



**Guidelines for the preparation of written reports  
at the Physical Geography and Landscape Ecology Section of  
the Institute for Earth System Sciences at  
Leibniz University Hannover**

Summer Semester 2024 / Winter Semester 2024/2025

Name, First name

Field of Study (e.g. Geography B.Sc.)

Student-ID/No.:

Semester of Study:

Supplementary field:

E-Mail:

Seminar / Course:

Supervisor:

WiSe/ SuSe:

Date:

# I Table of Contents

I	Table of Contents .....	II
II	List of Figures .....	II
1	General guidelines .....	1
2	Structure of the report .....	2
	2.1 Basic and formal information .....	2
	2.2 Structure of course assignments .....	3
	2.3 Structure of project and final theses .....	3
3	Quoting and citing .....	5
4	Using Artificial intelligence (AI) in written theses .....	6
5	Figures, Maps and Tables .....	8
6	List of references and sources .....	9
	6.1 Reference management .....	9
	6.2 List of references .....	9
	6.3 Data source directory .....	11
7	Appendices .....	12
8	Informative literature .....	13
9	Statutory Declaration .....	13

# II List of Figures

Figure 1: Soil development - a complex interplay of physical, chemical and biological processes (McKnight & Hess 2009, p. 453) .....	8
--	---

# 1 General guidelines

The title page of a written assignment should contain at least the following elements: the logo of the Section, the name of the Section, the Institute and the University, the title of the assignment, the author, the title of the course, in which the assignment was written, and the date. An illustration visualizing the topic can be added. Furthermore, the student ID should be noted on the title page. A simple title page design is shown on the first page of these guidelines.

The layout should be sophisticated but restrained. For written reports, the layout is single-column.

Formatting specifications for the text:

- Font: Serif font (such as Times New Roman) or sans-serif font (such as Arial or Calibri). The choice of font is a matter of taste. Serif fonts tend to be preferred for continuous text (see newspapers and books). For scientific reports, only a few simple fonts come into question. The three above mentioned fonts are most often used.
- Text font size: 11 pt (Arial) or 12 pt (Times New Roman, Calibri)
- Font size figure captions: usually 1 to 2 pt smaller
- Line spacing: between 1.15 and 1.3 lines
- Side margins: 2.5 cm
- Alignment: we recommend a justified alignment. This is common in books and written assignments. If hard copies need to be submitted, pages should be printed on both sides (duplex). Use consecutive page numbering. The cover page is counted as page I (Roman numeral), although the page number is usually not visible (for more on page numbering, see Section 2.1). For duplex prints, the odd-numbered pages should be on the right (front side) and the even-numbered pages on the left (back side). Blank pages are counted without a page number. The actual report begins with the introduction (page 1). If necessary, a blank page can be inserted before the introduction.

When writing a scientific report, clear formulations and relevant specialist terminology are to be used. Whether a report is written in the passive or active voice or in the "I" or "we" form should be clarified with the supervisor in advance.

It is also recommended to use gender-appropriate and non-discriminatory formulations. Gender-neutral formulations can be helpful. The report should meet formal as well as content-related quality standards. Scientific publications, textbooks, technical manuals and leaflets or data collected with scientific methods are to be used as sources. In individual cases, these can be supplemented by information brochures, newspaper articles, personal communications or similar non-scientific publications.

Be very careful when using internet sources (e.g. homepages or websites), as these sources can contain unchecked, erroneous content. In principle, internet sources should only be used if no corresponding literature is available. Homepages of official institutions, universities and authorities are suitable (BAADE ET AL. 2005). Concerning current data or exclusively online

available publications, internet sources can be an important supplement. PDF documents of scientific publications that can be accessed via the internet (e.g. articles from online archives of scientific journals) are not considered internet sources.

## 2 Structure of the report

### 2.1 Basic and formal information

The structure of a report varies depending on the type: In course assignments, a scientific topic is theoretically presented on the basis of available literature. Project and final theses also contain a methodology section in which new results are described and discussed in following sections.

Each report is preceded by a table of contents. The table of contents is followed by a list of figures, maps and tables, in which these are listed with their names, consecutive numbering and page references. The indexes are numbered with Roman numerals (I, II, III, ...), the page numbers on which the indexes are located also have Roman numerals. The actual page numbers in Arabic numerals (1, 2, 3, ...) begin with the first content chapter (usually the introduction).

The titles of the chapters should be short and meaningful. Decimal points should be used, with no dot at the end of the subdivision number (e.g.: 3.1.2 and not: 3.1.2.). A subdivision is only meaningful if at least two subtopics can be listed.

#### Example:

I	Table of Contents	II
II	List of Figures	III
III	List of Maps	IV
IV	List of Tables	IV
V	Abbreviations	V
	Abstract/Summary	VI
1	Introduction	1
2	Storms of the Mid-latitudes (...)	4
3	Tropical Cyclones	11
	3.1 Formation	11
	3.1.1 Requirements	11
	3.1.2 Development Phases	14
	3.1.3 Structures of a Tropical Cyclone	16
	3.2 Regional distribution and seasonal patterns	19
	3.3 Hazard potential	22
4	Tornados (...)	24
5	Conclusion(s)	33
6	List of References and Sources	34
7	Statutory Declaration	35

Abbreviations that are not commonly used can be listed in a list of abbreviations. However, it is also possible to insert them into the running text; in this case, the term must be written out the first time it is mentioned and followed by the according abbreviation:

"The 1:25.000 Topographic Map (TK25) shows contour lines and elevation points in addition to land use."

Comprehensive reports always contain a summary, in which the essential contents are repeated and presented in a compact form. The summary should not be longer than one page, precedes the introduction, is not listed in the table of contents and therefore does not have a table of contents number. If necessary, it may also be useful to add an English summary. Instead of a summary, an "Abstract" of about 300 words can be written.

The text section of the report is followed by a list of references (see section 5.2). If supplemental sources are used, an additional list of maps and geodata (see section 5.3) as well as a list of data sources (see section 5.4) are needed. In the case of self-created figures or maps, a list of figures or/and maps is useful when three or more are presented.

## **22 Structure of course assignments**

In course assignments, the introduction provides information about the topic and the objective of the assignment. This is followed by content-related chapters in which the topic is presented on the basis of literature sources. The structure of the chapters depends on the topic of the assignment. Course assignments conclude with a summary or conclusion(s) and - if appropriate - an outlook.

## **23 Structure of project and final theses**

Project and final theses generally follow the structure *Introduction, State of Science, Material and Methods, Results, Discussion, Conclusion or Conclusions (if necessary, Conclusion(s) and Outlook)*. The titles of the individual chapters may deviate.

The introduction provides a brief outline of the research problem. It should be clearly formulated and motivate the reader to read the thesis. At the end of the introduction, two to three research questions or hypotheses should be listed. These are derived from the research problem described in the introduction. An introduction usually contains the following components:

- (Current) Situation: Here the current situation for the thesis is described and thus the topic is introduced.
- Research Problem(s): Here the problem is defined from the initial situation to which the thesis is linked.
- Question(s): This is where the research questions or hypotheses are derived based on the problem.
- Research gaps: This is where you describe how your own thesis ties into these gaps.

The chapter *State of Science* provides a theoretical analysis of the current state of research. This is followed by a description of the materials and methods (*Materials and Methods*) which were used to investigate the question(s) formulated at the beginning. In the *Results* chapter,

the results of the study are presented in an appropriate form, supplemented by summarizing tables, graphs and maps. At the end of the report, a *Discussion* chapter analyses the results; and the afore presented state of research is also taken into account. The aim is to answer the research question(s) or, if hypotheses are used, to verify or reject them. The discussion should include a methods' review. A project or final thesis always concludes with a *Conclusion (if necessary, Conclusion and Outlook)*.

The approximate length is between 10.000 and 15.000 words for a bachelor's thesis and between 15.000 and 30.000 words for a master's thesis.

### 3 Quoting and citing

Scientific work requires the conscientious handling of a large number of sources. Any kind of sourced and/or cited content – whether literal or analogous - must always be marked with an according reference. A short reference is given in the text, which always provides a clear reference to the complete source citation in the list of references. Footnotes should be avoided if possible.

When citing a specific source that spans an entire paragraph and includes several sentences, the source should be cited once at the end of the paragraph.

Unmarked adoptions of other people's ideas are considered to be plagiarism and violate the principles of scientific work. Plagiarism is considered an attempt to deceive and, in serious cases, may lead to exmatriculation.

In the case of literal quotations or when numbers are quoted, the reference should be cited in a uniform style: the author, the year and the according page number(s). Word-for-word quotations should be put in quotation marks:

„Hurricane Katrina created the one of the worst natural disasters in the history of the United States“ (Link 2010, p.1).

Content that is not taken over word-for-word should be referenced with the name of the author and the year at the end of the sentence (before the end of the punctuation mark):

For the mitigation of tsunami damage, maps are created on the basis of historical records to enable an improved assessment of the risk (ZSCHAU ET AL. 2001).

Or for example:

According to GRÜNEWALD (2001) floods are the most common natural hazard worldwide.

If the source was written by two authors, both names are mentioned in the short reference:

... (DIKAU & POHL 2007)

If there are more than two authors, only the name of the first author is listed in the short reference and supplemented by the addition of "et al." (*lat.* et alii - and others):

... (ZSCHAU ET AL. 2001)

If you cite several publications by the same author from the same year, small case letters are assigned in the same way as in the list of references (see p. 5):

... (SCHÖNWIESE 2008a)

Only if an original literature source is not accessible, a secondary source can be cited:

... (HUMBOLDT 1817 cited in: WEISCHET & ENDLICHER 2008, p. 15)

In this case, the secondary source is listed in the list of references.

In the case of Internet sources, the author or publisher of the page and the year of the last update are indicated in the short reference:

... (UBA 2009)

## 4 Using Artificial intelligence (AI) in written theses

### The following applications of AI are not allowed:

- The generation of core content:
  - The use of AI to generate the main text of academic theses is not permitted. The reason for this is that academic writing, analysing and structuring are core competencies that should be learned during university studies. This includes the independent formulation of ideas, the development of arguments and critical reflection. In addition, AI statements can be incorrect, incomplete or distorted.
  - AI statements can be inaccurate. AI does not access academic libraries.
- The concealment of plagiarism through rephrasing:

The use of AI to reformulate sentences from third-party content for use in one's own scientific work without labelling the third-party content used constitutes plagiarism.

- Summarising your own texts:
  - Writing summaries (e.g. for a thesis abstract) is an important academic skill that students should develop themselves.
- Generating images (e.g. "illustrations" of environmental damage):
  - Illustrating seemingly existing facts through AI can be misleading and undermine scientific credibility.

### The following applications of AI are allowed:

- Linguistic improvement:
  - AI can be used to improve grammar, style and spelling. However, training your own ability to write scientific texts is important and should not be replaced by AI from the beginning.
- Translations:
  - The use of AI to translate texts is permitted, but students must check the accuracy and appropriateness of the translation themselves.
- Organising and structuring topics:
  - AI can help to structure topics, for example for lectures or term reports. However, students are responsible for developing their own questions, setting their own foci and structuring their work logically.

### AI can be applied in the following case:

- Programming assistance through AI:
  - AI can assist with programming (in Excel, R, Python, etc.), provided this is in line with the teacher's guidelines and instructions. However, students should ensure



that they have sufficient knowledge of the respective programming language and independently check the correctness of the AI suggestions.

**The following applications of AI are strongly discouraged:**

- Summarising scientific literature:
  - The use of AI to summarise texts (by uploading PDFs to corresponding tools) is not recommended.
  - The review of texts and their critical evaluation is a core competence of scientific work.

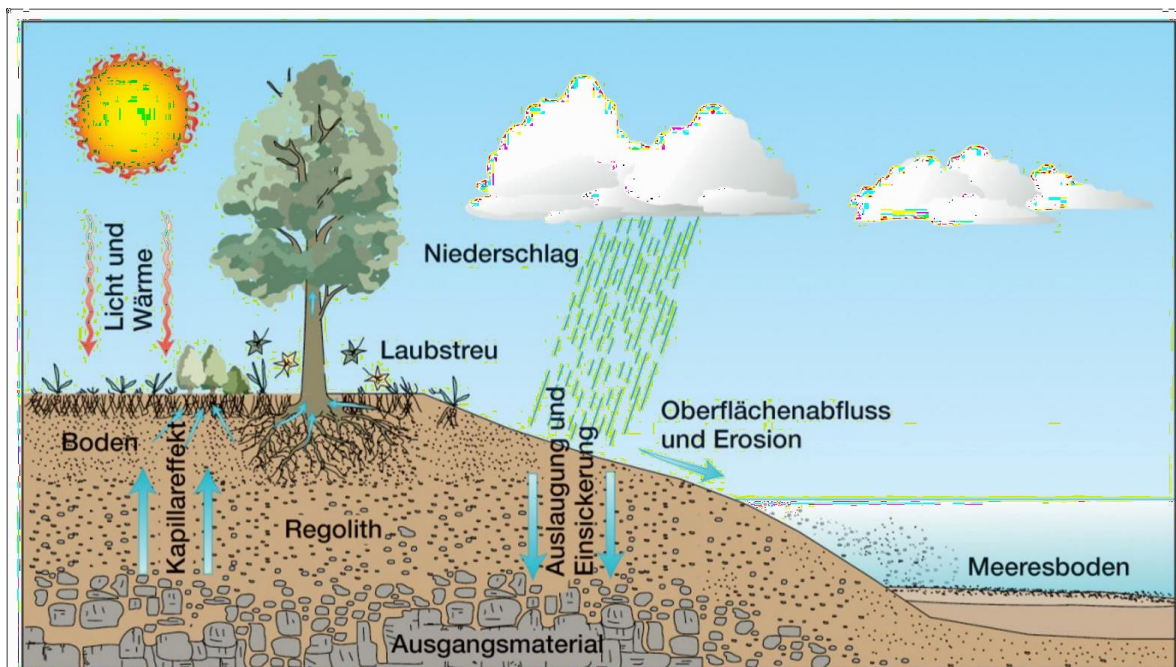
**Documenting the use of AI:**

- Transparency:
  - Students must disclose any use of AI in their work. This includes naming the AI tools used, the scope of their application and the purpose of their use.
  - The documentation of the use of AI must be clearly documented in the methods section of the thesis.
  - The declaration is part of good scientific practice and promotes transparency and trust between students, examiners and readers. It also facilitates compliance with the terms of use of the respective tool or technology.
- Traceability:
  - For the assessment of a student's individual performance, it is important that the contributions generated by AI are clearly and separately documented from self-generated content.

## 5 Figures, Maps and Tables

Figures (graphics, photos, diagrams), maps and tables should be imaginative, meaningful, easy to read and clearly arranged. They should be suitably integrated into the running text and commented on.

Figures and maps are each numbered consecutively and have a figure capture placed below the figure or map. Tables are also numbered consecutively and have a table capture placed above the table. If a figure is copied directly or only slightly modified from a publication, the source must be indicated. Figure 1 shows an example. If self-produced illustrations are based on templates, the source must also be cited here with the prefix "Own illustration based on ...".



**Figure 1: Soil development - a complex interplay of physical, chemical and biological processes** (from MCKNIGHT & HESS 2009, p. 453).

Figures and maps should be clearly structured, reasonably detailed, and technically well executed.

A complete legend, a scale bar and, if necessary, a map grid with coordinates must be included on every map. Map titles describe the depicted facts (subject) and landscape section (geographic location) and are necessary if the information mentioned is not indicated in the caption. Self-created maps should contain the name of the author, the date of creation, name the University, the Institute and Section and, if possible, also contain the Section's logo. In addition, the used geodata sources should be indicated according to the guidelines in Section 5.3. Always use the official citation style. Tables should be well organized and easy to read. A uniform table layout is desirable within a report. For a better overview, important figures can be highlighted. In certain cases, it may be more appropriate to present table contents as figures. Extensive tables should be avoided altogether in the text; tables with primary data should be listed in the (digital) appendix.

## 6 List of references and sources

The report is followed by a list of references and list of sources, which includes each publication mentioned or cited in the text with all necessary reference information.

### 6.1 Reference management

For the management of literature sources, it is recommended to work with an appropriate literature management software (e.g. the open source program Zotero or the campus-licensed program Citavi). Always use a consistent citation style throughout the report. A possible citation style for integration into such a management program is available on the Section's website as a .ccs-file (<https://www.phygeo.uni-hannover.de/en/teaching/thesis>). These can also be used to generate short references in the text and to automatically create reference lists. In addition, it is possible to search for literature online in various databases. Leibniz Universität Hannover has a campus license for the *Citavi* software, which is available to all members of the University. The TIB offers consultations and information on *Citavi* (<https://www.tib.eu/en/learning-working/reference-management>).

### 6.2 List of references

The list of references should include all cited sources in alphabetical order by name of authorship. These pages count as part of the report and must therefore be numbered accordingly. In contrast to the short reference, all authors are listed by name in the this reference list, even if there are more than two authors. If there are several publications by the same author, they are listed chronologically. If more than one citation has the same author(s) and the same year, the list is sorted alphabetically according to the beginning of the title and the year is supplemented by lowercase Latin letters starting with a, b, c and so on:

SCHÖNWIESE, C.-D. (2008a): Climate change and the water cycle - Some information concerning precipitation trends. In: ZEREINI, F. & H. HÖTZL (Ed.) (2008): Climate Changes and Water Resources in the Middle East and North Africa. Berlin, Heidelberg, 15-28.

SCHÖNWIESE, C.-D. (2008b): Klimatologie. 3. Auflage, Stuttgart, 472 p.

In the case of several editions, the most recent one should always be used and marked with an appropriate addition in the list of references.

The structure of the reference information depends on the type of publication:

#### Monograph:

AUTHOR (Year): Title. Subtitle. Place of publication, number of pages.

DIKAU, R. & J. WEICHSELGARTNER (2005): Der unruhige Planet. Der Mensch und die Naturgewalten. Darmstadt, 191 p.

#### Series work:

AUTHOR (Year): Title. Subtitle. Series Volume, Place of publication, number of pages.

NETELER, M. (2000): GRASS-Handbuch. Der praktische Leitfadens zum Geographischen Informationssystem GRASS. Geosynthesis Band 11, Hannover, 247 p.

Essay in an anthology:

AUTHOR (Year): Title. Subtitle. In: AUTHOR (Ed.): Title anthology. Subtitle anthology. Series Volume. Place of publication, page number.

DIKAU, R. & J. POHL (2007): „Hazards“: Naturgefahren und Naturrisiken. In: GEBHARDT, H., R. GLASER, U. RADTKE & P. REUBER (Ed.) (2007): Geographie. Physische Geographie und Humangeographie. München, 1029-1077.

Journal article:

AUTHOR (Year): Title. Subtitle. In: Journal/newspaper, Year, Issue no., page number.

EDWARDS, R. (2008): Sea levels: science and society. In: Progress in Physical Geography, Vol. 32, No. 5, 557-574.

WISNER, B. (2007): Regions at Risk or People at Risk? Wie natürlich sind „Naturkatastrophen“? In: Geographische Rundschau, Jg. 59, H. 10. 1218.

Unpublished work:

AUTHOR (Year): Title. Subtitle. Type of work, Place, number of pages.

PREPERNAU, U. (2006): Die Landwirtschaft Teneriffas und deren Wasserversorgung – Bestandsaufnahme und Prognose für das Jahr 2016. Unveröffentlichte Diplomarbeit am Institut für Physische Geographie und Landschaftsökologie, Hannover, 104 p.

Internet sources:

For sources from the Internet, the author or publisher of the source is followed by the year of the last update and the title of the document. In addition, the complete HTML address with the date of the visit of the page(s) is listed.

AUTHOR (Year): Title. Subtitle. URL, Accessed on: Date.

UBA (UMWELTBUNDESAMT) (2009): Stadtböden – Boden des Jahres 2010.  
[www.umweltbundesamt.de/boden-und-altlasten/boden/stadtboden.htm](http://www.umweltbundesamt.de/boden-und-altlasten/boden/stadtboden.htm).  
Accessed on: 31.03.2010.

Verbal and written communications:

COMMUNICATOR (Year) (Institution): Verbal or written communication on: Date.

BUSSIAN, B. (2010) (Umweltbundesamt): Verbal communication on: 08.02.2010.

STROTDREES, J. (2010) (Landwirtschaftskammer Niedersachsen): Written communication on: 08.02.2010.

Maps or geodata are listed in a separate directory. A unique abbreviation should be used as a short reference for maps and geodata in the text or in maps. For this purpose, use the same abbreviations usually used by the issuing institution or person in combination with the sheet number, such as "TK 3623" for the "Topographic Map, Sheet 3623" or "BÜK 50" for the "Soil Survey Map, Scale 1:50.000. The abbreviation is highlighted in bold in the geodata directory at the beginning of the full reference.

#### Maps:

Abbreviation NAME OF ISSUING INSTITUTION (Ed.) (Year): Title.

Subtitle. Scale. Place.

TK 3623: LGLN (LANDESAMT FÜR GEOINFORMATION UND LANDESVERMESSUNG NIEDERSACHSEN) (Ed.) (2005): Topographische Karte 1:25.000, Blatt 3623, Gehrden. Maßstab 1:25.000. Hannover.

#### Geodata:

Abbreviation NAME OF ISSUING INSTITUTION (Year): Title.

Available at: URL

CLC2006: UBA & DLR-DFD (UMWELTBUNDESAMT & DEUTSCHEN ZENTRUMS FÜR LUFT- UND RAUMFAHRT - DEUTSCHE FERNERKUNDUNGSDATENZENTRUM) (2006): CORINE Land Cover (CLC2006). Available at: [http://www.corine.dfd.dlr.de/datadescription\\_2006\\_de.html](http://www.corine.dfd.dlr.de/datadescription_2006_de.html)

### **6.3 Data source directory**

In addition to maps and geodata, all other data sources used in the thesis must be named in a separate list. This includes data from third parties (secondary data) such as statistics collected by public authorities, but also data collected by the authors themselves, e.g. through measurements, surveys or field mapping (primary data). For secondary data, the data source list should indicate who provided the data and how it was obtained, if necessary. Primary data are named in the data source list and should be attached to the report in an electronically readable form on a data storage device (USB stick) or via an online repository. The structure of the collected primary data should be documented on the data storage device. Complex data should be prepared or aggregated in consultation with the supervisors of the thesis.

### Primary data:

AUTHOR (Year): Title. Subtitle. Provided in digital appendix,  
List in digital appendix.

STEINHOFF, B. (2014): Kartierung Standortliches Trockenstressrisiko im Kanton  
Basel-Landschaft. Bereitgestellt im digitalen Anhang,  
Digitaler\_Anhang\Primärdaten\ Kartierung\_Trockenstressrisiko.

### Secondary data:

AUTHOR (Year): Title. Subtitle. URL, Accessed on: Date.

DESTATIS (Statistisches Bundesamt) (2016): Landwirtschaftliche Betriebe.

Landwirtschaftlich genutzte Fläche nach ausgewählten Hauptnutzungsarten.  
[www.destatis.de/DE/ZahlenFakten/Wirtschaftsbereiche/LandForstwirtschaftFischerei/LandwirtschaftlicheBetriebe/Tabellen/LandwirtschaftlicheBetriebeFlaechenHauptnutzungsarten.html](http://www.destatis.de/DE/ZahlenFakten/Wirtschaftsbereiche/LandForstwirtschaftFischerei/LandwirtschaftlicheBetriebe/Tabellen/LandwirtschaftlicheBetriebeFlaechenHauptnutzungsarten.html).  
Accessed on: 08.11.2016.

## **7 Appendices**

Analog and digital appendices summarize supplemental data and methods which were used in the report as well as results not described in detail in the report. Appendices therefore include extensive tables or other data collections, laboratory results or calculation methods, which would unnecessarily interrupt the flow of reading and are only of secondary importance for the understanding of the report. It is necessary that the data, methods or results of the appendices are indicated in summary form in the according section of the report. The individual parts of the appendix should be numbered logically, but the pages of the appendix are no longer numbered and are not added to the number of pages of the report.

Result maps that are not discussed in detail in the results section of the thesis are typical for geographic theses and should be included in the analogous appendices. Survey or mapping sheets prepared for the collection of primary data should also be included in the appendix.

The digital appendix should include a PDF version of the printed thesis, all primary data collected as part of the thesis and the results of models used in the thesis. The structure of the digital appendix and the stored data must be documented in a comprehensible manner. If available, data sharing agreements for third-party data should be included in the appendix.

## 8 Informative literature

BAADE, J., GERTEL H. & A. SCHLOTTMANN (2005): Wissenschaftlich arbeiten. Ein Leitfaden für Studierende der Geographie. Bern, Stuttgart, Wien, 236 p.

BORSODORF, A. (2007): Geographisch denken und wissenschaftlich arbeiten. 2. Auflage, Berlin, Heidelberg, 193 p.

ECO, U. (2010): Wie man eine wissenschaftliche Abschlußarbeit schreibt. 13. Auflage, UTB GmbH, 270 p.

KRUSE, O. (2007): Keine Angst vor dem leeren Blatt: Ohne Schreibblockaden durchs Studium. 12. Auflage, Campus Verlag, 266 p.

## 9 Statutory Declaration

*"I hereby declare in lieu of oath to the Institute of Earth System Sciences of the Leibniz University of Hannover, that the present work - **Title** - was prepared independently and only with the help of the sources and aids mentioned in the list of references. All passages of the work, which were taken from other works in the wording or the sense, are marked. I agree with the transfer of my work to external services for plagiarism check by plagiarism software."*

Statutory Declaration

-----

Place, Date

Signature