## Carrying out a Bachelor's or Master's thesis in the Conservation Biogeography Lab

Geography Department, Humboldt-University Berlin

Tobias Kuemmerle and team

This guideline describes the supervision framework for a Bachelor or Master thesis at the Conservation Biogeography Lab, as well as the major steps to be taken, from discussing potential topics to submitting the thesis. Please read this document carefully – and follow these guidelines.

Is the Conservation Biogeography Lab the right place for me and my thesis? – Humankind is rapidly transforming the planet, with major consequences for nature and human well-being. Finding ways to use natural resources sustainably while protecting biodiversity is perhaps the greatest challenge we currently face. Land use is central to this challenge, as it is essential for human survival, yet also the main driver of biodiversity loss - and it interacts with other extinction drivers, such as overexploitation and climate change. Against this background, the Conservation Biogeography Lab addresses three overarching research questions:

- 1. How do land systems change?
- 2. How is biodiversity impacted by human pressures?
- 3. Which strategies can balance conservation and other land uses?

Land systems are typically at the center of our research. A focus on land systems (= coupled humannatural systems on the land) enables us to put emphasis on the interactions between people and their environment, to explore dynamics in space and time, and assess links across spatial scales. We are convinced that precisely these aspects of land use are key for understanding biodiversity loss, trade-offs between resource use and conservation, and what characterizes successful conservation interventions. You can read more about our research here: <u>http://hu.berlin/Biogeography</u> >> <u>Research</u>

*For carrying out a thesis in the Conservation Biogeography Lab, you should be interested in at least one of the above questions.* More broadly speaking, you should be keen on learning about issues of global change and how it manifests in regions, about interactions between people and their environment, about understanding patterns of biodiversity, and about how to confront threats to biodiversity through conservation. In the Conservation Biogeography Lab, we typically work interdisciplinarily, often with an emphasis on quantitative and spatial tools, for example, spatial statistics, regressions modelling, econometric models, GIS, remote sensing, habitat or population models, connectivity analyses, or spatial simulation tools. We often work in large and international teams. The working language of our group is therefore English.

For a successful thesis in our group, you should feel broadly comfortable with the general research modes outlined above. A good knowledge in statistics (and R) and GIS is a prerequisite for most topics we offer and a thesis with us will be most beneficial if you have visited several of our <u>classes</u>.

**Finding a topic for a thesis** – A thesis can be carried out with different motivations, for example, to deepen your knowledge of a particular field, get better at particular a method, learn an analytical tool, or get insights into ongoing research projects in our group. While we do not expect you to approach us with a ready-to-go thesis topic, we do expect that you have reflected on what you would like to put into focus in your thesis - thematically or methodologically. Both our <u>classes</u> and our ongoing <u>research</u> projects and <u>publications</u> could be useful starting points for thinking about this. The theses we offer are often part of a research project, and thus you would be working closely with a postdoc or PhD student in our group. If you already have a specific and well-defined topic in mind, for example, one that arose from an internship, the main question will be whether we can supervise and evaluate your thesis. Another limiting factor, for all kinds of theses, is the number of Bachelor's and Master's theses that we already supervise at the time when you approach us.

**The next step: writing a thesis proposal** – Once we have agreed on a topic, a thesis proposal (aka outline or exposé) is written. This exposé includes:

- 1. A background and rational section (i.e., *Why is this an interesting and worthwhile topic? What is the state of knowledge, and what are research gaps?*),
- 2. Clear research questions and objectives (i.e., *What will be done? What are central hypotheses to test and/or major steps to be taken?*),
- 3. A proposed research plan that provides a summary of the planned analyses for each objective, what data is needed for them, and what the expected outcome will be (i.e., *How will the questions and objectives be addressed?*).

This proposal is typically 3-5 pages long and can consist of bullet points – the idea is to arrive at a 'cooking recipe' that will guide you through the rest of the thesis. Writing the proposal is an iterative process – typically taking a few rounds of feedback and revisions. Once a proposal is accepted, the thesis <u>must</u> be officially registered (i.e., started) with the study examination board (i.e., <u>Prüfungsbüro</u>) – please familiarize yourself with the <u>regulations there</u>. We will not allow presentations (full talks) in the <u>colloquium of theses that are not registered</u>.

Before registering you also need to decide on formal supervisors. One of your supervisors needs to be a professor in the Geography Department of HU Berlin. Your second supervisor does have to have at least a Master's degree (for Bachelor students) or a PhD degree (for Master's students). In case your second supervisor is not a professor at our department <u>and</u> not on the <u>list of examinators</u>, you must follow the <u>steps outlined in the regulations around appointing examinators</u>. The same is true for external supervisors and examinators not from the Geography Department (e.g., from another university, research institute, or from an NGO). If you plan to have external supervisors, please discuss this with us before applying for this with the Examination Board (Prüfungsausschuss).

**Feedback during the thesis** – While working on your thesis, report on your progress, particularly if you run into major problems or if you would like to discuss the main intermediate results and their interpretation. In general, do not hesitate to get in touch when you need feedback. For a thesis carried out within a research project, feedback will primarily come from the respective postdocs or PhD

students (normally your supervisors). A primary forum for feedback and discussion of your thesis is furthermore the student colloquium.

**Colloquium presentations** – The <u>Biogeography Colloquium</u> provides a space for students writing their Bachelor's or Master's thesis with us to present their work and receive feedback on it. The colloquium also helps prospective students to develop their ideas for possible future thesis topics and is a friendly forum for practicing and improving presentation, discussion, and communication skills. There is a <u>Moodle forum</u> that you can join at any time.

All Bachelor's or Master's theses students are required to present their work at least twice. Bachelor students present a short flashtalk (5 minutes) during the conceptualization phase of their work, and a full talk (15 minutes) at a stage when the first results are available. Master students present a full talk on the concept of their theses and first results (15 minutes) and defend their thesis after submission (30 minutes). All presentations are followed by intensive discussions. These presentations aim to provide students with constructive feedback and with opportunities to critically discuss methodological and thematic aspects of their projects with a wide range of peers (fellow students, PhD students, postdocs, and faculty members). As the working language of the group is English, the presentations and discussion in the colloquium will be in English as well.

We expect <u>regular participation</u> in the colloquium from all students writing theses with us. Only through active participation will you have the chance to provide feedback to your peers and to learn about their work. And when you present, you will appreciate their feedback as well.

All presentations take place during the teaching term, therefore <u>please register for talks as soon as</u> <u>possible!</u> Experience shows that slots fill up quickly and we are not going to offer extra slots in the time between terms. If you would like to present, please write an email to Camille Dammann (<u>camille.dammann@geo.hu-berlin.de</u>) to reserve a slot, including the following information: (1) title of your presentation, (2) mention if it is a flash talk / full talk/thesis defense, (3) a short abstract (70-150 words) and (4) preferred date. <u>We will not reserve a slot for you if any of this information is missing (e.g.</u> <u>title or abstract</u>). The latest possible time to reserve a slot is two weeks before the presentation! Finally, make sure that all your theses supervisors can attend the presentations when deciding on a date. We expect external supervisors to be present during full talks and MSc defenses. Finally, when preparing presentations, please **use the HU template** provided on Moodle and follow the guidelines for presentations (e.g., max # slides and time).

**Writing your thesis** – Writing your thesis should be an ongoing process - please avoid 'writing it all up' in a rush during the very end. The most important characteristic of a high-quality thesis is that it is consistently so – from motivating the research question to discussing the results in light of other research. Plan in the necessary time to get to this level of depth and do not trade off another analysis for a well-written discussion section! The format of the thesis itself is regulated in your <u>Studien- und Prüfungsordnung</u>. We encourage thesis that are written in English and, at the MSc/MA level, are in the form of a research paper. <u>Additional guidelines</u> are specified by the Examination Board (*Prüfungsausschuss*).

**Submitting your thesis** – You submit your thesis once it is ready (or the deadline approaches). In case you need a review in less than the time allocated in the respective study program, for example, because of a pending job offer or fellowship application, please contact us <u>early on</u> to discuss this.

Once you have submitted your thesis, <u>you must prepare a short summary</u> for <u>our webpage</u>. This simply can be the abstract of the thesis, plus a key figure and/or photo, please use only materials that can be shown on our website and provide the photo credits. Please send these materials to Camille Dammann (<u>camille.dammann@geo.hu-berlin.de</u>). We will only submit our grades to the examination board once you have provided these materials.

Finally, if you are a Master's student, your <u>thesis defense</u> will take place in the colloquium after you have submitted it, but typically after it has been graded. Again, be aware that your defense should take place during the teaching term and book a slot in the colloquium early on!

## Key steps to a successful thesis in the Conservation Biogeography Lab

1. <u>Generate an idea</u>

Before you contact us: think about what interests you, what your thesis should or could be about, and what you would like to learn during your thesis!

- 2. Develop the idea together with us
  - a. Discuss your ideas with us
  - b. Write a thesis proposal this will be an iterative process together with you supervisors.
  - c. Finalize your thesis proposal.
- 3. Register your thesis
  - a. Once the expose is finished, register the thesis officially with the Examination Office (*Prüfungsbüro*)
  - b. Prior to registering: decide on formal supervisors.
  - c. Book slots for your talks in the colloquium (only possible once you have registered!)
- 4. Working on your thesis
  - a. Implement the work and report on progress. Get in touch when there are problems.
  - b. Participate <u>regularly</u> in the colloquia.
  - c. Get the writing going early on!
- 5. <u>Colloquium presentations</u>
  - a. For Bachelor students: present the thesis idea (Flashtalk: 5mins, max. 5 slides).
  - b. For Bachelor and Master students: present your concept and first results in a longer presentation <u>(full talk: 15mins, about 12-15 slides)</u>
  - c. For all presentations: use our template for presentations! ( $\rightarrow$  Moodle)
- 6. Submitting the thesis
  - a. Submit the thesis to the Examination Office (Prüfungsbüro)
  - b. Write a summary with 1-2 key figures/photos for the webpage and send it to us
  - c. For Master students: thesis defense in the colloquium (format see study regulations).
- 7. <u>Celebrate!</u>