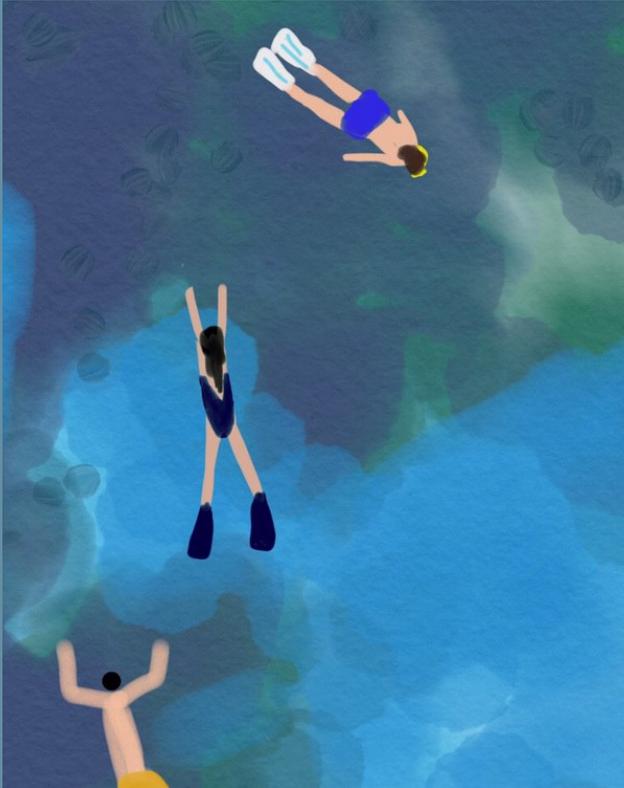


AGROECOLOGY STUDENT HANDBOOK

FROM YOUR LOVING ALUMNI
N M B U



FALL 2019

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TABLE OF CONTENTS

1. INTRODUCTION

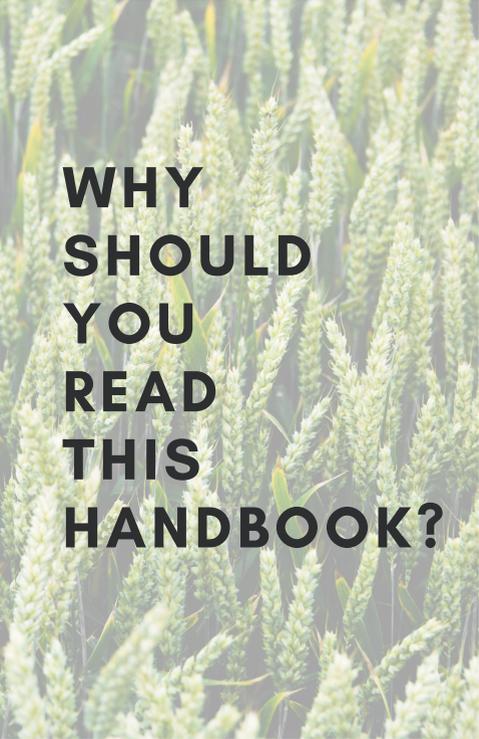
2. GENERAL THEMES

3. A TRANSECT WALK THROUGH THE
FIRST SEMESTER

4. RESEARCH PROJECTS

5. AN AGROECOLOGY WIKI

INTRODUCTION



WHY SHOULD YOU READ THIS HANDBOOK?

This handbook is for you who are not (yet) familiar with the agroecology approach at NMBU (and SLU), and are eagerly seeking in-depth knowledge and skills to drive change in agrifood and -forestry systems, and beyond. You want to make the most of this educational opportunity, discover your value-adding role and create your pathway. It is even meant for you outside the program who does not necessarily study agroecology, and wants a peek into our approach. This handbook is for everyone.

INTRODUCTION

WHAT IS THIS HANDBOOK?

This document is a prototype of what we believe Agroecology students need before starting their first semester, and what comes after. It is dynamic and in constant remaking because we hope every year students will edit the handbook, so it evolves based on the contents of the course and experiences that are linked to them. The first two chapters are about the first semester at NMBU, PAE302: Action Learning in Farm and Food Systems. The concepts, tools and methods that will be introduced in the course - you will work with these to incorporate them in a way that makes sense to you. The handbook is also a place to share our reflections on how we relate our agroecology education to our current work. There are more chapters online: www.agroecology.se/handbook, which cover later semesters, exchange, special projects, resources and getting into your career. We will also illustrate how to mobilise the university resources now at your disposal to construct the most fulfilling experience.

INTRODUCTION

ABOUT THE AUTHORS OF THIS LIVING DOCUMENT

This handbook is an ongoing project led by the Student Handbook Collective. It is participatory and inclusive so everyone's ideas and contributions are welcome. It is written by: people involved with the course - previous agroecology students, fellow students in related programs who also work with agroecology, and with insights from members of the program. However, it is influenced by many more: two workshops were held at SLU in May and NMBU in June 2019 with current and former students, to address how we support each other in the student-to-career pathway. The text also reflects conversations over the years between former and current students. The handbook is only as valid as it is continually built and re-written - this is the first edition.

Contributing authors of the 2019 Edition, NMBU

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Maybe you are an author!

Use the website at <http://agroecology.se/handbook> and add comments to any page, and it will be incorporated into future versions.

GENERAL THEMES

In the face of rapidly unfolding social and environmental crises, the problems of our time are messier and more complex than ever before. Therefore, as agroecologists we must be prepared to cope with our rapidly changing future. Today's "wicked problems" (i.e. threats to biodiversity, loss of indigenous knowledge systems, soil degradation, and corporate concentration of the food sector) cannot be solved through the work of a single discipline, but are located at the juncture of social, economic, political, cultural and environmental crises. As a result, we see that our learning context must also change. Wicked Problems require different frameworks, tools and an adaptive mindset when we deal with the real problems out there.

GENERAL THEMES

The agroecology program gives us a specially designed toolset as a learning outcome, a thoughtful approach to larger systems awareness and problem solving to avoid some of the mistakes made in our agrifood history. The Green Revolution brought about our current luxurious lifestyle, but with climate change, globalisation and the commodification of food, our knowledge about agriculture is changing fast.

We need adaptive and competent change agents to facilitate a transition toward sustainable agrifood systems. In order to take part in this transition, we must learn how we learn and respond to these complexities.

This calls for us to become autonomous learners and explore how knowledge is created, whether during or at the end of a process, through singular or collaborative efforts, focusing into a discipline or zooming out to see the bigger picture. There are several themes that will stay in your memory long after this semester is over. In order to establish a comprehensive understanding of the semester, we will explore some of these themes in depth.



GENERAL THEMES

REDUCTIONIST VS SYSTEMS THINKING

Systems thinking is an unconventional approach to learning in higher education, but it is CRUCIAL to agroecology. Conventionally, knowledge is broken down into disciplines with theoretical approaches that distinguish one component of a situation from another. Although we live in and work in, on and with a world of systems, we are often unconscious of their influence.

A systems thinking approach is a gateway to seeing interconnections within a dynamic flow of interaction. Very succinctly, thinking in systems means when we look at the whole of a situation, it is different than the sum of its parts. A farm, for example, involves multiple inter-relationships and human decision-making, which makes it complex and dynamic. It is at once an ecosystem consisting of an ecology of organisms, a human culture with social practices involving accumulation of contextual skills and knowledge, cultivation and production that are rooted in meaning, and a business enterprise that interfaces with economic markets.



GENERAL THEMES

REDUCTIONIST VS SYSTEMS THINKING

Therefore, the study of agroecosystems must involve the contemplation of its components, inputs, as well as the system's broader context: relationships to the outer world community and boundaries. We need to consider it as a whole, with a holistic approach. While research on individual components of the system is often essential, this work is most valuable when conducted with an appreciation of the whole system in mind.

When we fixate on one component of the situation we are not just missing out on the rest of the picture, but we are altering the situation with cascading, unintended consequences that may turn things drastically for the worse.

What is conventionally considered a "solution" to one problem can often create problems somewhere else. A systems thinking approach not only helps us understand situations better, but it also helps us design interventions and create improvements to move towards an improved future state.

GENERAL THEMES

AUTONOMOUS LEARNING

Despite how we are educated in school, with a formal class structure and assessment criteria, most learning happens casually. Just-in-time learning is a concept in adult education that explains how our motivation to understand something derives from its relevance to us. A good way to think about this concretely is how we learn a foreign language. Conventional classroom instruction can only give us so much understanding of language. We really learn to communicate in another tongue because we are immersed in another culture where we read, speak, and write to meet our needs.

In agroecology, we deal with messy, complex systems where the breadth of knowledge and skills needed is too much for any one person to handle. It is our job to identify what skills and knowledge we need to tackle a situation, whether it is social justice, seed sovereignty, or carbon sequestration. As autonomous learners, agroecologists mold their learning landscape to appropriately address the situation at hand, breaking old habits of thought.

This mode of learning is very different from the traditional classroom experience, where we are taught to think about the world through frameworks and models, but this is exactly the approach we must take when we ultimately leave university for a career. Critically, when we develop our own autonomy, we become more able to lead change at the fast pace, and with the flexible creativity, needed to approach urgent or even crisis situations. Autonomy of our own purpose, mixed with collaboration with other empowered people, can be an unstoppable combination.

GENERAL THEMES

HOW DO WE LEARN WHAT WE LEARN: UNDERSTANDING HOW OUR MINDS WORK



Before we can understand the world around us we must understand ourselves. One key aspect of self-understanding for an agroecologist is our personal approach to learning. It is crucial as autonomous learners that we know best how we internalise information so we can be confident when we must find something out for ourselves and validate our learning. A seminal figure for understanding how we approach learning is David Kolb and his learning cycle, which you will hear about many times this semester.

Reflecting on how you process information and your emotional response to it might benefit you for drawing connections, digesting content, arriving at conclusions how we process information and our emotional response to it. This process of metacognition, thinking about thinking, is important when we want to improve our learning and identify our knowledge gaps.

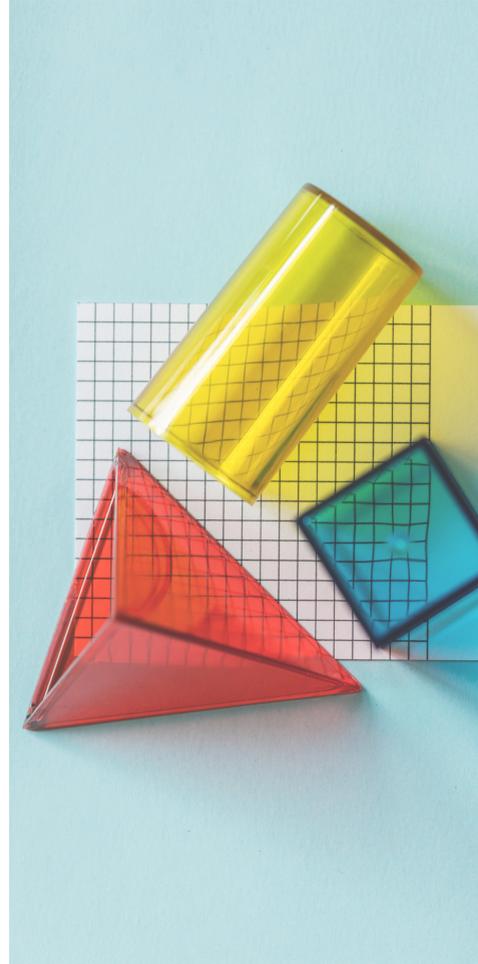
We each build our own world to understand our experiences. This means our self-knowledge about our learning landscape not only makes us better learners, but it also helps us understand what we bring to the table. When we think about our learning this way, we see that all of us have something unique to bring to our collective work.

GENERAL THEMES

INTERNATIONAL INTERPERSONAL COMPETENCY

Learning cannot be an individualistic endeavour in today's world. When we leave university we will be working with and across teams and experiences. At NMBU, your agroecology peer group will be very international, with a diverse demographic makeup, in experience, interests, educational background, as well as culture.

In the first semester you will work in two different teams on two projects simultaneously. Consequently, you must be ready to build your intercultural competence and facilitation skills to work most effectively with your peers. This is not just useful for the sake of this program. Group dynamics resemble a real-life working environment where you will work with colleagues.



GENERAL THEMES

GROUP DYNAMICS

When working in groups, some have experienced frustration, whereas some have had good dynamics. You might question your role in your group because of the varying experiences and knowledge basis. In a mixed group like this, you may have to look for concepts and skills that will stimulate you and bring your best into your team, honour diversity and learn how to collaborate. What is significant is each group member's unique perspective that they bring in the process of problem definition and improvement. We will thrive all together; we need to place each element where they are most useful. Understanding better how each individual plays a role was key in relieving this tension and stress for us.

With time, you will discover that some of your peers share the desire to find answers to the same burning questions you have. We have had "Deep Dive" sessions where we came together to discuss a local or a global issue, a subject we found intriguing.



GENERAL THEMES

HOW DOES IT ALL CONNECT

Most of our classmates have spread all over the world and are interested in working with different aspects of the agrifood systems and beyond. These systems require learners to be self-reflective, adaptive and think holistically in order to address the complex and messy problems that our planet and our society is facing. We have to be life-long learners and stay out of obsolete to cope with a rapidly changing world from a personal and global perspective. Yet not all problems are the same, and neither are the actors within these problems. Everything is contextual, and the assessment of this context makes all the difference there is.

The AE program focuses on this reality, and instead of delivering you strictly disciplinary content, or “know-that”, it emphasises the need for a framework, or “know-how”, so that your skill sets will not be confined to a specific point in time and place or discipline, and you will be ready to enter processes, suggest improvements and move on to your next challenge. Hopefully you will feel the moral purpose to learning, which must be to promote change and challenge the current power relationships and inequalities centered around agrifood systems, rather than memorise facts and regurgitate them during an exam.

In order to do that, your approach to problem-solving itself is one of the most important factors in determining whether the outcome will contribute towards a better future state. As part of the agroecology program, you will experience a commitment to focus on the process of inquiry as well as the content that you will get from various sources. Shifting towards “how we come to know what we know” from “what is known” may seem challenging, because it is simply not how we have been trained to think most of our lives.

GENERAL THEMES

HOW DOES IT ALL CONNECT



Linking theory to practice is necessary to take informed action, for the betterment of the lives of the communities we are working and the systems we are dealing with. Facilitating a transition toward sustainable agrifood systems cannot be accomplished through blind action, it has to be through knowing what is supposed to be better and what should be avoided. However this content is not delivered in a series of lectures or in a textbook as it would traditionally. You will co-create knowledge beyond the classroom and the university, with non-academic actors like your stakeholders.

Validating the content you get - making sure you “have it right” - can feel uncomfortable at times, especially when we want to change the world. For some of us, the uncertainty about the completeness of what we have learned was unsettling. Like other master’s degree programs, the Agroecology program aims to train researchers that have attained the competencies to validate their own learning. Not necessarily researchers in academia, but researchers who can think critically to support informed action that will improve the systems we are intervening.

GENERAL THEMES

FEEDBACK AND GUIDANCE: VALIDATING OUR KNOWLEDGE

The course relies on the student's judgement about his or her advancement, and some peer-assessment in group work.

Every student experiences a different journey throughout the semester, because of how varied their interests, experiences and educational backgrounds are. There is no right or wrong way to make use of this semester. There is your way. Therefore, the learnings that will emerge during this semester are likely to be the ones that you find relevant, interesting and necessary to understand and to use in practical life.

When you identify your knowledge gaps during the field-work or writing of the documents, then you can reach out to those that can help you narrow that gap, or build on the second and third semesters to address those gaps. Feedback on your case reports or guidance throughout the process will be minimal, and you may not know if the direction you have chosen is the right one. You may need to take the initiative to approach the teachers and be proactive to voice the learnings you are looking forward to grab. You can arrange a guest lecturer, or organise workshops and learn from your peers.

There is just one comforting thing that we can say: Trust in the process. And remember that the best solution may change again!



A TRANSECT WALK THROUGH

THE FIRST FEW WEEKS: COMPLEX PROBLEM SOLVING TRAINING

The first weeks are very social: Potlucks, an ice-breaker to get to know one another and personality types that you will frequently refer to in the upcoming weeks.

Classroom sessions on skills you will need for the semester projects: communication, diversity, observation, interviewing. There is also a light introduction to agriculture in Norway. Remember the pedagogical approach of this semester is that you immediately work in the food and farming systems instead of studying them from a classroom.

The visit to Fokhol Farm: This is a bootcamp designed to show you how the semester projects should be approached. In one week, you will go through two steps of the Kolb learning cycle: Concrete experience, and Reflective observation. By the end you will have captured a screenshot of what is happening within a system, which is a farm, at that particular moment from a systems-level, and analysed for improvements.

Literature seminars on systems thinking and learning: Many of these papers are about ontology (what realities exist and how they relate to each other). Some can be difficult to understand - be assured they are about the same concepts discussed in the classroom. Put on your academic hat and make a study/discussion group with your colleagues. You may suggest papers that are meaningful and interesting to you and make your contribution to the seminar.

THE FIRST SEMESTER

SEPTEMBER: THE SEMESTER PROJECTS GROUNDWORK

There are two projects, the farm case and the food case. You will be assigned to work with two different teams and follow through both of these projects simultaneously. Over several weeks in September, you will identify stakeholders, plan interviews, make visits to both of your cases to conduct fieldwork, and come back to NMBU for a lot of assimilation, reflection, and writing. You will present your findings to the classroom, and hear from other teams. It is a great idea to take these discussions further and learn from each other's cases as well as understand how they are approaching and handling the messy complex reality under study. Remember there is no competition amongst the projects, as well as amongst individuals.

Within this short time, you will make first drafts of both the food and farm case stakeholder documents. These first drafts are important for helping you to identify your focus, and how you arrived at it, rather than deliver a finished product. The drafts do not need to feel incomplete, almost everything will rather feel incomplete and unfinished, because you will be in the process of becoming. This is how it is supposed to be! Instead of sitting behind our desks to perfectionise a document on our own, action learning encourages you to dive in the phenomenon with community partners and deliver a prototype that will always evolve.

A TRANSECT WALK THROUGH

OCTOBER-EARLY NOVEMBER: FROM VISIONS TO ACTION

The course will make a turn here and introduce you to some very valuable tools that you can use in your personal or professional practices. There will be classroom sessions on how to facilitate a group to build a shared vision, and some techniques to encourage visionary thinking. By now there may be some sessions on special topics including Soft Systems Methodology, Farmer Field Schools, Force Field Analysis, among others.

You will be having second visits to food and farm cases. Now it is time to converge and narrow down your focus. This is also an opportunity to strengthen your relationship with stakeholders, they are future colleagues. You will feel motivated to do good work for them, and feel the cooperation. You may use the farmer field tool and/or the visioning method with your food and farm cases, and advance in completing the steps in the agroecological approach. In order to improve the situation within a system, it is important to include those who are within that system to build their own future, rather than “you” deciding what the ideal future looks like for them.

The deadline to deliver your farm case document is around the corner, therefore you should start structuring your report while the outputs of the second visit are still fresh. A good idea is to share all your notes, mind-maps, meeting minutes, diagrams and photos on a shared platform such as Google Drive, Slack, or Microsoft Teams for an easier collaboration from the beginning.

THE FIRST SEMESTER

OCTOBER-EARLY NOVEMBER: VISIONS TO ACTION, AND IN- DEPTH FARM AND FOOD SYSTEM ANALYSIS

Literature seminars on farm and food systems: approach these papers with the same critique you have been using on your farm and food cases. Do you agree with the author? Most of the times we have felt that we needed papers with more content, showcasing techniques and practical suggestions. The number of papers that do that are endless. Do you have a specific area of interest? Do you feel like you lack knowledge on a particular field?

We, your alumni, have gathered numerous papers and reports on a wide range of issues so far. We are here to share! Check out the resources tab on the web. Another point is, these papers will prepare you to write academically in a limited amount of space. Even this objective is secondary, ordering your thoughts and communicating your argument in written language is a must-have skill if we are to transform the agrifood systems. Often this is a challenging part of the semester. See “a guide to the emotions of the first semester”.

A TRANSECT WALK THROUGH

THE FINAL WEEKS: WRITING, REFLECTING, WRITING

The schedule may look empty but you will be busy having long and intense meetings with your team and writing the rest of the final documents (the food case and learner document) and preparing for the final oral presentation.

The stakeholder documents prepare you for professional projects. In many jobs you will have the responsibility for reporting to clients and to the public, and perhaps writing grants. This is a skill you with a masters degree should bring to a position, even if it was not done before, so your organisation can have a greater impact. Diverging and writing is the part where you will learn a lot, mostly because you will want to deliver a good stakeholder document that will benefit your stakeholders. This may urge you to go deep into subjects that you are not very well-informed of.

The learner document helps you acknowledge your own progress in your learning journey; untangle your confusion by putting in down on paper; document this process as you may want to remember it later.

The oral presentation is a reflection of your take-aways from the entire semester. You may innovate how you present this learning journey, as both the oral presentation and the learner document are absolutely personal deliverables; however it might feel painful to go through these assignments.

THE FIRST SEMESTER

THE FINAL WEEKS: WRITING, REFLECTING, WRITING

There will be an introduction to the thesis near the very end. Don't panic about that now, it's just a chance to introduce it while everyone is together.

Tips: Continue thinking about your career goals and knowledge gaps, so you can choose (or design your own) courses for the next semester. Or start thinking about the criteria that will make the best thesis for you; it is usually different for every person. It could be your passion, or the simplicity of it might be compelling, there might be opportunities for networking, and further learning.. In any case, it might be wise to consider a thesis that will help you reach your desired future - meeting people you want to work with and gaining experience in an area you enjoy. Tap into ideas from other students and teachers, and recent graduates who are still in town.

For more information about thesis work, see the website: agroecology.se/handbook

RESEARCH PROJECTS

NEXTFOOD

This EU-project is co-creating the education systems for future professional in agrifood and -forestry systems worldwide. The NMBU team is responsible for two work packages in the project including facilitating action research on 12 cases where action learning is being employed. These cases are at the core of the research project as they are where the novel educational approaches are put into practice. One of the cases is the autumn agroecology course at NMBU while the rest are located throughout Europe, Africa and India. The project has been running since 2018 and will conclude in 2022. The NMBU team has two full-time researchers employed on the project (Lutgart and Åsmund). Students are encouraged to seek more information from the research team to explore possible thesis opportunities related to the project work.

CULTIVATING PUBLIC SPACES

The project «Cultivating Public Spaces: urban agriculture as a basis for human flourishing and sustainability transition in Norwegian cities» is an interdisciplinary and internationally oriented project addressing the potentials of urban agriculture as a driving force of a sustainability transition in contemporary Norwegian cities. One major focus is social sustainability, in particular how urban agriculture can improve the quality of life in compact cities and how urban agriculture can be integrated in public spaces.

SUSTAINABLE ADAPTATION - RESILIENCE IN URBAN REGENERATION (ADAPT)

ADAPT is a research project funded by the Norwegian Research Council and led by The Norwegian Institute for Cultural Heritage Research (NIKU). In this project we ask how the reuse of industrial heritage, alongside developing new infrastructure, may contribute to human wellbeing and place attachment. NMBU is a partner in this project, responsible for a work package where the focus is on integration of urban agriculture (UA) in the two case areas (in Skien and Moss) which are former brownfields now being developed for new purposes.

The aims of this work package are as follows:

- To provide insights on how to facilitate socially sustainable and resilient urban development by integrating UA in public spaces developed on former brownfields.
- To assess the potential UA has for engaging the wider public, by examining the ways the pilot study of Klosterhagen are being carried out.
- To develop a set of policy, functional and process recommendations for implementing UA as part of urban regeneration processes taking place on former brownfields.

AN AGROECOLOGY WIKI

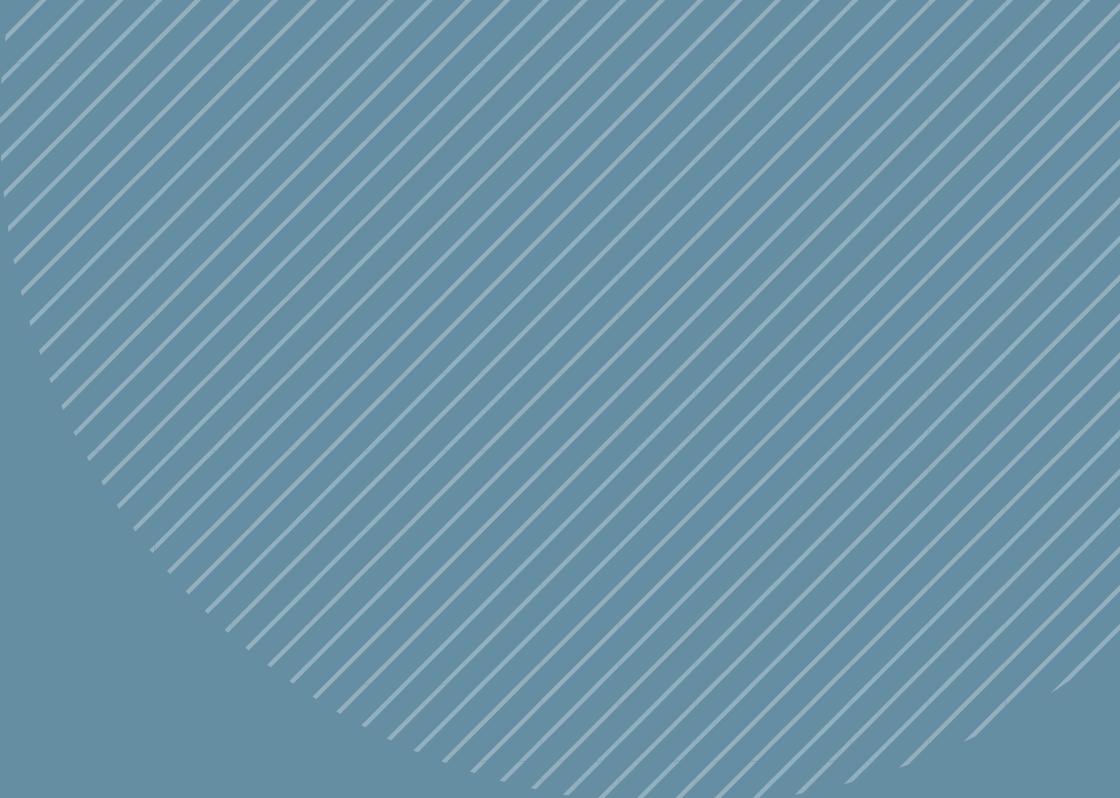
This pdf is just the first edition of what we believe will become a wiki (a collaboratively developed website) of student experiences from agroecology.

If you feel like this document needs improvement or additional chapters, then you can become an author and help develop this content.

Furthermore, this student handbook does not necessarily have to be confined to the NMBU experience. We look forward to exploring how we can connect with students/alumni from other universities and create a comprehensive document.

This handbook is the first action item we have identified to construct a student-career pathway. We want to carry agroecology from our classrooms into the real world. As such, this brings us one step closer to practicing the agroecology approach in our contexts to understand how we can make a difference for the better.

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agroecology.se/handbook



Thank you for reading!

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See more at agroecology.se/handbook