

Programme management appropriately followed up on the recommendations made by the previous assessment panel.

Assessment of this standard

These considerations have led the assessment panel to assess the programme to meet Standard 1, Intended learning outcomes.

3.2 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

The number of students enrolling in the programme was on average 7 students per year for the last seven years, ranging from 3 to 16 students per year. The proportion of international students is about 30 % of total intake. International students come from around the globe. The relatively low intake numbers of this research master programme are accepted by the Faculty Board. The Faculty Board is welcoming recent growth and aims at stable intake numbers of 10 to 15 students per year. The inflow of students may rise the coming years with the introduction of the Sustainable Landscapes track and if the request for Erasmus Mundus funding for the Islands and Sustainability track would be approved. In the view of staff and students, the low student numbers do not hinder the educational viability of the programme. Students still have the opportunity to engage in fruitful discussions.

The admission requirements for the programme are bachelor degrees in the field of spatial sciences or related to this field. The programme Admissions Board decides on admissions. The grade point average of candidates in the previous education must be at least be 7.0 for courses and 7.5 for the bachelor thesis (Dutch grades). Applicants have to be proficient in English. Motivation of applicants is taken into account. Reference letters are requested and personal interviews may be part of the procedures. About 30 % of the applicants are refused enrolment.

Programme management presented the table to demonstrate the curriculum meeting the intended learning outcomes of the programme. The curriculum consists of a number of courses, specifically designed for this research master programme (total 45 EC), courses taken together with students of regular master programmes (total 45 EC) and the Master Thesis (30 EC). The curriculum structure is the same for the regular research master programme, for all the specialisations and for the Islands and Sustainability track. The differences relate to the selection of regular master courses or, for the track, to the contents of some of the specifically designed research master courses. The specifically designed research master courses are the following. The *Individual Research Training* allows students individually to do academic research with staff members. In the *Joint Multi-Disciplinary Research Project*, students work in small groups on research assignments for societal organisations. The *Research Internship at a Renowned Research Institute* allows students to become acquainted with non-academic research. The *Advanced Research Skills* course builds on the methods courses in the regular master programmes which students take and addresses multi-method research methods. In the *Research Process and Proposal Writing* course, students set up the research proposal for the Master Thesis. The *Scientific English Writing* course is meant to train students academic writing. In the *Scientific Reading Debating and Reflecting* course which spans the two years, students study literature, write individual diaries and discuss these among each other and with staff, all to be seen as the compilation of mini-research activities.

In addition to these courses, students of this research master programme take three methods courses and six thematical courses (45 EC total) of regular master programmes of University of Groningen. When taking these courses, the research master students do not complete more complex in-depth assignments, or do not do more complex in-depth tasks, that would require them to complete these regular master courses at research master level. The students take the *Scientific Reading Debating and Reflecting* course, scheduled in parallel to the regular master courses over the entire timespan of the curriculum and requiring these students to engage in additional academic reading and reflection upon this reading. This course is mandatory for each of the two years of the programme, but students are offered 5 EC of credits only in the first year. The course is meant by programme management to provide additional, formative assignments in order to bring students to the research master level.

The staff members teaching in the programme are thirteen lecturers in total, among whom are six full professors, three associate professors, and four assistant professors. Within the lecturers' group, six of them are core teachers. Staff members come from the four Departments of the Faculty, being the Departments of Economic Geography, Demography, Cultural Geography, and Spatial Planning and Environment, assuring all the specialisations of the programme being taught by experts. The lecturers are qualified researchers in their field of study and publish in peer-reviewed journals. All of the them are involved as researchers in the Urban and Regional Studies Institute (URSI) of the Faculty. This Institute obtained results *very good* or *excellent* in the recent research assessment of 2020. All lecturers have PhDs. Nine of them (70 %) are University Teaching Qualification (UTQ) certified. Of the others, two lecturers have planned or have started the UTQ-training, one lecturer is exempted and one teacher has a very small appointment. The core teachers are all UTQ-certified. PhD students are involved in teaching in the *Individual Research Training* and *Advanced Research Skills* courses. PhD students are selected to do this, are trained to teach and are supervised by staff members. The core teachers meet to discuss the programme.

The educational concept of the programme, resting upon the Faculty educational vision, includes encouraging students to explore trends in spatial sciences, enabling them to conduct independent research, training students in multiple research methods, and promoting them to be members of the international scientific community in spatial sciences. The study methods in the courses are lectures, tutorials, excursions, and practicums. Given the size of the programme, class sizes are small. The students-to-staff ratio is about 20. Students are stimulated to actively engage in the classes by doing research individually or in groups, by writing assignments, by presenting their work and by taking part in discussions with lecturers and fellow-students. Although students may take different courses in the curriculum, they all come together monthly in the *Scientific Reading Debating and Reflecting* course. Students are matched to PhD students as mentors for the duration of the programme and meet with them on a quarterly basis. These student mentors assist students in making choices in the curriculum and introduce them to the research community of the Graduate School of Spatial Sciences. Students may also contact the Faculty study advisors for assistance in study-related matters. Study advisors may refer students to support services of the Faculty and University. Programme management and teachers guide students as well. Students are very content about the accessibility and the assistance of programme management and lecturers. The number of

students dropping out of the programme is limited to one or two students per cohort. For recent cohorts, on average 75 % of the students completed the programme within three years.

Programme management has taken measures to organise education in the Covid crisis and to monitor the quality of the education. On-campus education often proved not to be not feasible, mainly due to government regulations. Therefore, teaching has been converted to online teaching. In some periods, hybrid teaching was feasible. Lecturers were supported by the Faculty Task Force to change their teaching to these new formats. Research internships were done online. Students experienced the learning processes during the Covid crisis as challenging, primarily because of the lack of face-to-face interaction. To guard the well-being of students, programme management and lecturers kept in contact with students. Students very much appreciate the support and assistance offered by programme management and lecturers.

Considerations

Although the intake for the programme is rather small, the average number of incoming students does not hinder the educational viability of the programme. The entry requirements for the programme are valid and the admission procedures are elaborate. These requirements and procedures assure admitting students, who have the capacities to complete the programme.

The panel considers the courses specifically designed for the research master programme to be up to standard. These courses meet the research master requirements. In the panel's opinion, the research master students ought to meet the research master level over the entire curriculum of the programme and, therefore, also when taking the regular master courses. The panel does not see research master students meeting extra requirements to differentiate their learning activities and learning outcomes from those of students in regular master programmes. Also, the panel does not see more complex, in-depth summative examinations or assessments in or clearly related to these regular master courses to account for these extra requirements. The *Scientific Reading Debating and Reflecting* course is, in the panel's view, not clearly connected to the regular master courses. Students' learning activities in this course also largely depend upon their own initiatives. Both these features of this course make it impossible for the panel to establish students reaching the research master level in the regular master courses. In the panel's view, programme management ought to ensure the research master students do meet the research master level in the regular master courses and ought to ensure these students are tested on the research master level using more complex, in-depth summative examinations or assessments in or clearly connected to these regular master courses. In the panel's view, the programme management will be able to remedy the shortcomings noted by the panel within the time period of two years. Therefore, the panel advises NVAO to impose conditions in this respect upon the programme and to grant the programme two years time to fulfil these conditions. The two conditions to be fulfilled are the following.

- To ensure the research master students attain the research master level when taking regular master courses, by meeting the extra, more complex, in-depth requirements as articulated in the intended learning outcomes of the research master programme in order to differentiate their learning activities and learning outcomes in the regular master courses clearly from those of regular master students.

- To ensure research master students are assessed at the research master level when taking regular master courses by requiring more complex, in-depth summative assessments or examinations for them in or clearly connected to these regular master courses.

The lecturers involved in the programme have diverse expertise, covering the broad profile of the programme. In the panel's view, the lecturers are well-equipped in terms of educational expertise, and academic qualifications. Lecturers involved in the programme are good researchers. The Urban and Regional Studies Institute (URSI) of the Faculty, in which all lecturers take part as researchers, obtained as results *very good* or *excellent* in the 2020 research assessment. The panel considers the interaction among lecturers to be adequate.

The panel sees the educational concept and the study methods as appropriate for this programme. The panel appreciates the active involvement of students in class. The guidance and supervision offered by the programme coordinator, lecturers, student mentors and study advisors are up to standard. The panel notes this guidance and supervision to be very much appreciated by students. The community feeling among students is promoted by regular meetings of all students in this programme in the *Scientific Reading Debating and Reflecting* course. The drop-out figures and the study success figures for the programme are adequate.

In the panel's view, programme management took measures to provide adequate education during the Covid crisis, to assure the quality of this education, and to monitor the well-being of students.

Assessment of this standard

These considerations have led the assessment panel to assess the programme to partially meet Standard 2, Teaching-learning environment.

3.3 Standard 3: Student assessment

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

The programme examination and assessment rules and regulations are specified in the Teaching and Examination Regulations, which fall under the authority of the Board of the Faculty of Spatial Sciences. Based upon the Teaching and Examination Regulations, programme management drafted the assessment plan for the programme. This plan specifies the relations between the programme intended learning outcomes and the course goals and contents and lists the examination methods for all courses. Course guides, available for each of the courses, show the relations between the course goals, study methods and examination methods. Course examinations are drafted by examiners and peer-reviewed by fellow examiners. To assess course examinations, model answers or evaluation forms are used by the examiners.

The Board of Examiners ensures the quality of examinations and assessments of this programme as well as the other programmes of the Faculty. For this programme, the Board reviewed three courses as well as 10 % of all master theses. The Board intends to conduct the programme evaluation. This has been postponed due to Covid circumstances. The Board of Examiners discusses their findings with programme management. Thus far, no serious shortcomings were identified.

In most of the courses specifically designed for this research master programme, the final course grade is based upon multiple examinations. Examination methods include presentations, individual assignments, group assignments, group discussions and peer review assessments. Individual assignments are predominant in these courses. Standardised evaluation forms are adopted to assess the *Individual Research Training* and the *Research Internship at a Renowned Research Institute*. In the regular master courses, written, open questions' or multiple-choice examinations are scheduled next to individual or group assignments.

Rules and regulations on fraud and plagiarism are in place. Students are informed about these and are trained on quoting and presenting literature correctly. Written assignments and master theses are checked for plagiarism by automated means. Examiners are responsible for detecting cases of fraud and plagiarism. The Board of Examiners rules on cases.

Students choose the topic for their master thesis from themes researched in the *towards Wellbeing, Innovation and Spatial Transformation* research programme of the Faculty of Spatial Sciences. Students drafting the master thesis are individually guided in the process by the thesis supervisor. Master theses are assessed by the supervisor and second reader independently. Either one of them complete the standardised master thesis assessment form. This form lists a number of categories, relevant for the thesis' quality. These categories have weights, being aligned with the research master nature of the programme and attaching much weight to research and methodology. The examiners may change the weights, but have to state the reason for doing so. The assessment form refers to the written report, the oral defence by the student, and the research process. When

supervisor and second reader differ on the grading of the thesis with more than 2.0 points, a third assessor is invited to assess the thesis. The final grade will be the average of these three marks.

Programme management has taken measures to organise examinations and assessments in the Covid crisis and to monitor their quality. As on-campus examinations and assessments were no longer feasible, programme management and lectures changed examinations and assessments to online formats. The Board of Examiners decided on the validity of these new formats, assuring they were meeting the course goals and programme intended learning outcomes. Online Examining Guidelines were issued to assist staff members in drafting and assessing online examinations and assessments. In the Covid crisis, the Board of Examiners handled more cases of alleged fraud.

Considerations

The panel considers the rules and regulations for the programme examinations and assessments to be adequate. Suitable procedures have been put in place to assure the quality of examinations and assessments. The position and the activities of the Board of Examiners are up to standard. The panel is pleased to understand the Board regularly reviews course examinations and master theses. The panel recommends the Board of Examiners to conduct the programme evaluation with priority, as the Board already intends to do.

The examination methods in the courses are adequate for the knowledge, insights and skills to be tested in these courses. The examination methods are satisfactorily varied. The assessment procedures for the course examinations are appropriate.

The panel approves of the rules and regulations for fraud and plagiarism and of the implementation of these rules and regulations.

In the panel's view, the supervision and assessment processes for the master thesis are appropriate. The panel welcomes the elaborate thesis assessment form, with relevant assessment categories. The qualitative indicators on this form may, nevertheless, lead to different interpretations when transferring these to numerical marks. The panel appreciates the thesis assessment procedures, involving two examiners who separately submit their assessments. The panel recommends to consider returning to the involvement of the third examiner in the case of very high marks.

The panel considers the measures programme management has taken to organise examinations and assessments in the Covid-crisis and to monitor the quality of these examinations and assessments to be appropriate.

Assessment of this standard

These considerations have led the assessment panel to assess the programme to meet Standard 3, Student assessment.

3.4 Standard 4: Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.
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Findings

Students are to demonstrate the knowledge and skills, they have acquired in the programme, in the master thesis. The average grade for the master theses is 8.0 for the last seven years. The Board of Examiners for the programme considers the marks of the thesis examiners to reflect the quality of the theses appropriately and does not find the marks too high.

Master theses are increasingly written in the format of international journal articles, to allow students to have their thesis published in peer-reviewed journals. Master theses are assessed on their being suitable to be submitted as articles to these journals. A number of graduates of the programme succeeded in having their thesis published in journals.

The proportion of students graduating cum laude, was on average 37 % in the years 2014 to 2019.

The programme primarily aims to prepare students for both PhD positions or for positions in non-academic research. In the programme, students have opportunities to engage both in academic research and in non-academic research. All students find suitable employment within five months after graduation. Programme management is in contact with programme alumni through the alumni association. Every two to three years, an alumni event is organised, allowing students to meet with alumni and to obtain information on career perspectives.

On the basis of the figures for students having graduated between 2016 and 2020, the proportion of programme graduates proceeding to PhD trajectories was 47 %, whereas 32 % of the graduates found positions in non-academic research.

Considerations

The panel reviewed fifteen master theses of programme graduates. The theses were selected from all of the theses of graduates of the last five years. In the selection, theses with lower, average and higher marks were represented. No theses were found by the panel to be unsatisfactory. Out of all the theses reviewed, five theses were graded satisfactory by the panel, seven theses were found to be good, and two theses were considered to be excellent. The marks for six theses were regarded by the panel to be appropriate. The panel found the marks for nine theses to be too high, but in all cases less than one point too high. The panel, therefore, regards the average grade for the master theses of 8.0 as relatively high. The proportion of students graduating cum laude, being 37 %, is considered by the panel to be in the Dutch context rather high as well.

The panel appreciates the programme preparing for both academic or non-academic research positions. Programme management adequately keeps track of the number of graduates finding research positions as PhD students or in non-academic research. Although career preparation activities are organised in the programme, the panel recommends to step up the efforts in this

respect by, among other, strengthening the relations between students and alumni of the programme in order to prepare students for future careers. The panel also advises to prepare students better for positions in non-academic research. The panel applauds the results of the programme, 79 % of the graduates having secured PhD positions or positions in non-academic research.

Assessment of this standard

These considerations have led the assessment panel to assess the programme to meet Standard 4, Achieved learning outcomes.

4. Overview of assessments

Standard	Assessment
Standard 1. Intended learning outcomes	Programme meets Standard 1
Standard 2: Teaching-learning environment	Programme partially meets Standard 2
Standard 3: Student assessment	Programme meets Standard 3
Standard 4: Achieved learning outcomes	Programme meets Standard 4
Programme	Conditionally positive

5. Conditions and recommendations

The panel assesses the programme as partially meeting Standard 2, Teaching-learning environment. In the panel's view, programme management will be able to remedy the shortcomings noted by the panel within the period of two years. Therefore, the panel advises NVAO to impose conditions in this respect upon the programme and to grant the programme two years time to fulfil these conditions. The two conditions to be fulfilled are the following.

- To ensure the research master students attain the research master level when taking regular master courses, by meeting the extra, more complex, in-depth requirements as articulated in the intended learning outcomes of the research master programme in order to differentiate their learning activities and learning outcomes in the regular master courses clearly from those of regular master students.
- To ensure research master students are assessed at the research master level when taking regular master courses by requiring more complex in-depth summative assessments or examinations for them in or clearly connected to these regular master courses.

In this report, a number of recommendations by the panel have been listed. For the sake of clarity, these have been brought together below.

- To keep pursuing the policy of directing the programme profile towards spatial sciences including aspects of sustainability, but not to change completely to the sustainability field of study.
- For the Board of Examiners to conduct the programme evaluation with priority, as the Board already intends to do.
- To consider returning to the involvement of the third examiner in thesis assessments in the case of very high marks.
- To strengthen the relations between students and alumni of the programme in order to better prepare students for future careers.
- To prepare students better for positions in non-academic research.

Appendix: Assessment process

Certiked VBI evaluation agency was requested by University of Groningen to support the limited framework programme assessment process for the Research Master Spatial Sciences programme of this University. The objective of the programme assessment of this research master programme was to establish whether the programme would conform to the standards of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, September, 2018 (officially published in Stcrt. 2019 no. 3198, 29 January 2019) as well as to the criteria listed in the NVAO Specification of additional criteria for research master's programmes, 30 May, 2016.

This programme is one of the programmes in the assessment cluster of Social Sciences Research Master programmes (in Dutch: WO OZM Maatschappij). Management of the programmes in this assessment cluster discussed the composition of the assessment panel and drafted the list of panel candidates.

Having conferred with Research Master Spatial Sciences of University of Groningen programme management, Certiked invited candidate panel members to sit on the assessment panel. The panel members agreed to do so.

The panel composition was as follows:

- Prof. L.J. de Haan PhD, Professor Emeritus of Development Studies, International Institute of Social Studies, Erasmus University Rotterdam, the Netherlands (panel chair);
- Prof. A. Need PhD, Professor of Sociology and Public Policy; Dean Twente Graduate School, University of Twente, the Netherlands (panel member)
- Prof. J.Y. Nazroo PhD, Professor of Sociology, School of Social Sciences, University of Manchester, United Kingdom (panel member);
- Prof. G.P. van Wee PhD, Professor in Transport Policy, Faculty of Technology, Policy and Management, Delft University of Technology, the Netherlands (panel member);
- C. Fang MSc, PhD Candidate, Interuniversity Center for Social Theory and Methodology, Utrecht University, the Netherlands (student member).

On behalf of Certiked, W. Vercooteren MSc served as the process coordinator and secretary in the assessment process.

All the panel members and the process coordinator/secretary confirmed in writing being impartial with regard to the programme to be assessed as well as observing the rules of confidentiality. After having obtained the authorisation by the University, Certiked requested the approval of NVAO of the proposed panel to conduct the assessment. NVAO have given their approval.

To prepare for the assessment process, the process coordinator convened with programme management to discuss the documents to be presented to the assessment panel, the site visit schedule, and the planning of the preparatory activities. In the course of this process, programme

management and the process coordinator regularly had contact to fine-tune the process. The activities prior to the site visit were performed as planned. Programme management approved of the site visit schedule.

Well in advance of the site visit date, programme management sent the list of theses of programme graduates of the five most recent years. Acting on behalf of the assessment panel, the process coordinator selected fifteen theses from this list. In the selection, theses with lower, average and higher grades were evenly represented. All specialisations of the programme were covered in this selection.

The panel members were forwarded in time the documents, prepared by programme management. These documents consisted of the self-evaluation report, the appendices to the self-evaluation report and additional information. The student chapter was part of the self-evaluation report. The appendices to the self-assessment report included the overview and structure of the programme curriculum and the specialisations, overview of relations of intended learning outcomes to Dublin descriptors, overview of relations of curriculum to intended learning outcomes, Teaching and Examination Regulations, admission procedures, study methods and assessments in courses, evaluations forms of Individual Research Training, Research Internship, and Master Thesis, overview of core staff with research qualifications, educational qualifications and key publications, quantitative data of the programme, list of Master Theses, comparison with other programmes, reflection on previous accreditation and main programme changes, impact of Covid pandemic on education, and Faculty vision on education. The additional information consisted of, among other documents, course dossiers, course examinations, and Programme Committee and Board of Examiners minutes and annual reports.

To assist panel members in assessing the programme, they were sent the Trained Eye Research Masters Limited Framework document of Certiked evaluation agency, this document being the elaboration of the NVAO Assessment framework and the NVAO Specification for research master programmes.

Prior to the site visit date, the assessment panel chair and the process coordinator met to discuss the assessment process procedures. In this meeting, the panel chair was informed about the profile of panel chairs of NVAO. The panel chair agreed to work in line with the profile of panel chairs.

Seeing the continuing spread of Covid infections in the Netherlands and the measures taken by Dutch government to counter the spread of infections, programme management proposed the site visit to be organised online. All panel members agreed to the online visit.

Prior to the date of the online visit, panel members sent in their preliminary findings, based upon their studying the programme documents, and sent in questions to be put to the programme representatives on the day of the visit. The panel secretary summarised this information, and compiled a list of questions to serve as the starting point for the discussions with the programme representatives during the visit.

Shortly before the visit date, panel members met to prepare for the site visit. Panel members discussed the procedures to be adopted during the visit, the preliminary findings about the programme, the panel reviews of the theses studied, and the questions to be put to the programme representatives.

On 7 June, 2021, the panel conducted the online visit. The visit schedule was in accordance with the schedule as planned. The visit schedule included the following meetings.

09.00 – 09.45 Faculty Board representatives, director of education, programme coordinator
10.00 – 11.00 Programme management and core lecturers
11.15 – 12.00 Board of Examiners
12.00 – 13.00 Panel lunch (closed session), with 12.00 – 12.30 Open office hours
13.00 – 13.45 Lecturers/final project examiners
14.00 – 14.45 Students, with Programme Committee student member, and alumni
14.45 – 16.15 Deliberations panel (closed session)
16.15 – 16.30 Main findings presentation by panel chair to programme representatives
16.30 – 17.00 Development dialogue

Open office hours were communicated timely by programme management to staff and students. No persons presented themselves during these open office hours.

In a closed session at the end of the visit, the assessment panel considered the findings, weighed the considerations and arrived at conclusions with regard to the quality of the programme. After these internal deliberations, the panel chair presented in broad outline the panel findings, considerations, conclusions and recommendations to programme representatives.

At the end of the site visit, panel members and programme management met to discuss further improvements in the programme during the development dialogue.

Having been approved by all panel members, the secretary sent the summary of the considerations with regard to the conditions to be fulfilled and the text of the conditions earlier than the assessment report to allow programme management to prepare for the improvement plan, to be submitted.

The assessment draft report was finalised by the secretary, having taken into account the findings and considerations of the panel. The draft report was sent to the panel members, who studied this draft and made a number of changes. Thereupon, the secretary edited the final report. This report was presented to programme management to be corrected for factual inaccuracies. Programme management were two weeks time to respond. Having been corrected for the factual inaccuracies, the Certiked bureau sent the report to the University Board to accompany their request to continue the accreditation of this programme.