

**Appendix 5 Thesis evaluation:**

Quality standards for PhD theses vary internationally, including evaluation processes and grades like cum laude (with distinction). At Wageningen University, detailed guidelines on these processes are provided. In Appendix 5a, information is available on the two rubrics used for thesis evaluation. Appendix 5b outlines the evaluation procedure and gives instructions for giving feedback, to which opponents can be referred to. Appendices 5c, 5d, and 5e contain the evaluation form and two types of rubrics, ensuring transparency for PhD candidates and their supervisors (co-promoters).

## **Appendix 5a: Difference between rubric for assessment of disciplinary and multidisciplinary research, and rubric for assessment of interdisciplinary and transdisciplinary research**

Doctoral theses can be mainly disciplinary, multidisciplinary, interdisciplinary and/or transdisciplinary. There are two rubrics available:

- a rubric for the assessment of mainly disciplinary and multidisciplinary PhD research (appendix 5d);
- a rubric for the assessment of mainly interdisciplinary and transdisciplinary PhD research (appendix 5e).

The main criteria for the rubrics are the same, but in the operationalisation of the criteria in the rubric in appendix 5e puts a relatively heavier weight on the level of integration achieved between different bodies of knowledge and the extra effort and skills that were demonstrated to achieve this, and puts – compared to the rubric in appendix 5d- relatively less weight on the expected scientific impact of the research chapters in the dissertation.

The promotor decides after consultation with the candidate under which category the thesis is submitted to the examining committee, and thus which rubric is going to be used by the thesis committee.

The rubric for the assessment of disciplinary and multidisciplinary research is targeted at dissertations that either:

- consist mainly of research chapters that each belong to the same discipline, usually involving a supervisory team that is relatively homogeneous in terms of the scientific backgrounds/disciplines included.

or:

- consist mainly of disciplinary research chapters that belong to several disciplines, usually involving a supervisory team that is heterogeneous in terms of the scientific backgrounds/disciplines included.

The rubric for the assessment of interdisciplinary and transdisciplinary research is targeted at dissertations that either:

- attempt mainly to connect and integrate questions, concepts, theoretical frameworks, methodologies and/or findings from different scientific disciplines, possibly leading to the breaking of boundaries between disciplines and the formation of new domains of science, and usually involving a supervisory team that is heterogeneous in terms of the scientific backgrounds/disciplines included.

or:

- report mainly on research that is based on active engagement with non-academic groups during part of the research process - usually with the aim of addressing real-life societal challenges - whereby the knowledge and understanding of stakeholders is connected to and integrated with scientific understanding.

## **Appendix 5b Evaluation process of PhD theses at Wageningen University**

At Wageningen University, PhD theses are evaluated based on five key criteria using a standard evaluation form and a rubric. The rubric ensures consistency in assessments and facilitates discussions among evaluators, including examiners and the (co-)promotor(s) (supervisors). Additionally, it provides clarity to PhD candidates about the expectations for their thesis.

### Evaluation Process and Criteria

- **Criteria:** Each row of the rubric corresponds to a specific criterion, such as the originality of the research.
- **Grading Levels:** Each column represents a grading level (e.g., 'good'), with detailed descriptions for each criterion at each level.
- **Assessment:** Evaluators are encouraged to begin at the lowest level and move up to see if the thesis meets the descriptors of the higher levels. Achievements described at lower levels are assumed at higher levels and are not repeated.

### Feedback and Comments

Evaluators are asked to provide comments on each of the five criteria in 25 to 100 words, comparing the thesis to the rubric descriptors. These comments are crucial for providing constructive feedback and supporting the evaluation process.

### Handling Varying Scores

A thesis may receive different scores across the criteria. For example, it could be rated 'unacceptable' for one criterion and 'good' for another. If the thesis receives an 'unacceptable' for one of the first four criteria, it is deemed not defensible, and detailed feedback should be provided to help the candidate revise the thesis.

### Role of the Thesis Evaluation

The evaluation report is submitted in to Hora Finita, where it is used to determine if the PhD candidate can proceed to defend the thesis. Additionally, the evaluation plays a role in deciding whether the thesis should be considered for *cum laude* distinction. In such cases, two additional reviewers will assess the thesis. After the public defence, the committee will meet to discuss the thesis and defence quality, using anonymized evaluation reports.

### Anonymity of Evaluations

The anonymized evaluation report is shared with the (co-)promotor(s) in specific cases:

- If the thesis is deemed 'unacceptable,' the report is shared to allow for improvements and revisions.
- After the defence, the report serves as feedback for the (co-)promotor(s) on the quality of the thesis and future expectations.

### Recommendations for Minor Corrections

If the thesis is deemed defensible, only minor corrections (grammatical, formatting, etc.) should be suggested. These corrections are forwarded to the (co-)promotor(s) for possible incorporation by the candidate.

### Requirements for the Doctoral Degree at Wageningen University

To be awarded a doctoral degree, candidates must demonstrate:

1. Scientific Independence: The ability to formulate scientific questions, conduct original research, and publish in peer-reviewed journals or produce a technical design.
2. Integration of Research: The capacity to integrate their research within their discipline and the broader scientific context.
3. Societal Relevance: The ability to place their research within a societal framework.
4. Propositions: The ability to formulate concise, defensible propositions in both scientific and societal areas.

This structured approach ensures a thorough and consistent evaluation of PhD theses, preparing candidates to contribute meaningfully to their field of study.

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## Appendix 5c Thesis evaluation form in Hora Finita

### Assess manuscript

#### Assess manuscript

Please find the manuscript and the authorship statement available for download below. Your assessment can be entered in the separate boxes on this page. The comments made in the box for textual remarks will be anonymized and shared with the supervisors shortly after you've submitted your comments. The anonymized assessment as a whole will be treated confidentially and will only be shared with the supervisors after the defence ceremony has taken place.

In the case of a negative assessment a rebuttal procedure will be initiated. In this procedure the candidate will be requested to rewrite (parts of) the thesis based on your anonymized comments. Subsequently, all opponents will be requested to assess the revised document. For further information on this procedure please contact [graduation.dsc@wur.nl](mailto:graduation.dsc@wur.nl).

Please now enter your assessment in the relevant box on this page.

#### Download manuscript

title	<input type="text"/>
subtitle	<input type="text"/>
PhD candidate	<input type="text"/>
primary supervisor	<input type="text"/>
download thesis	<input type="button" value="↓"/>
authorship statement	<input type="button" value="↓"/>

#### Assessments of supervisors

<input type="text"/>	MANUSCRIPT APPROVED
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#### Assessments based on review points

Please provide your assessment for each review point, making sure to use the correct rubric: [Disciplinary & Multidisciplinary theses](#). The rubric can be [found here](#).

### EVALUATION AND MOTIVATION

#### Originality of the research \*

Let op: e-mails worden alleen verstuurd naar de domeinen: [fargeau.nl](mailto:fargeau.nl), [test-fargeau.nl](mailto:test-fargeau.nl), [svv@mail-tester.com](mailto:svv@mail-tester.com). Alle andere e-mails worden bezorgd op: [wur@test-fargeau.nl](mailto:wur@test-fargeau.nl)

**Motivation (minimum 10 words) \***

Maximum of 100 words

**Scientific quality of the research chapters \***

☐ Unacceptable ☐ Acceptable ☐ Satisfactory ☐ Good ☐ Very good ☐ Excellent

**Motivation (minimum 10 words) \***

Maximum of 100 words

**Reflection on the research as shown in the Introduction and General discussion \***

☐ Unacceptable ☐ Acceptable ☐ Satisfactory ☐ Good ☐ Very good ☐ Excellent

**Motivation (minimum 10 words) \***

Maximum of 100 words

**Quality of written presentation \***

Should you have suggestions for the PhD candidate / supervisor regarding grammatical, formatting and minor errors, you can include these in this box. If your suggestions do not qualify as such, PhD Office is not allowed to forward the information to the supervisor. Upon receiving suggestions, the supervisor will confer with the PhD candidate whether or not to incorporate your suggestions in the thesis.

☐ Unacceptable ☐ Acceptable ☐ Satisfactory ☐ Good ☐ Very good ☐ Excellent

**Motivation (minimum 10 words) \***

Maximum of 100 words

Let op: e-mails worden alleen verstuurd naar de domeinen: [fargeau.nl](mailto:fargeau.nl), [test-fargeau.nl](mailto:test-fargeau.nl), [srv\\*.mail-tester.com](mailto:srv*.mail-tester.com). Alle andere e-mails worden bezorgd op: [wur@test-fargeau.nl](mailto:wur@test-fargeau.nl)

**Overall Assessment \***

☐ Unacceptable ☐ Acceptable ☐ Satisfactory ☐ Good ☐ Very good ☐ Excellent

**Motivation (minimum 10 words) \***

Maximum of 100 words

— Your assessment considering the manuscript as a whole —

Please state your assessment and motivation for the manuscript as a whole.

**Explanation**

If you identify some grammatical, formatting and/or minor errors, but still are of the opinion that the manuscript as a whole qualifies for approval, then you can choose for "approved" and state your findings for minor adjustments in the motivation box "Quality of written presentation". If the necessary adjustments are such that the PhD candidate cannot continue in the process, you choose for rejected.

assessment\*

☐ approved  
☐ rejected

## Appendix 5e Rubric for evaluation of interdisciplinary and transdisciplinary PhD theses

	Unacceptable	Acceptable	Satisfactory	Good	Very good	Excellent
<b>1. Originality of the research</b>	Does not make (or has not made) a contribution to <b>either</b> the interdisciplinary field <b>or</b> transdisciplinary science, either because it is a copy, or nearly so, of work done before by others, or because the research question is trivial.	Makes (or has made) a small and not very original contribution to <b>either</b> the inter-disciplinary field <b>or</b> transdisciplinary science, uses a cookbook approach, is not really interesting but shows the ability to do research.	Makes (or has made) a modest contribution to <b>either</b> the inter-disciplinary field <b>or</b> transdisciplinary science by addressing relevant, but small and traditional questions that are interesting for those who work on the same subject.	Makes (or has made) a substantial contribution to <b>either</b> the interdisciplinary field <b>or</b> transdisciplinary science by addressing relevant questions that are interesting for others within the field. It is a solid part of normal science but does not open up the field.	Makes (or has made) important contribution to <b>either</b> the interdisciplinary field <b>or</b> transdisciplinary science by solving old problems in a new way, or by addressing new and relevant questions, however without completely exploring and solving those new questions.	Makes (or has made) an exciting, major contribution to <b>either</b> the interdisciplinary field <b>or</b> transdisciplinary science, by solving old problems in a brilliant, innovative way or by asking and answering new and intriguing questions.
<b>2. Scientific quality of the research chapters</b>  <b>see footnotes: 1, 2, 3</b>	<p>Less than three first-author research chapters are of publishable quality in a reputable scientific journal or by a reputable book publisher.</p> <p>Chapters are incoherent and choices and interpretations are mostly not convincing. The chapters are not publishable in any reputable journal or by any reputable book publisher and are not expected to be cited nor have a scientific impact.</p> <p>In case of a monograph, it is not likely to be cited nor have any scientific impact.</p>	<p>The thesis contains at least three research chapters of which the candidate is first author and which are publishable in a reputable scientific journal or by a reputable book publisher. Of these three chapters, only one may have shared first-authorship. For the avoidance of doubt: next to the aforementioned three chapters, other research chapters may be included of which the candidate is not first author."</p> <p>Chapters lack clear cohesion and choices and interpretations are not always convincing.</p> <p>Research chapters are expected to remain uncited or be cited, far below the norm in the inter- or transdisciplinary field of study involved and have a considerably lower than average scientific impact.</p> <p>In case of a monograph, it is likely to be cited far below the norm in the field of study involved and have a considerably lower than average scientific impact.</p>	<p>Chapters have sufficient cohesion and choices and interpretations are mostly convincing.</p> <p>Some chapters are expected to be cited, but below the norm in the inter- or transdisciplinary field of study involved and have lower than average scientific impact.</p> <p>In case of a monograph, it is likely to be cited considerably below the norm in the field of study involved and have a lower than average scientific impact.</p>	<p>Chapters are coherent and mostly well justified and convincing.</p> <p>Some of the chapters are expected to be cited in line with the norm in the inter- or transdisciplinary field of study involved and have an average scientific impact, while others are expected to be cited below the norm and have a lower than average impact.</p> <p>In case of a monograph, it is likely to be cited in line with or slightly below the norm in the field of study involved and have at most an average scientific impact.</p>	<p>Chapters are coherent, very convincing and some of them are thought provoking and exciting.</p> <p>Most chapters are expected to be cited at least as well as the norm in the inter- or transdisciplinary field of study involved and have an average scientific impact. Some chapters are expected to be cited above the norm and have a higher than average scientific impact.</p> <p>In case of a monograph, it is likely to be cited in line with or slightly above the norm in the field of study involved and have at least an average scientific impact.</p>	<p>Chapters are very coherent and convincing, all are exciting and some of them ground-breaking.</p> <p>All chapters are expected to be cited above the norm in the inter- or transdisciplinary field of study involved and have higher than average scientific impact and some will be cited substantially better than the norm and have a substantially higher than average scientific impact.</p> <p>In case of a monograph, it is likely to be cited well above the norm in the field of study involved and have a higher than average scientific impact.</p>



	<b>Unacceptable</b>	<b>Acceptable</b>	<b>Satisfactory</b>	<b>Good</b>	<b>Very good</b>	<b>Excellent</b>
	Integration between different bodies of knowledge and understanding (within science or between science and society) is not achieved or discussed at the level of results in any chapter.	Integration between different bodies of knowledge and understanding (within science or between science and society) is loosely achieved or discussed at the level of results in one or two chapters but is not very convincing.  Set of research approaches combined within chapters demonstrates that candidate employed very little extra effort and skill to deliver this inter- or transdisciplinary thesis.	Integration between different bodies of knowledge and understanding (within science or between science and society) is partially achieved or discussed at the level of results in one or two chapters and only partially convincing.  Set of research approaches combined within chapters demonstrates that candidate employed modest amount of extra effort and skill to deliver this inter- or transdisciplinary thesis.	Integration between different bodies of knowledge and understanding (within science or between science and society) is partially achieved or discussed at the level of results in three or four chapters and mostly convincing.  Set of research approaches combined within chapters demonstrates that candidate employed fair amount of extra effort and skill to deliver this inter-or transdisciplinary thesis.	Integration between different bodies of knowledge and understanding (within science or between science and society) is fully achieved or discussed at the level of results in three or four chapters and mostly convincing.  Set of research approaches combined within chapters demonstrates that candidate employed high amount of extra effort and skill to deliver this inter- or transdisciplinary thesis.	Integration between different bodies of knowledge and understanding (within science or between science and society) is fully achieved or discussed at the level of results in three or four chapters and entirely convincing.  Set of research approaches combined within chapters demonstrates that candidate employed very high amount of extra effort and skill to deliver this inter- or transdisciplinary thesis.
<b>3. Reflection on the research as shown in 'Introduction' and 'General discussion'</b>	There is no explanation of the added value of integrating different bodies of knowledge and understanding in this inter- or transdisciplinary research in either scientific or societal terms.  The work does not show how the results fit in the existing inter- or transdisciplinary knowledge, or what the societal relevance is.	The argument for integrating different bodies of knowledge and understanding in this inter- or transdisciplinary research is trivial; it is made plausible that it can be interesting (in scientific and/or societal terms) to link different bodies of knowledge but the choices made remain arbitrary.  Trivial reflection on how results fit in the existing inter- or transdisciplinary knowledge and what the societal relevance is.	There is a reasonably plausible argument of why it is relevant (in scientific and/or societal terms) to integrate the different bodies of knowledge and understanding chosen in this inter- or transdisciplinary research.  Narrow view on how results fit in the existing inter- or transdisciplinary knowledge and what the societal relevance is.	There is a convincing argument of why it is relevant (in scientific and/or societal terms) to integrate the different bodies of knowledge and understanding chosen in this inter- or transdisciplinary research.  Obvious correspondences and conflicts with existing inter- or transdisciplinary knowledge are identified. Most obvious societal relevance is indicated, and - in case of transdisciplinary research- there is already some evidence that non-academics build on	There is a compelling and original argument of why it is relevant (in scientific and/or societal terms) to integrate the different bodies of knowledge and understanding chosen in this inter- or transdisciplinary research.  Most correspondences and conflicts with existing inter- or transdisciplinary knowledge are identified. Societal relevance is mostly well indicated, and -in case of transdisciplinary research- there is clear potential for altering, policies, designs	There is a compelling, original and exciting argument of why it is relevant (in scientific and/or societal terms) to integrate the different bodies of knowledge and understanding chosen in this inter- or transdisciplinary research, and this may give rise to altogether new areas of study, collaboration and/or professionalism.  Results are critically confronted with existing inter- or transdisciplinary knowledge. Societal relevance is addressed in full, and - in case of transdisciplinary research - there is clear evidence that non-academics build on findings to alter

	Unacceptable	Acceptable	Satisfactory	Good	Very good	Excellent
	<p>The results from the different chapters are not connected to each other in any way.</p> <p>Possible weaknesses in the research are not discussed.</p>	<p>The results from the different chapters are connected to each other in a loose manner that is not very convincing.</p> <p>The most obvious weaknesses in the research are indicated, but not how they affect the conclusions.</p>	<p>The results from the different chapters are partially connected to each other in a manner that is partially convincing.</p> <p>Most weaknesses in the research are indicated, but less clearly how they affect the conclusions.</p>	<p>the research findings.</p> <p>The results from the different chapters are partially connected to each other in a manner that is mostly convincing.</p> <p>Most weaknesses in the research are indicated, and how they affect the main conclusions.</p>	<p>or courses of action in society.</p> <p>The results from the different chapters are fully connected to each other in a manner that is mostly convincing.</p> <p>All weaknesses in the research are indicated, and how they affect the main conclusions.</p>	<p>policies, designs or courses of action in society.</p> <p>The results from the different chapters are fully connected to each other in a manner that is entirely convincing.</p> <p>All weaknesses in the research are indicated, and how they affect each of the conclusions.</p>
<b>4. Quality of the written presentation</b>	<p>Writing, tables, figures and lay-out are so poor that it is hard to understand what the candidate wants to say. Reading is very difficult.</p> <p>The thesis is unstructured, often information is missing or presented in the wrong place.</p>	<p>Writing, tables, figures and lay-out are not always correct and clear, level of detail varies widely, but with effort the text is understandable. Reading is difficult.</p> <p>Main structure of the thesis is adequate, but placement and structure of sections are often not logical.</p>	<p>Writing, tables, figures and lay-out are mostly adequate, but level of detail varies, and text could be more concise. Reading is laborious.</p> <p>Main structure of the thesis is correct, placement and structure of sections are not logical in places.</p>	<p>Writing is correct and mostly clear, but text could be more concise. Tables, figures and lay-out are mostly clear, with few errors. Reading is effortless.</p> <p>Main structure of the thesis is correct, but some sections are less well placed or less well structured.</p>	<p>Writing is clear and concise, tables, figures and lay-out are functional and flawless. Reading is a joy.</p> <p>Main structure of the thesis is clear and correct, most sections are well structured and well placed.</p>	<p>Writing is crystal clear and compelling, concise but balanced with sufficient detail, with attractive, functional tables, figures and lay-out. Reading is exciting.</p> <p>The thesis is very well structured with each chapter and section having a clear function and-presented in a logical order.</p>
<b>5. Overall assessment</b>	In case one of the five criteria is marked as 'unacceptable' by any of the opponents/ reviewers, the PhD candidate will not be allowed to defend the thesis without major revision.	Based on the above categories the overall quality of the thesis is considered acceptable. The PhD candidate will be allowed to defend the thesis.	Based on the above categories the overall quality of the thesis is considered satisfactory. The PhD candidate will be allowed to defend the thesis.	Based on the above categories the overall quality of the thesis is considered good. The PhD candidate will be allowed to defend the thesis.	Based on the above categories the overall quality of the thesis is considered very good. The PhD candidate will be allowed to defend the thesis.	Based on the above categories the overall quality of the thesis is considered excellent. This PhD thesis belongs to the top of the scientific field. This may be a reason for awarding the designation 'cum laude' ('with distinction'). <sup>4</sup>

<sup>1</sup> The precise criteria for assessing quality may differ per discipline and type of research. Accordingly, quality criteria may relate to use of theory, research design, methods of data collection, analytical approaches, modelling, validation, conclusion and discussion. More general quality criteria in relation to such building blocks include depth of argumentation, justification of choices, creativity, clarity, sophistication and the level of coherence between the building blocks.

<sup>2</sup> In the case of a design, please consider the originality of the design and the contribution to technology. Consider the candidate's technological competence, application of design methodologies, and analytical and integrative skills.

<sup>3</sup> If the research chapters are multi-authored, it is important to consider the candidate's contribution to each chapter, in particular when s/he is not the first author. To this end, an authorship statement by the candidate has been added to the thesis manuscript. Also, it's good to check whether the research chapters show a level of written presentation similar to the

Introduction and General discussion. If the research chapters are written in a better way, this may result in a higher grade for the criterion 'research chapters' but it suggests an important contribution of co-authors. Thus, a higher grade for the research chapters alone should perhaps not be reflected in the overall grade of the thesis.

<sup>4</sup> After the oral defence, the committee will be asked to comment on the quality of the defence. At that point the final decision whether or not to award a cum laude designation is made by anonymous voting.