



NVAO • THE NETHERLANDS

INITIAL ACCREDITATION  
RESEARCH MASTER  
WATER AND SUSTAINABLE  
DEVELOPMENT  
(RESEARCH)  
IHE Delft

FULL REPORT  
30 June 2021

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# 1 Peer review

The Accreditation Organisation of the Netherlands and Flanders (NVAO) determines the quality of a new programme on the basis of a peer review. This initial accreditation procedure is required when an institution wishes to award a recognised degree after the successful completion of a study programme.

The procedure for new programmes differs slightly from the approach to existing programmes that have already been accredited. Initial accreditation is in fact an ex ante assessment of a programme. Once accredited the new programme becomes subject to the regular review process.

The quality of a new programme is assessed by means of peer review. A panel of independent peers including a student reviews the plans during a site visit to the institution. A discussion amongst peer experts forms the basis for the panel's final judgement and the advisory report. The agenda for the panel visit and the documents reviewed are available from the NVAO office upon request.

The outcome of this peer review is based on the standards described and published in the limited NVAO Assessment framework for the higher education accreditation system of the Netherlands (Stcrt. 2019, nr. 3198). Each standard is judged on a three-point scale: meets, does not meet or partially meets the standard. The panel will reach a conclusion about the quality of the programme, also on a three-point scale: positive, conditionally positive or negative.

This report contains the findings, analysis and judgements of the panel resulting from the peer review. It also details the commendations as well as recommendations for follow-up actions. A summary report with the main outcomes of the peer review is also available.

NVAO takes an accreditation decision on the basis of the full report. The NVAO decision can be positive, conditionally positive or negative. Following a positive NVAO decision with or without conditions the institution can proceed to offer the new programme.

Both the full and summary reports of each peer review are published on NVAO's website [www.nvao.net](http://www.nvao.net). There you can also find more information on NVAO and peer reviews of new programmes.

Because of COVID-19 temporary measures apply for this peer review.

## 2 New programme

### 2.1 General data

|                |   |
|----------------|---|
| Institution    | : IHE Delft   |
| Programme      | : Research master Water and Sustainable Development (research)  |
| Mode of study  | : fulltime  |
| Degree         | : Master of Science   |
| Tracks         | : Water Hazards, Risks & Climate;<br>Water & Health;<br>Water, Food & Energy;<br>Water Resources & Ecosystem Health |
| Location       | : Delft   |
| Study load     | : 120 EC <sup>1</sup>   |
| Field of study | : Interdisciplinary   |

### 2.2 Profile

The Research Master Water and Development is an interdisciplinary programme, aimed at talented and ambitious early- and mid-career water professionals, mainly from the global South, who want to pursue a research career. The programme covers the broad field of water management, from drinking water and sanitation to ecosystems and climate hazards, and combines a similarly broad range of disciplines (engineering, hydrology, social science, digital innovation and environmental science). Students combine solid knowledge and expertise in their field of study with skills development, such as critical thinking, research methodology, data analysis, ability to collaborate effectively with stakeholders and professional peers, oral and written communication and the ability to work independently.

### 2.3 Panel

#### Peer experts

1. Prof. dr. Isa Baud (*chair*), University of Amsterdam, Faculty of Social and Behavioural Sciences;
2. Prof. dr. Jaap Kwadijk, University of Twente, Faculty of Engineering Technology;
3. Dr. Karin Rebel, University of Utrecht, Faculty of Geosciences, Senior Fellow Center for Academic Teaching;
4. Aldo Zamarroni Peralta (*student*), Wageningen University, MSc student International Land and Water Management.

#### Assisting staff

- Dr. Marianne van der Weiden, secretary
- Drs. Henri Ponds, NVAO policy advisor and process coordinator

Site visit: 19-20 April 2021 (online)

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<sup>1</sup> European Credits

### 3 Outcome

The NVAO approved panel has reached a conditionally positive conclusion regarding the quality of the academic Research Master Water and Sustainable Development offered by IHE Delft. The programme complies with standards 1 and 3 of the limited NVAO framework and partially complies with standard 2. The programme has been judged according to the criteria for Research Masters (Specification of additional criteria for research master's programmes, May 2016).

The Research Master Water and Sustainable Development targets early- and mid-career professionals from the global South who wish to pursue a research career by offering them an interdisciplinary programme. The institute offers a strong research environment with emphasis on analytical and critical skills and scientific reflection, adequately expressed in the learning objectives. Students are supervised by experienced researchers and choose thesis topics that are linked to the institute's international research projects. The curriculum is student-centered: students choose their study path in consultation with a coach, selecting modules and a thesis topic that fit their background and ambitions. The panel notes that the admission procedure is not geared to the requirements for a Research Master and should be adapted to assess critical thinking and problem solving. The first year mainly consists of taught modules, the second year focuses on the research project and courses on research methods and specific disciplinary knowledge. In the modules students of the Research Master are grouped together with students of the regular (1 year) Master, without including higher learning objectives or additional assignments. The research orientation belonging to a Research Master programme is therefore not visible from the beginning. The level of the elective courses should also be more clearly guaranteed to be at an appropriate level for a Research Master. The thesis project and the translation of its results to stakeholders and society (valorisation) are a strength of the programme. The Exam Board actively monitors the qualifications of examiners and the quality of the assessment system. External examiners ensure that theses reach levels accepted by the discipline and professional field.

The panel is convinced of the quality of the proposed Research Master and expects that, if the distinction between the regular Master and the Research Master is clarified and anchored more clearly in the taught modules and electives, the Research Master will be a strong and attractive programme. All in all, the panel assesses the quality of the programme as conditionally positive.

The conditions to be met within a period of two years are the following:

- 1: adapt the admission requirements to ensure that applicants' research and analytical skills are taken into account in the selection procedure;
- 2: strengthen and guarantee the research orientation in the taught modules of the first year and in the electives of the second year.

| Standard                        | Judgement                    |
|---------------------------------|------------------------------|
| 1 Intended learning outcomes    | meets the standard           |
| 2 Teaching-learning environment | partially meets the standard |
| 3 Student assessment            | meets the standard           |

|                   |                               |
|-------------------|-------------------------------|
| <b>Conclusion</b> | <b>conditionally positive</b> |
|-------------------|-------------------------------|

## 4 Commendations

The programme is commended for the following features of good practice.

1. Research context – The programme is offered in a strong research environment, said to be rated highly in a recent research assessment. Students choose thesis research topics that are linked to the research projects of the institute and are supervised by professors actively involved in research.
2. Valorisation – In the final module, students create an action plan and related communication output to make their thesis research accessible to society, increasing its societal impact.
3. Interdisciplinarity – The programme provides students with knowledge in the wide domain of sustainable water management and the skills to work on research projects in interdisciplinary, trans-disciplinary and multi-cultural teams.
4. Mixed weeks – Between modules in the first year, time is built in for students to reflect with the coach on their study progress and to learn useful academic skills that they can apply and practice in the following modules. Second year students are involved in organising these weeks.
5. Student-centred programme – With the help of a coach, students design their own study path based on their background knowledge and their career ambitions. Within one of the four tracks they choose a profile and select a number of modules and a thesis topic that is linked to the research projects of senior staff members.

## 5 Recommendations

For further improvement to the programme, the panel recommends a number of follow-up actions.

1. Student guidance – Make sure that the available mechanisms (coaches and portfolio) to ensure that students make informed choices when designing their individual study paths are fully formalized recognized positions and activities and meet student expectations.
2. Preparatory courses – Urge students to complete the preparatory courses before they start the programme if there are knowledge gaps, and utilize the new role of coaches to emphasise the importance of this. Add a preparatory course on research methodology.
3. Didactic toolkit – Complete the process of utilising the didactic toolkit in the design of modules and assessment across the programme for complete alignment, and support staff by training them in its use.
4. Assessment committee – Establish an assessment committee under the responsibility of the Exam Board to help the Exam Board to check the quality of all programme assessments.



## 6 Assessment

### 6.1 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.*

#### **Judgement**

Meets the standard.

#### **Findings, analysis and considerations**

The Research Master of Science programme in Water and Sustainable Development is an interdisciplinary programme, aimed at early- and mid-career professionals, mostly coming from the global South, with a recognized relevant Bachelor degree, who are primarily interested in a career in research or academia and would like to pursue a PhD in a water-related field. The panel appreciates that the programme covers the broad field of water with an associated broad range of disciplines (engineering, hydrology, social science, digital innovation, environmental science) and incorporating new and emerging concepts such as remote sensing and digital connectivity. Compared to regular Master programmes, the Research Master in Water and Sustainable Development has a notably stronger emphasis on research oriented academic skills, creativity and independent thinking, which is made explicit in the programme's learning outcomes. Graduates are expected not only to use their knowledge in practice, but also to think critically and analytically, and to position themselves within the various debates and approaches regarding water topics. The programme is thus designed to prepare students to orient their research learning outcomes within the international policy discussions on water-related challenges, the professional practices emerging in the contexts on which the students will focus their work afterwards - in the global South. The capacity built to expand their knowledge and skills on the interface between analytical and applied research is a strong component of the learning outcomes, and a synergy, which is relatively rare (i.e. at the design level and the efficacy of solutions designed through comparative research). The recognition that such knowledge and research orientation requires a training component of skills in communication for valorisation is a strength of the programme.

The intended learning outcomes describe well the level of the programme as a Research MSc degree oriented towards applied research of development related challenges in the water management field. The strength of the programme is its trans-disciplinary character, that is also strongly inter- and multi-disciplinary because of its breadth and different disciplines combined in each defined track. The learning outcomes tie in strongly to the water challenges found internationally, given the diversity of water-related knowledge and practices and varying contexts found in the global South, by allowing students to define individual trajectories during their study programme that match their needs and the demands of their professional thinking and applied research orientation. The programme is provided in a context of research that has been rated by the recent international research assessment panel (April 2021) as clearly above average, that is strongly related to the contents of the programme, and that also trains PhD students and other junior researchers. The research assessment panel confirms the strong inter- and multi-disciplinarity of the IHE research programme and publications and the complementarity of the staff expertise in this respect. The research has a high output level and strong impact, providing IHE with a global reputation in the field.

The points of departure for the set-up of the programme meet the educational philosophy of the institution, as the programme is explicitly designed to provide students with the capacity for developing their knowledge and academic competencies for creating new research knowledge informing solutions, designs and interventions that address the complex nature of water-related development challenges. It involves students in many independent, inter-active and cross-disciplinary educational processes, and a variety of applied/analytical research projects of the IHE on which to draw from around the world. This also matches the profile of the institution, which is oriented towards the education of an international pool of young- and mid-career water professionals from the global South who would like to pursue a more academic career (PhD), as well as the institute's practice-oriented research and capacity building of institutions in the global South. The link to the discipline and professional field is also supported by an International Advisory Group, which reflects on the relevance of the programme for IHE's target groups and strategic goals.

Although internally already a great deal of attention is given to multi-, inter- and trans-disciplinarity, an internal discussion on definitions of these concepts and their integration could provide more coherence in understanding among the staff and students and reduce the current great variety.

The panel concludes that the intended learning outcomes are at the level of a Research Master programme, clearly express the inter-, multi- and transdisciplinary aims of the programme and tie in with the educational philosophy of the institute. They meet the expectations of the professional field and are formulated in line with international requirements. The panel confirms that IHE provides the strong research context that is required for a Research Master programme. The programme meets this standard.

## 6.2 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.*

### **Judgement**

Partially meets the standard.

### **Findings, analysis and considerations**

#### *Curriculum*

The 120 EC curriculum comprises a set of eight taught modules (jointly with students of the one-year Master programme), a specific module on science philosophy, a period of research proposal development, parallel with electives and courses on advanced academic skills, a period of thesis research and thesis writing, and a valorisation module on creating societal impact based on the thesis. During the site visit the panel understood from the management and teaching staff that the intention is to keep students from the regular Master and the Research Master together for the first seven months (up to and including module 8). This gives students the chance to switch between the programmes, if their experience indicates that the other programme would better suit their motivation and capacities. The panel agrees with the underlying philosophy of this choice, but notes that this compromises the learning outcomes for the Research Master students in the modules concerned. They require that additional requirements be met by students enrolled in a Research Master programme when following subjects in a regular Master programme. The documentation shows that this is the

case for module 8 only; in that module, students in the Research Master are asked to write a critical reflection on interdisciplinarity, in addition to the assignment of the regular Master students. The panel urges the programme to ensure that the research orientation belonging to a Research Master is made explicit in the module learning objectives from the start and, if offered in combination with the regular Master programme, the distinction is made clear for teaching staff, students and outside assessors, e.g. by separate tutor groups and higher assessment standards. The institute should decide what is most feasible for its staff and teaching methods. The panel suggests a collegial consultation with selected Dutch institutes that combine a regular Master and a Research Master programme with international students, for an exchange of views on how they deal with the distinctions between the programmes in terms of learning environment and assessment (e.g. the programmes on International Development Studies at the University of Amsterdam, Environment and Resource Management at the Vrije Universiteit Amsterdam, and programmes at the Wageningen University for international students on development issues). Alternatively, a completely separate Research Master programme can be organised within the IHE. In either case, students who want to switch from the regular Master to the Research Master should prove their higher critical and analytical skills in an assignment before they are allowed to do so.

Aside from this concern, the panel is positive about the general build-up of the first-year curriculum and how it is geared to the variety of students' backgrounds and ambitions. The first module on Water and Development and the Interdisciplinary project (module 8) are followed by all students. The other modules are grouped in four thematic tracks; within a track, modules are sub-divided into four profiles: engineering and hydrology, management and governance, environment, and digital innovation. Based on their background and professional ambitions, students select their modules within this framework. The choice of tracks and profiles provides a strong combination of pre-structuring and flexibility. The educational objectives of the curriculum are strongly student-centred, with the educational objectives being systematically spelled out in the four tracks of the programme, and in the possible profiles within those tracks. Students' choices are monitored by the Programme Committee.

The modules are designed to be student-oriented and require students to be (inter-)active in their learning activities and engage with a variety of disciplines and approaches. Each module is coordinated by two staff members from different staff groups, which contributes to the interdisciplinarity of the curriculum. The skills built up separately in the so-called mixed weeks between modules are utilized in following modules, ensuring application of these skills. Although the panel wishes to see a stronger differentiation within the modules between regular Master students and Research Master students, the systematic build-up of the modules in the programme is very strong, and well aligned into a consistent whole. The didactic tool kit is an excellent basis for ensuring the alignment of all modules; in the descriptions the majority of modules have indicated what students should be able to do at the end of the module; those that do not follow that framework should be urged to do so. The IHE should stimulate this by training teaching staff in using the toolkit (as part of – updating - their teaching qualification) and by monitoring its application in the programme build-up.

In the second year, students apply the whole set of knowledge and skills learned in a synthesized manner in the thesis work (30 EC). Towards the end of the first year, students select a topic and from then on start discussing research questions and objectives with their

mentors and begin their literature search. Time is devoted explicitly to philosophy of science, critical analysis of the origin of dominant concepts, theories and models, and how these may be linked to different approaches (5 EC). Attention will also be paid to the role of science in societal debates and policy-making, on research ethics and good practices for fieldwork and experimentation. In consultation with their coach and supervisory team students choose electives (20 EC) in parallel with the research proposal development (8.5 EC) to deepen their expertise and technical skills relevant for their chosen research topic, including advanced methodology courses (5 EC). The elective courses can also be taken at another university. At the time of the site visit it was not yet clear for the panel what criteria would be used to approve a student's choice of electives. Although in the discussions recognition of this point was well-taken by IHE, the panel urges the programme to build in assurances explicitly indicating the research orientation and Research Master level of electives.

The other components of the second-year curriculum are well-considered. An innovative feature of the Research Master programme is the final module on valorisation (10 EC), asking students to create an action plan and related communication output to make their thesis research accessible to society and to enable societal impact. The recognition that such knowledge and research orientation requires a training component of skills in communication for valorisation is a strength of the programme. The panel also appreciates that second-year students are involved in organising the skills workshops in the mixed weeks for first-year students.

Research Master students are expected to link to the research projects of the institute in doing their thesis work and valorisation module. This is excellent and ensures that students profit from the context of high-quality research. The panel remarks that the implications of the embedding of their projects into the wider set of institute projects should be discussed with them; issues of division of labour with other project members, ethical issues, and possible intellectual property rights, as part of a systematic discussion on how this process is embedded would be welcome in clarifying such issues for students.

#### *Admission*

In their application, candidates indicate their initial preference for a study track (track / profile combination). Applicants should have a Bachelor degree in a field that is relevant for their chosen track and profile, at least equivalent to a UK Upper Second Class Honours degree or a GPA score of at least 75% of the scale maximum, and sufficient English language proficiency. A convincing motivation letter for choosing a Research Master plays an important role. Preference will be given to candidates with at least two years of relevant work experience and a clear motivation of how the study will open up career perspectives. In order to do justice to the requirements of a Research Master, the panel urges the programme to not only rely on a candidate's motivation, but to give due weight to a candidate's capabilities in research orientation and skills. Possibilities are research methodology courses in their bachelor degree, or proof of their critical thinking and analytical skills in a special assignment.

Once students are admitted on the basis of their academic capabilities, the process of looking for a scholarship begins. To explore the best study trajectory for their ambitions and to choose specific modules, admitted students interact with a coach, a staff member of their selected track. The outcomes of this process can be seen in the personal portfolio that will guide students through their studies. The coach indicates the scope for choice, based on the student's background, and also advises on the relevance of preparatory courses to fill

knowledge gaps. These courses are available online and students are advised to complete them before the programme starts. Students are provided with self-tests to assess the outcomes of these preparatory courses. Each learning path is formally endorsed by the Programme Committee. The feasibility is tested on the basis of the pre-requisites at module level. The panel suggests the addition of a preparatory course on research skills to support refreshing a student's previously achieved skills in this area.

### *Student coaching*

The admission process is the starting point for the coaches to interact with their students. All students are assigned a coach who supports the student's personal development and provides study advice. Each coach supports 15 to 20 students, in group and individual sessions. During the second year, the role of the coaches becomes even more vital; therefore, a good monitoring system of the coaches should become part of the process, to ensure quality and provide sufficient support for the team of coaches (inter-peer review possibility). Formalizing the system of coaches for each student is work in progress; it is based on the six years' experiences in the current MSc programme in Water Management and Governance. The panel strongly urges the IHE to complete this process soon, and to introduce a system of peer review among staff for establishing standards from practice found among staff members already using the coaching system. Significant steps forward are that the system of coaches is currently becoming formalized under the guidance of the Educational Bureau, providing a 'terms of reference' for teachers, with a process of assessments of staff applying for coaching positions. This formalisation of the system of coaches should be completed and coaches selected according to the internal assessment system proposed (contributing to the acquirement of an extended university teaching qualification/ UTQ+). The importance of the coaches should be recognized in terms of workload (time allocation) and promotion reviews.

From the start, students define and reflect on their personal learning goals as part of a student portfolio. Time is set aside explicitly for this in the mixed weeks. The panel recognises the portfolio as a strategic instrument for reflection of the student – together with the coach – throughout the programme. It is currently designed to be assessed formatively. The importance of the portfolio could be emphasized by introducing a qualitative summative assessment for its components, possibly as part of programmatic assessment (see standard 3).

The panel notes that flexibility within the curriculum pre-supposes excellent guidance for the students to make informed choices, as a good and necessary support to the educational objectives at programme level. For such guidance a variety of mechanisms is in place: selection criteria including motivation and guidance on educational gaps (preparatory courses), providing each student with coaches during the whole programme for making informed and reflective choices through the use of a portfolio, and having a Programme Committee assess and approve student choices. The panel considers the recognition of the variety of students and their educational needs, and the student-oriented learning pathways a strength, but observes that it can become a vulnerability if the guidance and support systems do not live up to the expectations. Because the preparatory courses suggested to students accepted for the programme are voluntary, students should be strongly urged by their coach, and incentives suggested, for completing such courses if entering a track in which their educational background shows gaps. The system of coaches and portfolio should be fully implemented, learning from experiences in current practice, established in the academic master programme Water Management and Governance. Given the formalisation of the

process already in progress, the panel is fully confident that this will be successfully completed.

The number of ECTS is quite high in relation to the time allocated for the programme. On average students are expected to work 41 hours per week as indicated by the programme description. Although past experience indicates students show high dedication, and do work these numbers of hours, monitoring of students should take possible stress and over-dedication into account, especially as the online-based learning may continue to be extensive in the coming years, due to COVID-19.

#### *Teaching staff*

The teaching staff at the IHE have a strong international expertise which is based both on theoretical knowledge and professional practice in the global South and North, coupled with extensive research projects on comparative research, design, applications and innovative knowledge tools which make them a strong body of educators in the field of water management. The strong drive towards inter-disciplinary approaches to water issues is a strength at IHE, in both teaching and research programmes. Guest lecturers play a useful role in addressing specific topics. The students value the input of guest lecturers not only for their knowledge, but also for the opportunities they provide to build up a professional network. The physical constraints during the COVID-19-pandemic unfortunately restricted these networking opportunities temporarily. Generally speaking, IHE has handled the COVID-19-situation quite well. Students were unavoidably faced with restrictions, but the panel did not hear from students that these compromised the quality of teaching.

The supervisory teams for the Research Master thesis consist of members of the SENSE Research School and are chaired by a professor or an associate professor. The research programme provides an excellent background for students in various ways, because it is strongly inter-disciplinary (compared to other institutions), has a high level of impact and very successful research partnerships. The reorganization of the last five years has also added extensively to the number of junior staff members, which is a strength. For Research Master students, this implies that their environment for choosing topics on which to do their Master thesis, and the guidance from a selection of staff members is diverse and of high quality.

#### *Conclusion*

The teaching-learning environment benefits from the strong research environment and allows students to work on projects that are closely linked to the research of senior staff members. The build-up of the curriculum is well-considered, ties in with the diverse backgrounds and needs of students and allows a substantial proportion for advanced methodological skills and thesis research. Two elements, however, do not live up to the additional assessment criteria for a Research Master. The first is that the admission criteria are not specifically geared towards the selection of students for a Research Master. The second is that the research orientation is not clearly visible in the taught modules of the first year nor in the electives of the second year. The panel is aware that discussions on these issues are already taking place within IHE, and that staff is fully aware of the additional criteria for a Research Master programme. A taskforce has been set up to take this further. The panel expects that the didactic toolkit will be a strong instrument to explicitly align the learning objectives, learning activities and assessment with the Research Master criteria, and to organise differentiation between groups of students in the taught modules. The panel is, therefore, convinced that

the programme will be able to address these issues within a reasonable period of time and concludes that the programme partially meets this standard.

### 6.3 Standard 3: Student assessment

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

#### **Judgement**

Meets the standard.

#### **Findings, analysis and considerations**

For all parts of the curriculum, an assessment matrix is included in the module plan. The didactic tool used for the whole programme and its modules, provides a clear set of proposed learning outcomes and their alignment throughout the programme. This is a solid infrastructure for student assessment and also provides students with very clear indicators which will be applied. The use of and training for utilising the didactic tool kit should therefore, as mentioned above, be rolled out systematically across the whole programme and teaching staff involved in order to ensure a unifying approach to assessment and its quality standards (validity, reliability, transparency).

More emphasis will be put on progressive testing, with more attention to formative assessment throughout a module. The programme aims to use summative testing for higher level learning objectives (application, analysis, synthesis) through assignments during the module and in the final exam. The distinctions between formative and summative assessments are useful in relation to the learning outcomes specified, supporting the student-centred learning process, but do not seem to be clear yet among all involved. Internal discussions on the meaning of formative and summative assessment would be helpful to create a common level of understanding among staff and students. The programme could consider introducing a system of programmatic assessment, especially of skills, since with the stronger position of formative assessment most elements seem to be in place.

The panel notes a few points of attention. (1) For Research Master students, additional assessment of analytical and critical skills in modules is necessary if students in the regular Master and Research Master are taught together. (2) A variety of innovative assessment methods are currently becoming used in the taught modules of the first year; aligning them in a unified assessment system will increase their impact. (3) It is important to clearly identify group and individual assessment at the module level, to ensure there is sufficient individual assessment at the programme level. While a certain module can mainly focus on group assessment (i.e., the integration courses), others could include more individual assessment so that the balance remains right at the programme level. (4) The question of assessment overload needs to be considered in the alignment between the different modules and within modules, so that both students and teaching staff do not become overburdened with continuous assessments.

The final thesis meets the specific criteria for a Research Master: it can be considered a substantial test of research competence that is valuable in the student's scientific discipline. Students complete the entire research cycle within their graduation trajectory, including explicit attention to the valorisation and societal relevance of their research. Thesis topics are



strongly linked to and profit from the research projects of senior staff members. The final product can be either in the form of a Master thesis or a publishable paper. The expected quality is the same in both cases and higher than for a regular Master thesis, e.g. in its attention to the embedding in scientific debates, the quality of the analytical framework and the innovation of research methods. Students present and defend their research in a public setting. The final examination linked to the thesis and valorisation output is sufficiently safeguarded by always including external examiners (i.e. who have not been involved in the thesis supervision); clear criteria have been spelled out for each level of grades across the four indicators chosen (introduction and contextual setting; originality, analysis and interpretation; organisation, style, presentation; creativity, independence, work planning and critical attitude).

The Exam Board takes its responsibilities seriously, and monitors and assesses the updating of staff teaching qualifications at different levels (the university teaching qualification UTQ, including the didactic toolkit, and additional qualifications). External examiners are called upon to assess and maintain the final master level. All assignments and essays are subjected to Turnitin-review to detect any cases of plagiarism. Rules to deal with such cases are spelled out in the examination regulations. Appeals to grades are possible and are organized in a way that fails can be recovered. The panel advises establishing an assessment committee (under the responsibility of the Exam Board) to help check the quality of module assessments.

The panel concludes that the assessment system is well-aligned with the educational objectives and actively monitored by the Exam Board. The Research Master thesis is an appropriate instrument to assess the intended learning outcomes of the programme and meets the additional requirements for a Research Master. Assessment methods could be unified more strongly, but sufficient mechanisms are in place to safeguard the quality of assessments and the final level.

#### 6.4 Degree and field of study

The panel advises awarding the following degree to the new programme: Master of Science. The panel supports the programme's preference for the following field of study: Interdisciplinary ('sectoroverstijgend').



The full report was written at the request of NVAO and is the outcome of the peer review of the new programme Research Master Water and Sustainable Development of IHE Delft

Application no: AV-1018



Nederlands-Vlaamse Accreditatieorganisatie  
Accreditation Organisation of the Netherlands and Flanders

Parkstraat 83 • 2514 JG Den Haag  
P.O. Box 85498 • 2508 CD The Hague  
The Netherlands

T +31 (0)70 312 23 00  
E [info@nvao.net](mailto:info@nvao.net)  
[www.nvao.net](http://www.nvao.net)