MSc thesis course guide Water Systems and Global Change group

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Profile of the course

An MSc-thesis is a research project, which covers a substantial component of your master study. It is a piece of original work undertaken by you under the direction of an academic project supervisor and sometimes also an external supervisor.

A topic is selected considering the student's interest and also the available expertise at the WSG group. Discuss the thesis topic in time with the contact person (see table below). This is particularly true, if you are planning to do a topic requiring fieldwork abroad as it often takes several months for arrangements to be made.

Contact persons, examiners

The WSG group offers one thesis trajectory.

subject	contact person	examiner
Thesis Water Systems and	Dr. Ir. E. van Slobbe	Prof C. Kroeze
Global Change (WSG80436)		

Study load

The number of credits you receive depends on your (approved) study programme.

Learning outcomes

After completion of the thesis you are at least expected to be able to:

- demonstrate commitment, perseverance, initiative and creativity in order to investigate a research question/perform a design project,
- work independently and efficiently with a feeling for knowing when to ask help from your supervisor and how to handle comments,
- plan and keep to the time schedule,
- formulate an adequate delineation and definition of your research question,
- build a sound theoretical framework for orientation of the research,
- collect data in a systematic and verifiable manner,
- · analyse the data critically and correctly,
- present orally and written the major findings in a comprehensible manner for experts in the field,
- formulate sound conclusions based on a comprehensive discussion of the results,
- evaluate and discuss the contribution of your results to the development of the research topic,
- · compose a comprehensive, consistent and concise thesis report,
- ensure that your work is reproducible through good data management and logging of research activities

Assessment of the thesis

The Thesis assessment form Wageningen University (see appendix B) is used for the assessment. The average mark for each category (research competence, thesis report, colloquium, examination) should be at least 5.5. In appendix C you can find an assessment tool (called a Rubric) that may be used as a guideline to determine the mark for your thesis.

WSG thesis: what are acceptable topics and what not?

The Water Systems and Global Change Group is a solution-oriented multidisciplinary research group focusing on water systems and global change. We aim to create new knowledge to contribute to sustainable water systems in a changing global environment.

Our teaching is focused on solution-oriented science for sustainable water system management. We analyse and assess the impacts of climate and socio-economic changes on water systems and propose and test adaptation and mitigation strategies. We also develop water and climate services. To this end, we use simulation models, earth system observations, scenario analysis and field studies. Your thesis research is supposed to relate to our research field (see: <a href="https://www.wur.nl/en/Expertise-Services/Chair-groups/Environmental-Sciences/Water-Systems-and-Global-Change-Change-Oracle (see: https://www.wur.nl/en/Expertise-Services/Chair-groups/Environmental-Sciences/Water-Systems-and-Global-Change-Oracle (see: https://www.wur.nl/en/Expertise-Services/Chair-groups/Environmental-Sciences/Chair-groups/Environmental-Sc

<u>Group/research.htm</u>) and must build upon theories, models and conceptual approaches you learned during the WSG thesis preparatory courses. These courses are Modelling Future Water Stress (WSG 35306), Climate Change Adaptation and Water Management (WSG-34806), and Integrated Water

Management (WSG-33806). You'll find that these courses span a wide continuum ranging from natural science system dynamics modelling on one side to adaptation strategies and governance studies on the other side.

You are encouraged to choose either an existing topic from our list (see next section) or propose your own topic. Topics are acceptable when they fit with the above description and when our supervising staff is confident that they have sufficient knowledge to support your research.

How to find and start a thesis?

You can:

- Consider the WSG track courses you took and find one inspiring aspect you want to further develop
- Look for a thesis subject via the WSG educational page: http://www.wur.nl/en/Expertise-Services/Chair-groups/Environmental-Sciences/Water-Systems-and-Global-Change-Group/education.htm.
- Make an appointment with Erik van Slobbe.
- Go to a thesis information meeting or market organized by your MSc programme or the chair group.
- Agree with your contact person on topic and start date.
- Fill in the thesis agreement form (including a data management plan) together with your supervisor (see appendix A for MES and MCL and blackboard for MIL). Note that MIL students have a different thesis contract form than MES and MCL students (see blackboard for different forms)
- Submit the thesis agreement form to Gerda de Fauw (WSG secretary). Only after reception of the agreement you are formally registered as a thesis student!

Supervision

The main supervisor is usually a staff member of the chair group. Co-supervision from another chair group is only allowed after agreement of the WSG contact person. In the thesis contract you have to state the agreements regarding supervision. You should frequently (one meeting every 1-2 weeks during proposal writing and reporting) have contact with your supervisor, unless circumstances do not allow such a frequency. The actual frequency of meetings may vary depending on the nature of the thesis project. As the thesis project is a learning experience, the student is encouraged to act independently as much as possible in solving problems or difficult situations. However, one supervisor will always be available for feedback and support.

Educational activities

Checklist thesis start.

- 1. Check whether you are allowed to start with a thesis
- 2. Find a thesis topic and discuss with Erik van Slobbe or directly with a WSG thesis supervisor
- Register for the thesis students mailing list with Maartje Sijtsema
- 4. Fill in the Thesis Contract and the data management form and hand it in (see appendix A) at:
 - a. Maartje Sijtsema (WSG group)
 - b. the study advisor of your study programme.
- 5. Check which thesis ring group fits your schedule

Research proposal/planning

Usually the student starts with a literature survey related to the subject of the project. Based on this a research proposal is written that will be thoroughly discussed with your supervisor and presented in the thesis ring.

The proposal should contain the following components: a description of the context of the proposed research, research objectives and a problem statement (including a description of what is the current state of knowledge and what the thesis is contributing to the existing scientific field), research questions, a description of the applied methodology, a data management plan, a time planning and a feasibility study. See appendix D for an outline of the MSc thesis proposal.

If completed correctly, (part of) the proposal can be integrated into the final thesis report (e.g. in the Introduction and Methodology). Without approval of your supervisor and study advisor you are not allowed to start carrying out the research project.

Checklist what to do during research?

- Do not start your research before approval of you proposal by the supervisors and discussion in thesis ring
- 2. Regular meetings with your supervisor(s)
- 3. Enrol for and attend a thesis ring group of 8 weeks
- 4. Give proposal presentation
- 5. Attend 6 or more colloquia
- Take care to schedule your own colloquium and examination in time!

Thesis ring

You need to join one thesis ring group during your thesis research. The objective of the thesis ring is to improve the academic writing skills of the thesis students. You can enrol for the thesis ring group that fits your schedule on Brightspace. You will meet with your group every two weeks on Tuesdays from 14:00 to 15:00 for a total of eight weeks to review and discuss each other's work. It is compulsory to join at least one thesis ring group during your thesis. (see bright space for more information). Make sure that you check the thesis ring group dates at the beginning of your thesis, especially if you go abroad.

Proposal presentations

You need to present your proposal at the end of the proposal phase of your thesis. The proposal presentations are held once every two weeks on Thursday from 12:30-13:30. Register in the schedule on Brightspace at least one week before you want to do your presentation.

Carrying out the research project

You should document your research activities, data and (model or analysis) programming codes, findings and sources carefully, including also seemingly small details (keep a logbook). It is recommended to keep in close contact with your supervisor to discuss the on-going project. When unforeseeable circumstances occur you will have to adapt your research plan. Changes in time planning must be approved by your supervisor.

Confidentiality

In principle your thesis is public. However, sometimes an external supervisor asks for confidentiality, in case your results are used for contract research. You have to be informed beforehand when their project is a part of contract research. With your supervisor, external supervisor and study advisor agreements have to be made about the time that confidentiality is respected.

Thesis report

Your research project should finally result in a comprehensive, consistent and concise thesis report, with a maximum of 60 pages (including references, but excluding annexes). It is important to realise that the thesis is not a chronology of the project. Furthermore, there is no good scientific writing without properly organising the results, presenting and processing the data, and data analysis. In principle an MSc thesis report should contain all elements of a full scientific paper in your discipline. Under some conditions it is possible to write your thesis in the format of a scientific article, which is usually much shorter than a regular thesis report. Discuss this possibility with your supervisor. See appendix E for the general format of a scientific paper. Publication of the results of your research in proceedings or a scientific article is sometimes possible. The supervisor of the chair group will generally be co-author of publications originating from thesis work.

Go-ahead from examiner

The examiner will proof-read a draft version of your thesis report about one month before finalisation. He or she will give feedback and will assess whether the draft has enough quality to pass the examination.

Colloquium

When you and your supervisor have agreed on the final version of the thesis report you will have to give a final thesis presentation. This is an oral presentation of the major findings of your research to other MSc students and staff members of the chair group. In principle presentations will be held at a fixed time, namely every last Tuesday of the month, between 16.00 and 17.00. Appointments for a date and the publication of the announcements should be made well in advance. Communicate the structure and contents of your presentation with your supervisor in advance, so he/she can give you feedback. The presentation should be given in English, so that international staff and students can participate in the discussion.

You are also to attend to 6 other colloquia. An attendance form (see annex H) needs to be submitted during the final examination.

Oral examination

The final examination will be a discussion with your supervisor, a second reviewer/examiner and sometimes a supervisor from outside the chair group. The thesis will be evaluated, as well as understanding, creativity and scientific attitude you showed during the research. You are expected to be able to place your results and conclusions in the context of the field of science and to indicate the possibilities for application in practice. In addition, the grade of the thesis will be motivated including all aspects of the assessment. You should make the appointment for the examination well in advance.

Archiving

In order to ensure that others can use or even reproduce your work (as is fundamental to 'good scientific conduct') it is essential that you neatly archive your data in a way that is comprehensible for others also after you yourself completed your work. If any programming was performed in your work you are expected to put that under version management (using the WUR wide GitHub repository). Your data should be logically organised and include enough descriptive comments (metadata, readme files, etc) to be understandable for others, prior to handing them over to your supervisor. Disk space for your archive will be made available by your supervisor. See appendix I for further instructions.

Checklist examination

- 1. Send the final version in PDF one week ahead of the examination date to supervisor and examinator
- 2. Take attendance forms (thesis rings and colloquia and the data (according to your data management plan) with you to the examination.

Travelling abroad?

In case you plan to do a thesis research abroad you need to check the risk profile of the country you plan to travel through. WUR policy is to follow Dutch Ministry of Foreign Affairs advices. See: www.rijksoverheid.nl/onderwerpen/reisadviezen. You are not allowed to travel to countries with orange or red codes (high risk). For countries with a yellow code you need to ask approval at least three weeks before departure. See Annex J for registration form and additional information.

Dealing with personal data and ethics (social research)

When you conduct interviews, organize focus groups or use information from people in any way during your thesis, you have to be aware of the ethics involved. Firstly it is important to be aware of the sensitivity of personal information. Do not leave names, phone numbers, and email addresses of the people you are contacting lying around. Make sure they are stored on a secure flash drive or computer. Secondly, do not use personal titles and names in your thesis report, make sure your data are anonymized. If this is not possible for your research then you have to have explicit consent from the interviewee to make their title traceable. i.e. if you interview the head of a water board, people will know who he/she is even when you do not use their name. So make sure that someone is not traceable OR that you have explicit consent for them to be traceable. Thirdly, make sure you have explicit consent to record interviews and use interview data in your research. You can do this by taking a consent form and letting the interviewee sign it and by asking them to agree to the recording both before you record and after you start the recording, so it is on tape.

Discuss your plan on how to deal with research ethics and personal data with your supervisor.

Managing your references

You are expected to work with scientific literature (and sometimes secondary literature) in your thesis. For this you need to follow a consistent and acceptable reference style, both in your text and in your literature list. Some examples of often used reference styles are: APA, AMA, IEEE and Chicago. Of these IEEE and AMA are numbered reference styles while APA and Chicago are examples of author/year reference styles. It depends on you and your supervisor which style you prefer but whichever style you choose, be consistent!

To make this a bit easies you can use a reference manager. Endnote and Mendeley are two commonly used reference managers. Mendeley is completely free and Endnote is free for students but not after you finish studying. These are software in which you can store and organize your references. Both have a plugin for your web browser (chrome and Firefox) which makes it easy to download and store your scientific papers and other documents. They also have a plugin for Word so you can be consistent in your in-text referencing and you can create an automatic reference list in the preferred style. You can ask your supervisor, the WUR library or the thesis ring coordinator if you have any questions on referencing and the software

Plagiarism

Plagiarism is considered to be a serious form of fraud. In appendix G you can find information about several forms of plagiarism. Read this information well.

Thesis course evaluation

After the assessment, the university will send you an electronic course evaluation questionnaire. We ask you to fill this in, even though your work may already be finished for quite some time. The results from the questionnaires help us to improve the quality of the thesis supervision and organisation, and to identify potential (or actual) problems. The evaluation is done anonymously.

Appendix A: Wageningen University Master Thesis Agreement and data management plan

This Wageningen University (WU) master thesis agreement serves to lay down agreements between a master student and a chair group. The agreement registers rights and duties of both parties and is a further supplementation and elaboration of the Higher Education and Research Act (WHW), Education and Examining Regulations and the Student Charter.

The form has to be completed for each master thesis by the student and a representative of the chair group before the start of the study activities.

Student and representative sign the form. A third one is sent to a representative of the programme: the study advisor mentioned below and to mil.msc@wur.nl. The study advisor signature confirms that the student has passed the prerequisite courses. Please send a copy of this table in Microsoft Word (.doc) as we keep a record of all students abroad for safety purposes. Send it digitally so we can copy-paste it into our system. A PDF-document doesn't work!

For complaints on the supervision or assessment the student can appeal to:

- The study advisor for advice and support
- The Examining Board for advice on procedures or an official complaint.
- The Examination Appeals Board.
- A dean or a Confidential advisor for students

For additional information see the explanation on page 5.

1. Information on student and chair group

Student particulars		
Last name		
Name		
Registration number		
Study program		
Study adviser		
Phone number		
Fieldwork planning (if any)		
Country + region		
Date of departure		
Date of return		
Exact period of stay	From:	Until:
Travel permission		
Travel advise (colour code) by		
Ministry of Foreign Affairs upon		
departure:		
In case of code yellow: have you		
obtained travel permission from		
the director of ESG?		
* Please include the travel permission	as an annex to this document.	
Contact in case of emergency		
Name		
Street + house nr.		

Postal code		
City		
Phone number		
Email		
Eman		
Wageningen University supervisor	(s)	
Name		
Tune		
Chair group		
Examiner a		
Examiner b		
Course code		
Host supervisor		
Name		
Institution		
Address (street + nr)		
Postal code		
City		
Country		
Phone number		
Email		
students: yes/no	e (written) guidelines and rules of the chair group	for thesis
2. Prerequisite course(s)		
2. Prerequisite course(s) Course code:	Passed:	yes/no
Course code:	Passed:	yes/no
<u>-</u>	-	yes/no yes/no
Course code: Course code:	-	
Course code: Course code: 3. Admission to the thesis	Passed:	yes/no
Course code: Course code: 3. Admission to the thesis Study advisor	Passed: has stated that the	yes/no student is
Course code: Course code: 3. Admission to the thesis Study advisor	Passed:	yes/no student is
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Course code: Course code: 3. Admission to the thesis Study advisor qualified¹ for a master thesis and 4. Title and planning Title of the thesis project: Date of completion parts of the Date of start: Date of finish: Special arrangements for plann 5. Arrangements on supervision	has stated that the d that the thesis is optional for the programme of thesis: ing:	yes/no student is he student.
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 $^{^{\}scriptsize 1}$ This means that the student has completed all requirements for starting with this master thesis.

(Work place (office/lab), access to buildings and locations. Availability and use of equipment, materials and
facilities)
7. Arrangements on report
(Language and lay out, time and format of transfer of results and data, agreements on secrecy of results and publicity of the thesis report)
publicity of the theolis reports
8. Arrangements for individual situations.
(Circumstances beyond one's control, disability, absence for special reasons)

9. Assessment

The <u>assessment form</u>² for theses of WU has to be used.

The percentages i	n the assessment form that w	ill be used are:	
Learning outco	mes (assessment criteria)		percentage
A. Research com	npetence		
B. Thesis report			
C. Colloquium			
D. Examination			
The assessment	will be done in week (on)		
results of the proj The student decla the assessment for		es and procedures to have provide	res of the chair group and with led the student with all relevant
Wageningen,	Name	Date	Signature
Student:			······
Supervisor(s):			
Examiner a:			
Examiner b:			
Study adviser			
	Study adviser signs for having passed the prerequisite courses as indicated by the thesis supervisor.		

 $^{^2}$ https://portal.wur.nl/sites/owi/kwaliteitszorg/Policy Documents and Forms/Thesis assessment form WU UK v9.xls

Explanation

1. Information for student and Chair Group

The study advisor has to be contacted regarding the progress of the student and his/her qualification for a master's thesis. The study programme (study advisor) has to be informed about the arrangements a student wants to make for his/her thesis project in order to establish whether the programme permits the student to take this thesis, and to keep records of the student's progress.

The examiner will be the chair holder responsible for the thesis. The supervisor is responsible for daily supervision. Supervisor from an external organisation cannot have a formal role, and cannot be involved in the grading as they are not qualified lecturers. If more supervisors and chair groups are involved, each role should be explained under item 5. WUR employees working outside the university section (e.g. researchers) have the same status as supervisors (WU lecturer).

2. Prerequisites

Chairs may determine a maximum of two prerequisite courses (in total 12 credits) for starting a thesis. These prerequisites have to be published in the study handbook. The student has to pass the exam(s) before being granted access to the thesis.

3. Admission to the thesis

The Chair Group (supervisor, education coordinator) has to contact the study advisor personally to ensure that the student is qualified for starting the master's thesis.

4. Description and planning

In general, reference can be made to an existing Chair Group project proposal, including subject and type of activities. An important aspect is that the student has to write a detailed project description and is aware of all the consequences with respect to type of activities, intensity and planning of work. If the student intends to interrupt the project for exams or a period of leave/absence, this has to be agreed with the supervisor in advance.

5. Arrangements on supervision

Supervisors have their own guidelines for planning meetings with students and for involving co-workers. In cases where more supervisors and Chair Groups are involved, the student should not be confronted with conflicting rules and opinions: One supervisor should be the focal point for the student. It is recommended to include an intermediate evaluation.

6. Arrangements on facilities

The Chair Group arranges the facilities required for the student, including those for archiving. In general, it should be assumed that the student is unfamiliar with the policy concerning priorities for use of equipment and facilities, and is not aware who is in charge of them. The student needs to be informed that arrangements made are never a guarantee for availability, and that due to unpredictable circumstances, the thesis project may have to be adapted with respect to time planning and/or content. The Chair Group and the student then have to agree solutions together.

7. Arrangements on report

Specific rules on the lay-out of a report, the transfer of data sets and processed results have to be agreed.

The thesis project may be part of a larger project in which external partners are involved, or in which results may be generated that require confidentially. The university has guidelines re protection and embargo of scientific results. Thesis reports can be registered with a restriction on disclosure of contents. The examiners and supervisor(s), however, always need a full copy to be able to assess the student.

From October 2009, all master's theses have to be uploaded to the Wageningen UR Digital Library through the AIR (Administration Enrolment data and Results). It is up to the Chair Group and student to decide whether the thesis will be made public or not in the Digital Library.

8. Arrangement for individual situations

Students can ask for specific facilities for example in the case of disabilities. The student and Chair Group can ask the study advisor or Dean for students for advice. Additional arrangements for Double Degree students can be included here if needed.

9. Assessment procedure

In 2006, the Examining Boards and Board of the Education Institute decided that all WU Chair Groups have to use the standard assessment form for theses and appoint two examiners. The Chair Group can adjust the weight (percentages) of the assessment criteria on the Excel-form. The student should be informed about this weighting (item 9 of this agreement).

Data Management Policy

1. To whom does the policy apply?

- The policy applies to everyone who does research within the chair group, which includes MSc, PhD students, and all staff.
 - i. For MSc students, the data policy of the chair group should be part of thesis contract.
 - ii. PhD students follow the rules of the chair group, unless other demands exist from WASS or WU.
- Visitors are exempt, as they are not paid by the university and therefore the university has no responsibility. Further, enforcing any policy for visitors will be difficult and awkward. We do advice that visitors who come for long periods (e.g., longer than three months) will be informed about our policy when they arrive.
- For research teams larger than one person, there should be a conscious decision who is responsible for data management. This is the person that completes the form.
- If a co-author outside of WUR is responsible for data, this person should be informed about our policy, but no further steps need to be taken.

2. Responsibility for data management and storage (general)

• In general the rule is that the university owns data that is generated during working hours. There are of course many other sources of data (such as data that is used but owned by others). Exempt from ownership (and the need for accessibility) by the university are personal field notes and observations as laid down in a research diary. For data that is not owned by the university, there should still be a way to trace its existence and storage location (i.e., through the filled out data management form).

3. Who is responsible for data management in your group?

• Staff members are responsible for their own data management. For MSc and PhD students supervisors are responsible, with the addition that the first supervisor is responsible for making sure proper procedures are followed. The research coordinator of the chair group regularly (yearly) checks whether everyone adheres to the policy. The research coordinator also informs newcomers of the data management policy and makes sure they sign the form.

4. Which data have to be stored?

- All data that is intended for use in publications. This includes BSc/MSc theses, reports, articles, books, etc. Data gathered for educational purposes without the intention to publish does not have to be stored according to the data management policy.
- If external rules exist with regard to the storage of data (for example when you don't own them), these should be followed, but it should be described in the data management form where and how data can be found.

5. What type of data do we store?

- This is of course a difficult question to answer precisely, since everyone has different types of data. We solved this problem by focusing on what someone who is not involved with the research should be able to do with the files.
- To be able to understand data and rerun analyses, the following core files are necessary:
 - i. Raw data in digital form
 - ii. Files that describe how data was cleaned and processed
 - iii. Final data file as used in analyses for publication
 - iv. Files that describe which analyses were run for publication (syntax, do files, etc.).
- For the storage of raw data in physical form (e.g. surveys etc.), we leave it to the researcher whether, where and how long this needs to be stored. This depends strongly on the demands that exist in the field. We recommend to keep the physical

- data for at least the time the project is running.
- Most of us probably store these files anyway, so this should not lead to much extra work. Moreover, doing this systematically will help all of us in being able to rerun analyses, for example for revisions or educational purposes, etc.

6. Format

It is NOT necessary to use standard software or explain everything so everyone can
understand it. We can all just keep using our own format, as long as an outsider is in
principle (if necessary after learning the relevant software) able to understand the
files. It is not necessary to make every data set completely transparent for outsiders,
since the overwhelming majority of stored data is never looked at by others. Thus,
standardization would be inefficient.

7. Where is data stored?

- Data can be stored as usual (M:, C:, D:, external hard disk, drop box), it should just be specified on the form where and how this can be accessed. Bottom line is that the data are stored in a place where the system administrator or ICT department can access it in case the researcher is unable.
- The name of the folder in which the core files (see 5) can be found should be stated on the data management form.
- Researchers themselves are responsible for back-ups.
- Colleagues who leave store all the WUR owned data and core files on the chair group's W: server.

8. Accessibility

• Access runs through the research coordinator, who also is responsible for confidentiality/privacy issues if data is accessed.

9. Storage duration (general rule)

 We would advise indefinitely for digital files, because storage becomes less and less costly over time.

Tips/Tricks:

- The M: drive is often the best place to store data, since it is backed up automatically (unlike the D: partition or external storage media).
- Creating a separate folder for finished articles containing the core files described above makes it easier to find things.
- Systematically use logical file and variable names from the beginning.

I have read and understand the	Date, Name
data management policy of the	
Water Systems and Global Change	
group at WUR.	
I declare that I will adhere to this policy.	

Data management form

Name:	
Chair group:	
In case of M.Sc. or PhD student, name of supervisor:	
Short Project name:	
Where is data stored? For files stored by researcher give name of folder and location (e.g. D:\Dropbox\published papers materials\Energy savings plug wise\files for final article).	
For files not stored by researcher, describe how they can be obtained.	
For raw data in physical form (paper- pencil surveys, etc.), please specify where this is stored and for how long this will be the case.	

Appendix B: Thesis assessment form

Assessme	nt Form MSc Thesis	wageningen	Univers	sity			
On what the the server College beauty designed as leading	Para Harana da			En all'a la	(1110		
Complete the green fields boxed with a single	line. Use a point as decima	sign; the default I	anguage is	English	(UK)		
Name chair group				Fee Pe	ercentage	per Ch	nairgroup
Name student				Chair G		-	100%
Registration number					plicable	7	0%
Study programme					plicable		0%
Specialisation							
Code thesis							
Short title thesis							
Short due diesis							
Country (of fieldwork)	1 CountryName	-					
	2 Not aplicable	Ţ					
	2 Not aplicable				0:		
Date examination					Signat	ure	
Supervisor chair group							
Supervisor outside chair group (if any)							
Second reviewer/examiner							
			Grading		Relativ		Checl
Dana and a serve to a serve (20 COO/) *			Mark 1-10		weigh	t *	
Research competence (30-60%) * 1 Commitment and perseverance					30%		
2 Initiative and creativity							
3 Independence					0.00		Fa
4 Efficiency in working with data					0.00		
5 Handling supervisor's comments and devel	opment of research skills			1/			
6 Keeping to the time schedule							
Thesis report (30-60%) *					60%		
1 Relevance research, clearness goals, delir 2 Theoretical underpinning, use of literature	neation research						
3 Use of methods and data					0.00		Fai
4 Critical reflection on the research performe	d (discussion)				0.00		ı aı
5 Clarity of conclusions and recommendation				//			
6 Writing skills				1			
-							
Colloquium (5-10%) *					5%		
1 Graphical presentation				,,,			
2 Verbal presentation and defence					0.00		Fai
Oral Defence (5-10%) *					5%		
1 Defence of the thesis							
2 Knowledge of study domain					0.00		Fai
* please choose weights such that their sum							
is 100.	TOTAL				0.00		
i e e e e e e e e e e e e e e e e e e e							

Appendix C: Rubric for assessment of MSc-thesis

Author: Arnold F. Moene, Meteorology and Air Quality Group, Wageningen University
Version: 1.1 (December 15, 2010)
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Item	Mark for item							
	2-3	4-5	6	7	8	9-10		
1. Research competence (. Research competence (30-60%) *							
1.1. Commitment and perseverance	Student is not motivated. Student escapes work and gives up regularly	Student has little motivation. Tends to be distracted easily. Has given up once or twice	Student is motivated at times, but often, sees the work as a compulsory task. Is distracted from thesis work now and then.	The student is motivated. Overcomes an occasional setback with help of the supervisor.	The student is motivated and/or overcomes an occasional setback on his own and considers the work as his "own" project.	The student is very motivated, goes at length to get the most out of the project. Takes complete control of his own project. Considers setbacks as an extra motivation.		
1.2. Initiative and creativity	Student shows no initiative or new ideas at all.	Student picks up some initiatives and/or new ideas suggested by others (e.g. supervisor), but the selection is not motivated.	Student shows some initiative and/or together with the supervisor develops one or two new ideas on minor parts of the research.	Student initiates discussions on new ideas with supervisor and develops one or two own ideas on minor parts of the research.	Student has his own creative ideas on hypothesis formulation, design or data processing.	Innovative research methods and/or data-analysis methods developed. Possibly the scientific problem has been formulated by the student.		
1.3. Independence	The student can only perform the project properly after repeated detailed instructions and with direct help from the supervisor.	The student needs frequent instructions and well-defined tasks from the supervisor and the supervisor needs careful checks to see if all tasks have been performed.	The supervisor is the main responsible for setting out the tasks, but the student is able to perform them mostly independently	Student selects and plans the tasks together with the supervisor and performs these tasks on his own	Student plans and performs tasks mostly independently, asks for help from the supervisor when needed.	Student plans and performs tasks independently and organizes his sources of help independently.		
	No critical self-reflection at all.	No critical self-reflection at all.	Student is able to reflect on his functioning with the help of the supervisor only.	The student occasionally shows critical self-reflection.	Student actively performs critical self-reflection on some aspects of his functioning	Student actively performs critical self-reflection on various aspects of his own functioning and performance.		
1.4. Efficiency in	Experimental work	Student is able to execute detailed instructions to	Student is able to execute an experiment that has	Student is able to execute an experiment that has	Student is able to judge the setup of an existing	Student is able to setup or modify an experiment		
working with data Note: depending on the characteristics of the thesis work, not all three aspects (experimental work, data analysis and model development) may be relevant and some	Student is not able to setup and/or execute an experiment. No logbook is kept.	some extent, but errors are made often, invalidating (part of) the experiment. A logbook is kept poorly, is not shared with the supervisor or not understandable to him	been designed by someone else (without critical assessment of sources of error and uncertainty). An acceptable logbook is shared with the supervisor and understandable to him	been designed by someone else. Takes sources of error and uncertainty into account in a qualitative sense. A detailed logbook is shared with the supervisor and easily understandable to	experiment and to include modifications if needed. Takes into account sources of error and uncertainty quantitatively. A detailed logbook is archived with data and code and is	exactly tailored to answering the research questions. Quantitative consideration of sources of error and uncertainty. Execution of the experiment is flawless. A		

Item	Mark for item						
	2-3	4-5	6	7	8	9-10	
may be omitted. In case of complex or large scale data analysis			with some effort.	him.	understandable for experts.	detailed logbook is archived with data and code and is understandable for anybody.	
using extensive scripts in R, MatLab, etc. the 'Model development' rubric also applies.	Data analysis Student is lost when using data. Is not able to use a spreadsheet program or any other appropriate data-processing program.	Student is able to organize the data, but is not able to perform checks and/or simple analyses. Data are not shared with the supervisor, or not understandable for him.	Student is able to organize data and perform some simple checks; but the way the data are used does not clearly contribute to answering of the research questions and/or he is unable to analyze the data independently. Data are shared with the supervisor and with some effort understandable for him.	Student is able to organize the data, perform some basic checks and perform basic analyses that contribute to the research question. Data are shared with the supervisor and easily understandable for him.	Student is able to organize the data, perform commonly used checks and perform some advanced analyses on the data. Data include metadata and are properly archived; understandable for experts.	Student is able to organize the data, perform thorough checks and perform advanced and original analyses on the data. Data include metadata and are archived in a completely transparent way; understandable for anybody.	
	Model development Student is not able to make any modification/addition to an existing model.	Student modifies an existing model, but errors occur and persist. No validation. No annotation. Code is not shared with the supervisor.	Student is able to make minor modifications (say a single formula) to an existing model. Superficial validation or no validation at all. Code is annotated and shared with the supervisor and with some effort understandable for him.	Student is able to make major modifications to an existing model, based on literature. Validation using some basic measures of quality. Code is annotated and brought under some crude form of version management; easily understandable for the supervisor.	Student is able to make major modifications to an existing model, based on literature or own analyses. Validation using appropriate statistical measures. Code is annotated and neatly implemented under Git version management; understandable for experts.	Student is able to develop a model from scratch, or add an important new part to an existing model. Excellent theoretical basis for modelling as well as use of advanced validation methods. Code is annotated and neatly implemented under Git version management; understandable for anybody.	
1.5. Handling supervisor's comments and development of research skills	Student does not pick up suggestions and ideas of the supervisor	The supervisor needs to act as an instructor and/or supervisor needs to suggest solutions for problems	Student incorporates some of the comments of the supervisor, but ignores others without arguments	Student incorporates most or all of the supervisor's comments.	Supervisor's comments are weighed by the student and asked for when needed.	Supervisor's comments are critically weighed by the student and asked for when needed, also from other staff members or students.	
	Knowledge and insight of the student (in relation to the prerequisites) is insufficient and the student is not able to take appropriate action to remedy this	There is some progress in the research skills of the student, but suggestions of the supervisor are also ignored occasionally.	The student is able to adopt some skills as they are presented during supervision	The student is able to adopt skills as they are presented during supervision and develops some skills independently as well	The student is able to adopt new skills mostly independently, and asks for assistance from the supervisor if needed.	The student has knowledge and insight on a scientific level, i.e. he explores solutions on his own, increases skills and knowledge where necessary.	

Item	Mark for item						
	2-3	4-5	6	7	8	9-10	
1.6. Keeping to the time schedule	Final version of thesis or colloquium more than 50% of the nominal period overdue without a valid reason (force majeure)	Final version of thesis or colloquium at most 50% of the nominal period overdue (without a valid reason).	Final version of thesis or colloquium at most 25% of nominal period overdue (without valid reason)	Final version of thesis or colloquium at most 10% of nominal period overdue (without valid reasons)	Final version of thesis or colloquium at most 5% of nominal period overdue (without good reasons)	Final version of thesis and colloquium finished within planned period (or overdue but with good reason).	
	No time schedule made.	No realistic time schedule.	Mostly realistic time schedule, but no timely adjustment of time schedule.	Realistic time schedule, with some adjustments (but not enough or not all in time) in times only.	Realistic time schedule, with timely adjustments. of times only.	Realistic time schedule, with timely adjustments of both time and tasks.	
2. Thesis report (30-60%)							
2.1. Relevance research, clearness goals, delineation research	No link is made to existing research on the topic. No research context is described.	The context of the topic at hand is described in broad terms but there is no link between what is known and what will be researched.	The link between the thesis research and existing research does not go beyond the information provided by the supervisor.	Context of the research is defined well, with input from the student. There is a link between the context and research questions.	Context of the research is defined sharply and to-the- point. Research questions emerge directly from the described context.	Thesis research is positioned sharply in the relevant scientific field. Novelty and innovation of the research are indicated.	
	There is no researchable research question and the delineation of the research is absent	Most research questions are unclear, or not researchable and the delineation of the research is weak	At least either the research questions or the delineation of the research are clear	The research questions and the delineation are mostly clear but could have been defined sharper at some points	The research questions are clear and researchable and the delineation is clear.	The research questions are clear and formulated to-the-point and limits of the research are well-defined.	
2.2. Theoretical underpinning, use of literature	No discussion of underlying theory.	There is some discussion of underlying theory, but the description shows serious errors.	The relevant theory is used, but the description has not been tailored to the research at hand or shows occasional errors.	The relevant theory is used, and the description has been tailored partially successful to the research at hand. Few errors occur.	The relevant theory is used, it is nicely synthesized, and it is successfully tailored to the research at hand.	Clear, complete and coherent overview of relevant theory on the level of an up-to-date review paper. Exactly tailored to the research at hand.	
	No peer-reviewed/primary scientific papers in reference list except for those already suggested by the supervisor	Only a couple of peer- reviewed papers in reference list.	Some peer-reviewed papers in reference list but also a significant body of grey literature.	Relevant peer-reviewed papers in reference list but also some grey literature or text books. Some included references less relevant.	Mostly peer-reviewed papers or specialized monographs in reference list. An occasional reference may be less relevant.	Almost exclusively peer- reviewed papers in reference list or specialized monographs (not text books). All papers included are relevant.	
2.3. Use of methods and data	No description of methods and/or data.	Research is not reproducible due to insufficient information on data (collection and/or treatment) and analysis methods	Some aspects of the research regarding data-collection, data-treatment, models or the analysis methods are described insufficiently so that that particular aspect of the	Description of the data (collection, treatment) or models as well as the analysis methods used is lacking in a number of places so that at most a more or less similar	Description of the data (collection, treatment) or models as well as the analysis methods used is mostly complete, but exact reproduction of the research is not possible due to lack of	Description of the data (collection, treatment) or models as well as the analysis methods is complete and clear so that exact reproduction of the research is possible.	

Item	Mark for item					
	2-3	4-5	6	7	8	9-10
			research is not reproducible.	research could be performed.	some details.	
2.4. Critical reflection on the research performed (discussion)	No discussion and/or reflection on the research. Discussion only touches trivial or very general points of criticism.	Only some possible weaknesses and/or weaknesses which are in reality irrelevant or non-existent have been identified.	Most weaknesses in the research are indicated, but impacts on the main results are not weighed relative to each other.	Most weaknesses in the research are indicated and impacts on the main results are weighed relative to each other.	All weaknesses in the research are indicated and weighed relative to each other. Furthermore, (better) alternatives for the methods used are indicated.	Not only all possible weaknesses in the research are indicated, but also it is indicated which weaknesses affect the conclusions most.
	No confrontation with existing literature.	Confrontation with irrelevant existing literature.	Only trivial reflection vis-avis existing literature.	Only most obvious conflicts and correspondences with existing literature are identified. The value of the study is described, but it is not related to existing research.	Minor and major conflicts and correspondences with literature are shown. The added value of the research relative to existing literature is identified.	Results are critically confronted with existing literature. In case of conflicts, the relative weight of own results and existing literature is assessed. The contribution of his work to the development of scientific concepts is identified.
2.5. Clarity of conclusions and recommendations	No link between research questions, results and conclusions.	Conclusions are drawn, but in many cases these are only partial answers to the research question. Conclusions merely repeat results.	Conclusions are linked to the research questions, but not all questions are addressed. Some conclusions are not substantiated by results or merely repeat results.	Most conclusions well- linked to research questions and substantiated by results. Conclusions are mostly formulated clearly but with some vagueness in wording.	Clear link between research questions and conclusions. All conclusions substantiated by results. Conclusions are formulated exact.	Clear link between research questions and conclusions. Conclusions substantiated by results. Conclusions are formulated exact and concise. Conclusions are grouped/ordered in a logical way.
	No recommendations given.	Recommendations are absent or trivial.	Some recommendations are given, but the link of those to the conclusions is not always clear.	Recommendations are well-linked to the conclusions.	Recommendations are to- the-point, well-linked to the conclusions and original.	Recommendations are to- the-point, well-linked to the conclusions, original and are extensive enough to serve as project description for a new thesis project.
2.6. Writing skills	Thesis is badly structured. In many cases information appears in wrong locations. Level of detail is inappropriate throughout.	Main structure incorrect in some places, and placement of material in different chapters illogical in many places. Level of detail varies widely (information missing, or irrelevant information given).	Main structure is correct, but lower level hierarchy of sections is not logical in places. Some sections have overlapping functions leading to ambiguity in placement of information. Level of detail varies widely	Main structure correct, but placement of material in different chapters illogical in places. Level of detail inappropriate in a number of places (irrelevant information given).	Most sections have a clear and unique function. Hierarchy of sections is mostly correct. Ordering of sections is mostly logical. All information occurs at the correct place, with few exceptions. In most places	Well-structured: each section has a clear and unique function. Hierarchy of sections is correct. Ordering of sections is logical. All information occurs at the correct place. Level of detail is appropriate

Item	Mark for item					
	2-3	4-5	6	7	8	9-10
			(information missing, or irrelevant information given).		level of detail is appropriate.	throughout.
	Formulations in the text are often incorrect/inexact inhibiting a correct interpretation of the text.	Vagueness and/or inexactness in wording occur regularly and it affects the interpretation of the text.	The text is ambiguous in some places but this does not always inhibit a correct interpretation of the text.	Formulations in text are predominantly clear and exact. Thesis could have been written more concisely.	Formulations in text are clear and exact, as well as concise.	Textual quality of thesis (or manuscript in the form of a journal paper) is such that it could be acceptable for a pear-reviewed journal.
3. Colloquium (5%) *	,		,			,
3.1. Graphical presentation	Presentation has no structure.	Presentation has unclear structure.	Presentation is structured, though the audience gets lost in some places.	Presentation has a clear structure with only few exceptions.	Presentation has a clear structure. Mostly a good separation between the main message and side- steps.	Presentation clearly structured, concise and to- the-point. Good separation between the main message and side-steps.
	Unclear lay-out. Unbalanced use of text, graphs, tables or graphics throughout. Too small font size, too many or too few slides.	Lay-out in many places insufficient: too much text and too few graphics (or graphs, tables) or vice verse.	Quality of the layout of the slides is mixed. Inappropriate use of text, tables, graphs and graphics in some places.	Lay-out is mostly clear, with unbalanced use of text, tables, graphs and graphics in few places only.	Lay-out is clear. Appropriate use of text, tables, graphs and graphics.	Lay-out is functional and clear. Clever use of graphs and graphics.
3.2. Verbal presentation and defense	Spoken in such a way that majority of audience could not follow the presentation.	Presentation is uninspired and/or monotonous and/or student reads from slides: attention of audience not captured	Quality of presentation is mixed: sometimes clear, sometimes hard to follow.	Mostly clearly spoken. Perhaps monotonous in some places.	Clearly spoken.	Relaxed and lively though concentrated presentation. Clearly spoken.
	Level of audience not taken into consideration at all.	Level of audience hardly taken intro consideration.	Presentation not at appropriate level of audience.	Level of presentation mostly targeted at audience.	Level of presentation well- targeted at audience. Student is able to adjust to some extent to signals from audience that certain parts are not understood.	Clear take-home message. Level well-targeted at audience. Student is able to adjust to signals from audience that certain parts are not understood.
	Bad timing (way too short or too long).	Timing not well kept (at most 30% deviation from planned time).	Timing not well kept (at most 20% deviation from planned time).	Timing is OK (at most 10% deviation from planned time).	Timing is OK.	Presentation finished well in time.
	Student is not able to answer questions.	Student is able to answer only the simplest questions	Student answers at least half of the questions appropriately.	Student is able to answer nearly all questions in an appropriate way.	Student is able to answer all questions in an appropriate way, although not to-the-	Student is able to give appropriate, clear and to-the-point answers to all

Item	Mark for item					
	2-3	4-5	6	7	8	9-10
					point in some cases.	questions.
4. Examination (5%) *						
4.1. Defense of the thesis	Student is not able to defend/discuss his thesis. He does not master the contents	The student has difficulty to explain the subject matter of the thesis.	Student is able to defend his thesis. He mostly masters the contents of what he wrote, but for a limited number of items he is not able to explain what he did, or why.	Student is able to defend his thesis. He masters the contents of what he wrote, but not beyond that. Is not able to place thesis in scientific or practical context.	Student is able to defend his thesis, including indications where the work could have been done better. Student is able to place thesis in either scientific or practical context.	Student is able to freely discuss the contents of the thesis and to place the thesis in the context of current scientific literature and practical contexts.
4.2. Knowledge of study domain	Student does not master the most basic knowledge (even below the starting level for the thesis).	The student does not understand all of the subject matter discussed in the thesis.	The student understands the subject matter of the thesis on a textbook level.	The student understands the subject matter of the thesis including the literature used in the thesis.	Student is well on top of subjects discussed in thesis: not only does he understand but he is also aware of current discussions in the literature related to the thesis topic.	Student is well on top of subjects discussed in thesis: not only does he understand but he is also aware of discussions in the literature beyond the topic (but related to) of the thesis.

Appendix D: Outline MSc thesis proposal

- a. Title page
 - Title research project
 - Name student (incl. reg.nr.), name supervisor, name chair group
 - Date
 - Chair group
 - (Optional: illustration relevant to the subject)
- b. Introduction; elaboration and information on proposal
 - Introduction on subject of proposal
 - Detailed elaboration of problem and aims of proposal
 - Scientific relevance of proposal
 - Societal relevance of proposal
- c. Theoretical framework
 - Description of scientific field (with reference to scientific literature)
 - Description of concepts used in the research
- e. Experimental/design approach
 - Research questions (informed by problem statement and theoretical approach)
 - Description of methods, techniques, to be used
 - Estimation of amount of data that can be collected in time available
- f. Data analysis/design evaluation, presentation results
 - Type of data to be collected
 - Methods of data processing and analysis
 - Description of how results will be presented.
 - Description of how logbook, data and codes (if any) will be documented and archived
- g. Project planning
 - Phasing of various stages of the research project
 - Week by week planning of activities (give graphic presentation)
- h. Back-up strategies
 - Identification of possible problems with proposed research plan
 - What to do in case of lack of usable data?
- i. Literature references

Appendix E: General format of a scientific paper

Title page: title, author(s) supervisor(s), year, name of the chair group and that of other participating institutes, and date of submission.

Contents: including numbered chapters, and other subdivisions

Summary: brief outline of context, research question (hypothesis), methods, results, and discussion. The length of the summary should not exceed 1.000 words.

Introduction: The introduction provides the background of the research question/hypothesis. As a rule of thumb the introduction should at least explain all the keywords of the hypothesis/research question. It provides the state of the art with regard to nature of the research question as well as the (experimental) strategies that have been used so-far to deal with the research question of this thesis project or with similar research questions.

Materials and methods: write down your material and methods in such a way that a colleague within the field can reproduce your experiments.

Results: including statistical analysis, however, omit any interpretations, preliminary conclusions, and references to literature in this section.

Discussion: Here the interpretation of the results is given, including proper reference to the research question and literature as pointed out in the introduction. Be explicit in your conclusions as to whether the hypothesis is accepted or rejected based on your findings. Discuss in retrospective if the methods used in the project were adequate in relation to the research question. Analyse the strengths and the weaknesses of the methods and the results in the thesis and discuss the results in relation to relevant literature. Identify conclusions that would hold true in further scrutiny.

Perspectives: Give recommendations for further research.

Acknowledgements

Literature Cited: make a list of literature according to the rules of one journal in your scientific discipline Check the Instructions for Authors of scientific journals for common practice in formatting tables and figures, and use of italics.

Appendix F: Guidelines for giving an oral presentation

- Take care that the issues you want to present can be presented within the time allocated to you. Define your story and distinguish between major and minor issues, you may have to limit yourself to the major issues. During a rehearsal of your presentation you can determine whether you indeed finish within the time limit.
- You have to adjust your language, amount of background information etc so that a major part of your audience can follow your presentation. It makes a big difference whether you present before an audience of fellow students and colleagues or for interested laymen.
- It is very useful to repeat the important issues, and this will also help your audience to resume the thread of your story. The following structure of a presentation will introduce the necessary repetitions:
 - *Introduction*. Give a *rough sketch* of the central issues; discuss the basic concepts at a level that is adjusted to your audience. Keep in mind that the first minutes of your presentations are essential. If you are able to attract the attention, you will have a receptive audience. The first sentence(s) of your presentation should be devoted to this.
 - The core of the story. This contains a description of the problem, the approach that is used, and the results and conclusion of the research. Do not discuss too many different issues and details, especially not when your time is limited. It is better to take some time to clearly explain the most important issues. If someone wants to know more details, he will ask for it.
 - Conclusion. Summarize the *most important results and conclusions*. Do not introduce new results or insights at this point. Clearly indicate that you are at the end of your presentation for example by thanking the audience for their attention and/or asking whether there are questions.
- Inform yourself well ahead of time whether the audio-visual aids you would like to use (overhead projector, beamer, PC, internet connection, etc) are available and ready for use in the room where your presentation is scheduled. It's rather annoying to find out after preparing a PowerPoint presentation that there is no beamer available. Take care that the text on slides/sheets is easy to read from a distance. A rule of thumb is a letter size of 24, and 6 sentences or less per slide/sheet. Also text present in tables and diagrams should be easy to read. Use contrasting colours and bear in mind that people in your audience can be colour blind. If possible check whether your presentation is also visible for people in the back of the room.
- Especially when you find it difficult to estimate what you can and cannot do, how you come across and how long your presentation will be, it is very useful to rehearse your presentation with a couple of friends or colleagues. They can give you feedback, which can help you to improve your presentation.
- Check whether everything (beamer, microphone, overhead projector, lights, etc) is working the way it should, and if not arrange that the problem is fixed.
- Take care that your audience has a good view on what you project. Do not put yourself and the projector in the line of view of the audience.
- Look at your audience during your presentation. People like to have personal attention, and by looking at them they experience this. If you do not like to look at people, look at their noses.
- Speak loud and clear and not too fast. If you doubt whether you are audible, ask and when necessary adapt.
- Show only small pieces of text. During a PowerPoint presentation you can bring in one sentence at the time (do not overdo this). Do not show big chunks of text, and at the same time give additional information. Your audience will than choose to listen or to read. Give them time to digest what you show and tell them. Use a pointer or stick to point at things you want to emphasize. The small pieces of text on the slide/transparency also function as a reminder for yourself. Avoid reading the text literally. When you see the text, things you want to tell surface. Do not read a write out text; this will make the presentation less attractive for the audience.
- While showing figures, tables, and graphs to the audience take them as a matter of speech by the hand using a pointer and explain the details (e.g. on the x-axis is indicated; on the y-axis is indicated; the points here are ...); Give the audience time to fully comprehend the illustrations of your presentation.
- Be alert to reactions from the audience. It could be annoying when someone from the audience wants to say something thereby interrupting your presentation. It might be useful to give people the opportunity to do so. Sometimes it is just to indicate that a picture is not in focus or that it is difficult to hear you talk, and then you can do something about that. It can also happen that a term is not clear; explain in this case what you mean. In general it is better to try to avoid lengthy

- discussions about questions; just say that you will come back to that question at the end of the presentation.
- Usually the presentation ends with a discussion. Sometimes questions are directly related with your work and you might have to clarify certain things. It is also possible that your results/views contradict with what others have found. Be prepared for this kind of questions. It becomes more difficult when people try to get remarks from you about things you have not studied yourself. Just tell them that you do not know the answer.

Appendix G Plagiarism Statement

Authors: staff of the Environmental Policy Group

1. Introduction and definition

The task of writing a paper or other assignment for a course sometimes lures students into using other's work, ideas, facts, texts, etc and represent it as their own. The goal of this statement is to distinguish between methods to do this in an appropriate way and methods that fall under plagiarism.³ It is important for students to understand that plagiarism is considered as a very serious offense against academic norms and, hence subject to equally serious punishment.

"Plagiarism" is derived from the Latin *plagiarius*, 'plunderer', 'kidnapper'. It refers to intellectual theft, defined as "the false assumption of authorship: the wrongful act of taking the product of another person's mind, and presenting it as one's own"⁴ "To plagiarize is to give the impression that you wrote or thought something that you in fact borrowed from someone. While some plagiarize deliberately by copying or buying papers or soliciting unauthorized help, most plagiarism is accidental, but it is usually dealt with just as harshly as intentional plagiarism."⁵ It is precisely to avoid discussion about what constitutes plagiarism and it's intentional character that we want students to understand the content of this document well.

The **sanction** in case of plagiarism is –based on WU policy (articles 35 and 36 of MSc Education/Examination Regulation):

- The examiner informs the student and reports to the secretary of the WU Examination Committee the case of plagiarism. The examiner may utilize a plagiarism scanner to prove the case.
- The commission will ask the student to express his/her view about the case.
- Depending on the magnitude of the fraud the appropriate sanction will be assessed: a warning; a fail for the exam; exclusion of the exam for a maximum period of one a year or a combination of these sanctions.

In the following pages, you will first find several examples of plagiarism, then examples of accepted use of sources and ideas and finally some guidelines on how to avoid plagiarism. We urge students to carefully read these pages and when in doubt talk to their instructors in order to prevent later problems.

2. Examples of plagiarism

A. DIRECT PLAGIARISM

Source Material

From: *Emotion in the Human Face: Guidelines for Research and an Integration of Findings* by Paul Ekman, Wallace V. Friesen, Phoebe Ellsworth (New York: Pergamon Press, Inc), p.1. (Psychology source)

The human face in repose and in movement, at the moment of death as in life, in silence and in speech, when alone and with others, when seen or sensed from within, in actuality or as represented in art or recorded by the camera is a commanding, complicated, and at times confusing source of information. The face is commanding because of its very visibility and omnipresence. While sounds and speech are intermittent, the face even in repose can be informative. And, except by veils or masks, the face cannot be hidden from view. There is no facial maneuver equivalent to putting one's hands in one's pockets. Further, the face is the location for sensory inputs, life-necessary intake, and communicative output. The face is the site for the sense receptors of taste, smell, sight, and hearing, the intake organs for food, water, and air, and the output location for speech. The face is also commanding because of its role in early development; it is prior to language in the communication between

³ See Department of English Northern Illinois University, http://www.engl.niu.edu/fycomp/plag.html

⁴ MLA Style Manual, 2nd ed. New York: MLA 1998, page 146.

⁵ US Naval Academy Plagiarism policy

parent and child.

Misuse of source

(italicized passages indicate direct plagiarism):

Many experts agree that the human face, whether in repose or in movement, is a commanding, complicated, and sometimes confusing source of information. The face is commanding because it's visible and omnipresent. Although sounds and speech may be intermittent, the face even in repose may give information. And, except by veils or masks, the face cannot be hidden. Also, the face is the location for sensory inputs, life-supporting intake, and communication.

Comment

The plagiarized passage is an almost verbatim copy of the original source. The writer has compressed the author's opinions into fewer sentences by omitting several phrases and sentences. But this compression does not disguise the writer's reliance on this text for the concepts he passes off as his own. The writer tries to disguise his indebtedness by beginning with the phrase "Many experts agree that. ..." This reference to "many experts" makes it appear that the writer was somehow acknowledging the work of scholars "too numerous to mention." The plagiarized passage makes several subtle changes in language (e.g., it changes "visibility and omnipresence" to "it's visible and omnipresent"). The writer has made the language seem more informal in keeping with his own writing style. He ignores any embellishments or additional information given in the source-passage. He contents himself with borrowing the sentence about how only masks and veils can hide the face, without using the follow-up elaboration about there not being a "facial equivalent to putting one's hands in one's pockets." He also reduces the source's list of the face's diverse activities at the end of the paragraph.

Had the writer credited the authors of the Emotions book in this text or in a footnote, and enclosed the borrowed material in quotation marks, this would have been a legitimate use of a source.

B. THE MOSAIC

Source Material

From: Language in Sociocultural Change by Joshua Fishman (Stanford University Press, 1972), p.67. (Linguistics source)

In a relatively open and fluid society there will be few characteristics of lower-class speech that are not also present (albeit to a lesser extent) in the speech of the working and lower middle classes. Whether we look to phonological features such as those examined by Labov or to morphological units such as those reported by Fischer (1958) (Fischer studied the variation between -in' and -ing for the present participle ending, i.e. runnin' vs. running and found that the former realization was more common when children were talking to each other than when they were talking to him, more common among boys than girls, and more common among "typical boys" than among "model boys"), we find not a clear-cut cleavage between the social classes but a difference in rate of realization of particular variants of particular variables for particular contexts. Even the widely publicized distinction between the "restricted code" of lower-class speakers and the "elaborate code" of middle-class speakers (Bernstein 1964, 1966) is of this type, since Bernstein includes the cocktail party and the religious service among the social situations in which restricted codes are realized. Thus, even in the somewhat more stratified British setting the middle class is found to share some of the features of what is considered to be "typically" lower-class speech. Obviously then, "typicality," if it has any meaning at all in relatively open societies, must refer largely to repertoire range rather than to unique features of the repertoire.

Misuse of source

(italicized passages indicate direct plagiarism):

In a relatively fluid society many characteristics of lower-class speech will also be found among the working and lower middle classes. Labov's and Fischer's studies show that there is not a clear-cut cleavage between social classes but only a difference in the frequency of certain speech modes. All classes share certain speech patterns. The difference among classes would only be apparent by the frequency with which speech expressions or patterns appeared. By this standard, then, Bernstein's distinction between the "restricted code" of the lower-class speakers and the "elaborated code" of middle-class speakers is useful only up to a point, since Bernstein mentions cocktail parties and religious services as examples of "restricted speech" groupings. "Typicality" refers more to speech "range" than to particular speech features.

Comment

While this passage contains relatively few direct borrowings form the original source, all its ideas and opinions are lifted from it. The writer hides her dependency on the source by translating its academic terms into more credible language for a novice in sociology. For example, the plagiarist steers clear of sophisticated terms like "phonological features," "morphological units," and "repertoire range." However, her substitutions are in themselves clues to her plagiarism, since they over-generalize the source's meaning. The writer seems to acknowledge secondary sources when she refers to Labov's and Fischer's studies, but she obviously has no first-hand knowledge of their research. If she had consulted these studies, she should have footnoted them, rather than pretending that both she and her audience would be completely familiar with them. She intertwines her own opinions with the source and forms a confused, plagiarized mass.

The writer should have acknowledged her indebtedness to her source by eliminating borrowed phrases and crediting her paragraph as a paraphrase of the original material.

C. PARAPHRASE

Source Material

From: Cliff's Notes on The Sun Also Rises by Ernest Hemingway

THE DISCIPLINE OF THE CODE HERO

If the old traditional values are no good anymore, if they will not serve man, what values then will serve man? Hemingway rejects things of abstract qualities courage, loyalty, honesty, bravery. These are all just words. What Hemingway would prefer to have are concrete things. For Hemingway a man can be courageous in battle on Tuesday morning at 10 o'clock. But this does not mean that he will be courageous on Wednesday morning at 9 o'clock. A single act of courage does not mean that a man is by nature courageous. Or a man who has been courageous in war might not be courageous in some civil affair or in some other human endeavor. What Hemingway is searching for are absolute values, which will be the same, which will be constant at every moment of every day and every day of every week. Ultimately therefore, for Hemingway the only value that will serve man is an innate faculty of self-discipline. This is a value that grows out of man's essential being, in his inner nature. If a man has discipline to face one thing on one day he will still possess that same degree of discipline on another day and in another situation. Thus Francis Macomber in the short story "The Short, Happy Life of Francis Macomber," has faced a charging animal, and once he has had the resolution to stand and confront this charging beast, he has developed within himself a discipline that will serve him in all situations. This control can function in almost any way in a Hemingway work.

Misuse of source:

Hemingway tries to discover the values in life that will best serve man. Since Hemingway has rejected traditional values, he himself establishes a kind of "code" for his heroes. This code is better seen than spoken of. The Hemingway hero doesn't speak of abstract qualities like courage and honesty. He lives them. But this living of values entails continual performance the Hemingway hero is always having his values put to the test. How can the hero be up to this continual test? Hemingway stresses the faculty of self-discipline as the backbone of all other virtues. Self-discipline places man's good qualities on a continuum. The dramatic change in Francis Macomber in "The Short, Happy Life of Francis Macomber" stems more from his new-found self-control than from any accidental combination of traits.

Comment

This illustrates plagiarism since the writer used the notion of the "Hemingway code hero" presented in Cliff's Notes as the sole basis for his own essay. He has absorbed his source's concepts, re-phrased them, and, perhaps, made them simpler. But there is a one-to-one relationship between the development of ideas in the Cliff's Notes and the plagiarists' rendition.

The first two sentences of the plagiarist's are directly borrowed from his source; the remaining sentences are more artfully disguised. The worst feature of this idea-copying is that it seems to be the end product of a close reading of Hemingway's "Short, Happy Life," the writer makes it appear that his comments are based on this short story.

The writing here would be acceptable if he had written the same paraphrase with the proper acknowledgement of his source.

D. INSUFFICIENT ACKNOWLEDGEMENT

Source Material

From: Peter Laven, Renaissance Italy: 1464-1534 (New York: Capricorn, 1964), pp. 130f.

The tenacious particularism of the Italian state gave rise to a wide variety of constitutional solutions and class structures throughout Italy. Even conquered territories and those swallowed up by bigger neighboring powers often managed to retain much of their internal organization as it had been. If power changed hands, the instruments and forms of power usually remained the same. Since the economic needs of such territories did not suddenly alter with a change of government or master, those classes which had been important before the change tended to continue to be important afterwards as well. Only when the nature of the change was economic and social might there have been a reversal in the relationships of classes; but even in this there was no sudden revolution in the structure of classes.

Misuse of source:

In his comprehensive study, *Renaissance Italy*, Peter Laven discusses the peculiar organization of Renaissance city-states:

The tenacious particularism of the Italian states gave rise to a wide variety of constitutional solutions and class structures throughout Italy. Even conquered territories and those swallowed up by bigger neighboring powers often managed to retain much of their internal organization as it had been.¹

This means that if power changed hands, the instruments and forms of power usually remained the same. Since the economic needs of such territories did not suddenly alter with a change of government or master, those classes which had been important before the change tended to continue to be important afterwards as well. Only when the nature of the change was economic and social might there have been a reversal in the relationships of classes; but even in this there was no sudden revolution in the structure of classes.

Comment

This half-crediting of a source is a common form of plagiarism. It stems either from a desire to credit one's source and copy it too, or from ignorance as to where to footnote. The general rule is to footnote after rather than before your resource material. In this case, the plagiarist credits historian Peter Laven with two sentences and then continues using the author without giving acknowledgement. The writer disguises the direct plagiarism as a paraphrase by using the falsely-explanatory phrase "This means that ..." in the third sentence. This example of plagiarism is especially reprehensible because the writer seemingly acknowledges her source--but not enough.

3. How to do it right: examples of the good use of others' work6

In all academic work, and especially when writing papers, we are building upon the insights and words of others. A conscientious writer always distinguishes clearly between what has been learned from others and what he or she is personally contributing to the reader's understanding. To avoid plagiarism, it is important to understand how to attribute words and ideas you use to their proper source.

A. QUOTED MATERIAL AND UNUSUAL OPINION OR KNOWLEDGE

Source:

The teenage detective who was once a symbol of spunky female independence has slowly been replaced by an

¹ Peter Laven, Renaissance Italy, p. 130-31.

 $^{^6}$ This section is borrowed directly from the Northwestern University website on plagiarism ($\underline{\text{http://www.northwestern.edu/uacc/plagiar.html}})$

image of prolonged childhood, currently evolving toward a Barbie doll detective. ... Every few pages bring reminders of Nancy's looks, her clothing, her effect on other people. ... The first entry in this series carries a description of Nancy: "The tight jeans looked great on her long, slim legs and the green sweater complemented her strawberry-blonde hair."

Jackie Vivelo, "The Mystery of Nancy Drew," MS., November, 1992, pp. 76-77

Use and Adaptation of the Material:

Nancy Drew has become a "Barbie doll" version of her old self. She has become superficial and overly concerned with her looks. She is described in the new series as wearing "tight jeans [that] looked great on her long, slim legs." She has traded her wits and independent spirit for a great body and killer looks.

Explanation:

The writer has paraphrased most of the material, and she has borrowed a few of the author's words. She has also discovered that the paraphrased ideas are unusual (not found in other sources). Therefore, the writer has placed quotation marks around the author's words and has credited the author twice--once directly after the quoted material and once at the conclusion of the author's ideas.

B. INTERPRETATION

Source:

One recent theory, advanced by the physicist Gerald Hawkins, holds that Stonehenge was actually an observatory, used to predict the movement of stars as well as eclipses of the sun and moon. Such a structure would have been of great value to an agricultural people, since it would enable them to mark the changing seasons accurately, and it would have conferred seemingly supernatural powers on the religious leaders who knew how to interpret its alignments.

Stanford Lehmberg, *The Peoples of the British Isles: A New History*, vol. I, (Wadsworth Publishing Company, 1992), p. 9.

Use and Adaptation of the Material:

If Stonehenge was an astronomical observatory which could predict the coming of spring, summer, and fall, this knowledge would have given tremendous power to the priestly leaders of an agricultural community.¹

Explanation:

The writer has appropriately cited this material since the writer is in debt to someone else for the analysis, even though the writer has not used any direct quotations.

C. PARAPHRASED MATERIAL

Source:

As a recent authority has pointed out, for a dependable long-blooming swatch of soft blue in your garden, ageratum is a fine choice. From early summer until frost, ageratum is continuously covered with clustered heads of tine, silky, fringed flowers in dusty shades of lavender-blue, lavender-pink, or white. The popular dwarf varieties grow in mounds six to twelve inches high and twelve inches across; they make fine container plants. Larger types grow up to three feet tall. Ageratum makes an excellent edging.

How to Grow Annuals, ed. Sunset Books and Sunset Magazine (Menlo Park, CA: Lane Books, 1974), p. 24.

Use and Adaptation of the Material:

¹ Jackie Vivelo, "The Mystery of Nancy Drew," MS., November, 1992, p. 77.

² Vivelo, pp. 76-77

¹ Stanford Lehmberg, *The Peoples of the British Isles: A New History*, vol. I, (Wadsworth Publishing Company, 1992), p. 9

You can depend on ageratum if you want some soft blue in your garden. It blooms through the summer and the flowers, soft, small, and fringed, come in various shades of lavender. The small varieties which grow in mounds are very popular, especially when plandted in containers. There are also larger varieties. Ageratum is good as a border plant.¹

¹How to Grow Annuals, ed. Sunset Books and Sunset Magazine (Menlo Park, CA: Lane Books, 1974), p. 24.

Explanation:

The writer has done a good job of paraphrasing what could be considered common knowledge (available in a number of sources), but because the structure and progression of detail is someone else's, the writer has acknowledged the source. This the writer can do at the end of the paragraph since he or she has not used the author's words.

D. USING OTHER AUTHORS' EXAMPLES

Sources:

The creative geniuses of art and science work obsessively. ... Bach wrote a cantata every week, even when he was sick or exhausted.

Sharon Begley, "The Puzzle of Genius," Newsweek, June 28, 1993, p. 50.

Albert Einstein published nearly 250 papers in his life, but a sizeable percentage of them were ignored or even proven wrong.

"What Produces Scientific Genius?" USA Today, June 1989, p. 11.

Use and Adaptation of the Material

If there is a single unifying characteristic about geniuses, it is that they produce. Bach wrote a cantata every week. Einstein drafted over 250 papers.¹

¹Sharon Begley, "The Puzzle of Genius," *Newsweek*, June 28, 1993, p. 50; "What Produces Scientific Genius?" *USA Today*, June 1989, p. 11.

Explanation:

Instead of finding an original example, the writer has used an author's example to back up what the writer had to say; therefore the writer has cited it.

E. USING OTHER AUTHORS' CHARTS AND GRAPHS

Source: Accretion Chart for Illinois tax on OID bond, prepared by John Lindsay, Principal Financial Securities, Inc., 6/12/95.

Use and Adaptation of the Material:

As the following chart indicates, investment in an OID (Original Issue Discount) bond is taxable by the State of Illinois on the accretion and interest.¹

¹Accretion Chart for Illinois tax on OID bond, prepared by John Lindsay, Principal Financial Securities, Inc., 6/12/95.

Explanation:

Instead of creating an original chart or graph, the writer has used one from an outside source to support what the writer has to say; therefore the chart or graph has been cited. If the writer had created an original chart, some of the facts might need citations (see example VIII).

F. USING CLASS NOTES

Source: Lecture Notes

A. Born in USA--Springsteen's 7th, most popular album

- a. Recorded with songs on Nebraska album--therefore also about hardship
- 1. Nebraska about losers and killers
- b. About America today--Vietnam, nostalgia, unemployment, deterioration of family
- c. Opening song--many people missed the Vietnam message about how badly vets were treated. class notes--Messages in Modern Music A05

Professor Mary McKay--March 10, 1995

Use and Adaptation of the Material:

As Professor McKay has pointed out, many of the songs in *Born in the USA* (Springsteen's seventh and most popular album), including the title song, were recorded with the songs on *Nebraska*. Consequently, *Born in the USA* is also about people who come to realize that life turns out harder and more hurtful than what they might have expected. However, while *Nebraska* deals with losers and killers, *Born in the USA* deals more locally with the crumbling of American society—its treatment of returning Vietnam veterans, its need to dwell on past glories, its unemployment and treatment of the unemployed, and the loss of family roots. This is apparent from the opening song of the album "Born in the USA" in which Springsteen sings from the perspective of a Vietnam Veteran.¹

¹Mary McKay, "Messages in Modern Music" A01 (Northwestern University) March 10, 1995.

Explanation:

The writer has acknowledged that these ideas (which are not commonly held or the writer has not investigated to find out if they are commonly held) come from a lecture.

G. DEBATABLE FACTS

In the campaigns of 1915 Russian casualties have been conservatively estimated at more than 2 million. Gordon Craig, *Europe Since 1815* (Dryden Press, 1974), p. 370.

By the end of the summer [of 1915] in addition to military casualties totalling 2,500,000 men, Russia had lost 15 percent of her territories...

L. S. Stavrianos, *The World Since 1500* (Prentice Hall, 1966), p. 438.

Response to the Material

Estimates of the number of deaths in Russia during 1915 range from over two million¹ to two and a half million.²

Explanation:

The writer found different facts in different sources; therefore the "facts" needed to be documented.

H. UNUSUAL FACTS

Source:

There also has been a dramatic shift in the percentage of our students whose mothers work outside the home. Approximately 80% of our entering students in 1994 have mothers who are employed outside the home. In 1967, more than half of our students' mothers were full-time homemakers.

"Characteristics of Northwestern Students: Data from the Cooperative Institutional Research Project," Northwestern University, 1994 p. 2.

Use and Adaptation of the Material:

At Northwestern University, the rise in the number of mothers working outside the home has been dramatic-moving from less than half in 1967 to about 80 percent among the freshman class of 1994.1

¹ Gordon Craig, Europe Since 1815 (Dryden Press, 1974), p. 370.

² L. S. Stavrianos, *The World Since 1500* (Prentice Hall, 1966), p. 438.

Explanation:

The writer found this fact in only one source and wants his reader to know where to find it.

Guidelines to avoid and prevent plagiarism

- Take carefully documented notes. Identify your sources by name of author, title of work, place and name of publication, date, and page numbers.
- Enclose all borrowed words in quotation marks, and set off longer borrowed passages in an indented block.
- Avoid mere paraphrasing, substituting your own words or synonyms for the original work without giving proper credit to your source.
- Do not plagiarize your own work by copying from it or submitting it more than once for credit unless specifically authorized by your professor.
- Document all figures, charts, statistics, graphs, tables, opinions and conclusions taken or adapted from any source, including electronic media such as CD-ROMs, diskettes or tapes, online resources like the World Wide Web, or computer services such as Nexis and Dialog. Resist the tremptation to cut and paste without attribution.
- Do not use translation software to produce a foreign-language text for submission as your own work. Not only does this constitute misrepresenting another entity's work as your own, it also will be recognizable to your instructor as a machine-produced text.
- Do not document facts of common knowledge such as familiar proverbs or well-known quotations ("We shall overcome"), but you must indicate the source of any appropriated material that readers otherwise could mistake for your own. If in doubt, ask. If still uncertain, err on the side of caution (borrowed from USNA statement).
- Within a text, particularly in case of repeated reference to the same source, identify its origin briefly by name or title and page number, enclosed in parentheses, and provide complete documentation of all your sources in an alphabetized list of "Works Cited" at the end of your paper.

¹"Characteristics of Northwestern Students: Data from the Cooperative Institutional Research Project," Northwestern University, 1994 p. 2.

Appendix H Colloquia and thesis ring attendance form

Name student:	
---------------	--

No.	Date	Topic and name	signature
1			
2			
3			
4			
5			
6			

No.	Date	Own text submission (Yes/No)	signature
1			
2			
3			
4			
5			
6			
U			

Appendix I Guidelines for archiving of logbook, data and codes

After your thesis research has been completed it is essential that you properly archive your work. This is important for your supervisor in case he/she wishes to continue your work, perhaps with another thesis student, so they do not need to reinvent the wheel. More fundamental, proper scientific conduct includes the possibility of replication of your work in order to check you assumptions, results and conclusions.

To facilitate both objectives it is important that you a) document your day-to-day activities in a *logbook*, b) properly annotate and organise your data, c) properly annotate and organise your programming codes (whether for modelling and/or complex data analysis).

Some suggestions for each:

- a) Logbook. See this as your scientific dairy. Setup a simple text file (or use something like OneNote, or other specialised software, e.g. start your own wiki) that you always have open for editing next to your other work. Use English. You can organise it chronologically (start a new page/section for every day) or better by task/research phase (each in a new section). In simple formulation and bullet wise write down what you do and also why you do it. Write down which data set or excel file, code, etc. you used for any figure or table in your report. Write down which literature you read and its main conclusions relevant to your work. Show and discuss it occasionally to/with your supervisor. Archive it with the rest of your work (data and codes) and, finishing your thesis work, give it to your supervisor.
- b) Data archive. Annotate your data. Make sure that every column and row in your data is annotated. What are these numbers, units? Where do they come from (monitoring site, model version, data processing step, literature)? We call these annotations *metadata*. Some data formats are self-describing (e.g. NetCDF); use them when appropriate. Organise your data: give all files names related to your work. Put all files in a directory structure that have names related to your work and that make sense to others. In each directory create a readme file where you describe its contents. If you have large datasets, keep these directories separate from your report and separate from you codes (see next). Finishing your thesis work, give all your data to your supervisor and/or put them in a storage location, i.e. (network-) disk, provided by him/her.
- Code management. You may have to write codes for data processing and analyses, e.g. in R, MatLab, GrADS, IDL, GIS scripting, etc., or for modelling, e.g. in Linux shell scripts (BASH, etc), Python, C or Fortran. In all cases use proper indentations and always write ample comments/annotations in your code. What is done in a certain section, and -if not trivial- why this programming solution and not another? Use appropriate file structure and naming. During your research generally your codes will require many updates, to remove bugs, to extend or improve its functionality, etc. It is strongly advised to use a version management system for all your codes. At WUR it has been decided to use the version management system 'Git'; go to https://git-scm.com for more information about Git and go to https://git.wageningenur.nl about how to put your source code on Wageningen UR's servers. By exception (approved by supervisor) you can use other software. Git works on directories, keeping track of all changes made to any file within a certain directory. Therefore the recommendation under b) to keep your data in separate directories from your code. Once you feel confident about a certain piece of code you can freeze and archive it ('commit' and 'tag' in Git language) and the software will force you to again annotate this version. The good thing is that you can always revert to older saved versions of your code, without changing its file name (e.g. giving a version number in the file name; so don't do this!). If coding will be a substantial part of your research, WSG will give a short crash course and further support in implementation. If you do all this properly, you do not need to further archive your code, simply give the location/url of the Git repository to your supervisor (in your logbook or in the readme files in your data directories). This also serves as the 'logbook' for your coding activities.

See also the Appendix C: Rubric for assessment of MSc-thesis, page 17, for these elements.

Annex J Travelling to Risk Areas

Request Travelling to Risk Area(s)

Questionnaire for approval student's request for travelling to risk area(s)

The travel policy of Wageningen UR states that travelling of staff and students to risk areas* is only allowed with the approval of Wageningen University & Research.

* For codes risk areas (yellow, orange and red): www.rijksoverheid.nl/onderwerpen/reisadviezen (only in Dutch).

!! Students are never allowed to tavel to or through areas code red.!!

Student's personal data

Surname	
Given name(s)	
Date of birth	
Student's study programme + course,	
set of examination subjecst approved on <>	
Nationality (-ties)	
Passport number	
Date and place of issue	
Date of expiry	
Phone number 1	
Phone number 2	
E-mail address	
Warn in case of emergency (1)	
Relation to traveller	
Address	
Phone number 1	
Phone number 2	
Warn in case of emergency (2)	
Relation to traveller	

Request Travelling to Risk Area(s)

Address	
Phone number 1	
Phone number 2	
In case a staff member or fellow student of	
Wageningen U&R travels with you, please	
mention the person's name, address and	
contact person.	
Are you well insured during your trip and stay?	
Are you aware of Wageningen U&R (additional) insurances? http://www.wur.nl/nl/Onderwijs-Opleidingen/Huidige-Studenten/Verzekeringen.htm	
Person(s) for Wageningen U&R to contact in	
the area in case you are out of reach:	
Name(s)	
Relation to the student	
Phone number(s)	

II Risk assessment

Period of your stay
 Country/ area
 Type of activities/ brief description of your stay and the research location(s): what, when, where?
 Motivation for the specific risk area. Non-risk aeras possible for the research?
 Describe the importance of the activities for you, for Wageningen U&R and for the counterparts in the area.
 Are you hosted by an organisation? Contacts formalised? Contact person? Will you get/ are you introduced to the area? How?
 Describe your travel plan including address(es) accommodation(s) to stay. Are you being picked up from the airport to go to your first accommodation? Who is to consult for advice about travelling in the area?

Who may accompany you in the area?

Request Travelling to Risk Area(s)

8. Show the travel advice of BuZa https://www.nederlandwereldwijd.nl/reizen/reisadviezen

and Foreign Affairs UK https://www.gov.uk/foreign-travel-advice

- Reflect on what the advice(s) mean for the specific situtaion and activities
 proposed and discuss additional, specific risks that may derive from the research/
 travel plans. For example health risks, terrorism, criminal violence, communal and
 political violence.
- 10. Describe what (prevention) measures you took/ will take to mitigate possible risks for research contacts and data.
- Describe how will you get and kept informed about possible tensions and danger during your stay.
 - For Dutch travelers: confirm your awareness of the 24/7 BZ Informatieservice: https://informatieservice.nederlandwereldwijd.nl/.
 - For non-Dutch travelers: confirm that you will contact your ambassy/ consulate as soon as you arrive.
- 12. Describe your contact with the embassy/ consulate (..): what, where and when?
- 13. Have you taken course SDC-51306/ ENT-50303/ other?
- 14. Reflect on personal aspects of being in the risk area: previous experiences, cultural awareness , ...
- Describe what (prevention) measures you took/ will take to mitigate possible risks for research contacts and data.
- 16. Describe the health risks mentioned on http://www.ggdreisvaccinaties.nl/ and the recommended vaccinations* (if any). Description of other prevention measures you could take. Elaborate on how to avoid health risks during your stay.
 - ** In order to get admission for your travel and credits for the course/ internship/ thesis, you are obliged to take the recommended vaccinations (Refer to: Wageningen U&R policy Infection Prevention Students, 2018)
- 17. Describe the possibilities for first AID in the area? Availability of hospitals? Embassy's information on this?
- 18. Describe how, how often and when you will contact your Wageningen U&R supervisor for frequent updates. Including a backup plan in case you cannot reach each other on the moments agreed upon. Also for contact outside Wageningen U&R office hours.
- 19. Describe the measures you take in case of unforeseen financial problems or needs. How do you obtain cash or other access to financial means?
- 20. Describe a possible evacuation/ emergency plan. Including how you handle collected data, valuables, extra cash and copies of your passport.

Request Travelling to Risk Area(s)

 $\underline{Completed\ truthfully}\ including\ the\ declaration\ that\ the\ traveller\ took\ or\ is\ going\ to\ take\ the\ recommended\ vaccination(s):$

Name & signature traveller:	Name & signature course supervisor:
Place & date:	Place & date:
Name & signature chair holder:	
Approved* on <date>:</date>	*incl. payment safety course students
Name & signature director of operations unit (('directeur bedrijfsvoering'):
Approved** on <date>:</date>	**incl. payment safety course staff
Representative advisory committee ('drieman:	schap'), via <u>Huub.Loffler@wur.nl</u> :
Name & signature:	
Unanimous advice positive/ negative on <date< td=""><td>e>:</td></date<>	e>:
Name & signature director of operations unit :	
Final approval after unanimous positive advice	e advisory committe on <date>:</date>
Representative Executive Board (only if advice	committe was not unanimous):
Name & signature:	
EB approved/ disapproved on <date>:</date>	
>> To be stored in the director's archive <<	

Annex K; Consent Form for Interviews Title: **Researcher:** Date: If you are happy to participate in this study then please complete and sign the form below. Please initial the boxes below to confirm that you agree with each statement: Please Initial box: I confirm that I have read and understood the information provided before the interview and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. I understand that my responses will be kept strictly confidential. I understand that my name will not be linked with the research materials, and will not be identified or identifiable in the report or reports that result from the research. I agree for this interview to be recorded. I understand that the audio recording made of this interview will be used only for analysis and that extracts from the interview, from which I would not be personally identified, may be used in any conference presentation, report or journal article developed as a result of the research. I understand that no other use will be made of the recording without my written permission, and that no one outside the research team will be allowed access to the original recording. I agree that my anonymised data will be kept for future research purposes such as publications related to this study after the completion of the study.

To be counter-signed and dated electronically for telephone interviews or in the presence of the participant for face to face interviews

Date

Date

Signature

Signature

I agree to take part in this interview.

Name of participant

Principal Investigator

Copies: Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form, and the information sheet. A copy of the signed and dated consent form should be placed in the main project file which must be kept in a secure location.