

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

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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 it!

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 has large synergistic effects with other extinction drivers, such as overexploitation and climate change. Against this background, the Conservation Biogeography Lab addresses three overarching research questions:

1. Where, when and why does land use change?
2. How does land-use change impact biodiversity, and how does it interact with other threats?
3. Which conservation strategies balance biodiversity and resource use at different spatial scales?

Land systems are typically in the center of our research. A focus on land systems (= coupled human-natural 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 to assess links and feedbacks across spatial scales. We are convinced that precisely these systemic 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 focus [here](#).

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 nature, about understanding threats to biodiversity and about how to confront them. In the Conservation Biogeography Lab, we typically work with quantitative and spatially-explicit tools, for example geostatistics, advanced regressions modelling, econometric models, GIS, remote sensing, habitat or population models, connectivity analyses, or system simulation tools. We work highly interdisciplinary, often in large and international teams, and the working language of our group is English.

For a successful thesis in our group, you should feel broadly comfortable with the thematic and methodological research mode outlined above. A thorough knowledge in basic statistics and GIS is mandatory for most topics we offer and a thesis with us will be most beneficial if you have visited several of our [classes](#).

Finding a topic for a thesis – A thesis can be carried out with different motivations, for example with the goal to deepen your knowledge of a particular field or method, or to get insights into ongoing research 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 [classes](#) and our ongoing [research projects](#) and [publications](#) could be starting points for thinking about this. The theses we offer are typically 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 this thesis. Another limiting factor, for all kinds of theses, is the number of theses that we are already supervising when you approach us.

The next step: writing a thesis proposal – Once we have agreed on a topic, a thesis proposal (exposé) is written that includes:

1. A background and rationale section (i.e., Why is this an interesting and worthwhile topic?),
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 should typically be 3-5 pages 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. Once a proposal is accepted, the thesis must be officially registered (i.e., started) with the study board ([Prüfungsbüro](#)).

Prior to registering you also need to decide on formal supervisors. One of your supervisors needs to be a professor at the Geography Department. Your second supervisor does not have to have at least a Master’s degree (for Bachelor students) or a PhD (for Master’s students). If you plan to have external supervisors (e.g., from another university or outside academia), please do 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 main results and their interpretation. For a thesis carried out within a research project, such feedback should be primarily obtained from the respective postdocs or PhD students. A primary forum for feedback and discussion of your thesis is the student colloquium.

Colloquium presentations – Both Bachelor and Master students are expected to present their work at least twice in the student colloquium. For Bachelor students, your first presentation will be a flashtalk (5 minutes, maximum 5 slides) after we have agreed on a thesis proposal. This flashtalk presentation serves the purpose to get feedback on your initial idea. Once you have obtained first results, and ideally at a point when you can still incorporate feedback, you will have a longer presentation (15 minutes, about 12 slides). For Master students, your first presentation should introduce the concept and first results that were obtained (15 minutes, about 12 slides). Your second presentation then will be the defense of your

MSc thesis, once it has been graded (i.e., about 1-2 months after handing in). The format of this defense is regulated in your [Studien- und Prüfungsordnung](#).

All presentations take place during the teaching term (i.e. until ca. mid-Feb in winter and ca. mid-July in summer). As the colloquium tends to fill up quickly, book slots for your presentations early on! When booking send a title and a short abstract (2-5 sentences) to Camille Dammann – we will re-open slots to other students if these are missing. The colloquium is a place not only to present your own work and get feedback on it, but also to see and learn from what others do. We expect regular participation of the thesis students in our lab in our Student Colloquium!

Writing your thesis – Writing your thesis should be an ongoing process - please do 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 [Studien- und Prüfungsordnung](#). We encourage thesis that are written in English and, at the MSc/MA level, are in the form of a research paper. [Guidelines for the latter](#), especially regarding the length of the thesis, have been 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 quick review that is shorter than the time allocated in the respective study program, for example because of a pending job offer or fellowship application, please contact us *early on* to discuss this. Once you have submitted your thesis, you must prepare a *short summary* (this can be the abstract) of your thesis with one or two key figures and/or photos for our webpage (use only materials that can be shown on our website and provide the photo credits). Please send these materials to Camille Dammann (camille.dammann@geo.hu-berlin.de). If you are a Master student, your *thesis defense* will take place in the colloquium after your thesis has been graded. Be aware that your defense should take place during teaching term and book a slot in the colloquium early on!

Key steps to a successful thesis in the Conservation Biogeography Lab

1. Generate an idea

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.
- c. Finalize your thesis proposal.

3. Register your thesis

- a. Once we have agreed on a topic and outline, register the thesis officially with the Examination Office (*Prüfungsbüro*)
- b. Prior to registering: decide on formal supervisors.

4. Working on your thesis
 - a. Implement the work and report on progress. Get in touch when there are problems.
 - b. Participate regularly in the colloquia.
 - c. Get the writing going early on!
5. Colloquium presentations
 - 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 (*full talk: 15mins, 12 slides*)
 - c. For Master students: thesis defense (format see study regulations).
 - d. For all presentations: use our template for presentations! (→ Moodle)
6. Submitting the thesis
 - a. Submit the thesis to the Examination Office (*Prüfungsbüro*)
 - b. Write a summary / abstract with 1-2 key figures/photos for the webpage and send this to Camille Dammann
7. Celebrate!