



Swiss tdMOOC

Course Title: Partnering for Change: Linking Research to Societal Challenges

<https://go.transdisciplinarity.ch/MOOCContent>

Enrollment and ECTS Credits:

This MOOC offers an opportunity to explore how research can be connected to societal challenges and how partnerships can be developed to create positive change. The course is recommended **for master's students, PhDs, postdocs, project leaders, and practitioners engaged in research cooperation**. However, anyone interested or involved in finding solutions to complex societal challenges through transdisciplinary research can benefit from the course. The course is **designed for self-study** and **can be used at any time without registration or enrollment**. A public virtual whiteboard is available for communication and collaboration with other learners.

The estimated study time for the course is 30 hours, and it is recommended for 1-1.5 ECTS¹ points. However, with additional exploration of course materials and written exercises based on discussion prompts, the ECTS points may be increased to 1.5-2 points or higher.

More interaction is possible through a **learning group**. Conditions of participation: Registration on a mailing list to receive information. Participants still decide afterwards how much they want to contribute to the course. A certificate can be issued on request for active participants (note that this is not an official accreditation). We recommend accreditation through your institution. After registration td-net will send weekly motivational emails to the learners, and the group will have access to a private whiteboard for sharing questions, ideas and more. There will also be at least 3 joint Zoom sessions to enhance the active classroom feeling. These will be scheduled according to most participants' availabilities. Depending on the motivation of the group, more sessions can be organised.

Run 2025

Next learning group: **February 25th to April 11th, 2025** (to be confirmed)

Sign up for the mailing list on our website or feel free to recommend participation:

<https://go.transdisciplinarity.ch/mooc>

Main Topics covered by the MOOC

- Research skills needed in order to produce relevant outcomes for society and academia
- Transdisciplinarity: principles, research processes, and application
- Guiding questions, phases, and steps in transdisciplinary projects
- Pitfalls and opportunities in transdisciplinary projects

¹ The European Credit Transfer and Accumulation System (ECTS) is a tool of the European Higher Education Area for making studies and courses more transparent. <https://education.ec.europa.eu/education-levels/higher-education/inclusive-and-connected-higher-education/european-credit-transfer-and-accumulation-system>

- Ethical implications of co-production processes
- Examples of transdisciplinary projects on sustainable development, migration, and health topics

By the end of the course, you will be able to...

- Develop your research skills as you investigate how to co-produce knowledge for society and academia.
- Reflect transdisciplinarity – its principles, its research processes and the context in which it is promising.
- Apply transdisciplinary approaches to societally relevant questions.
- Identify guiding questions, phases and steps of a transdisciplinary project.
- Apply the principles and steps of transdisciplinary research to examples in order to reflect the implication for your own projects.
- Reflect the role of scientists and stakeholders in society and consider the ethical implications of co-producing processes.

Suggestions for Integration into Lectures, Seminars, and Project Work:

This course material can be integrated into seminars, lectures, and project works, and universities can grant credit points for it. The responsible lecturers will handle the ECTS points, including the respective tests, according to their institutional regulations.

We recommend the following options:

- a) Students complete the entire MOOC, followed by **an essay or test at the end**. Essay topics can be based on discussion prompts offered in the MOOC, such as:
 - What are your personal three key takeaways from this course?
 - What are the most important changes in the way you think about research approaches to complex societal challenges?
 - What learning will you be able to apply in your work?
 - What learning would you like to apply in the near future?
 - What additional competencies and skills would you like to strengthen for effectively addressing societal challenges?
 - What do you see as the specific strengths and limitations of your discipline to engage with other disciplines and societal actors?
- b) Students work through one or two chapters of the MOOC, then discuss online or in-person (in seminars, lectures), in small groups or plenary, then they work through the next 1-2 chapters of the MOOC, followed by discussion. Discussions can be based on the discussion prompts in the MOOC and/or linked to the specific subjects and tasks of the curriculum, lecture or seminar.
- c) Project groups work on a specific project, going through some or all three phases of a transdisciplinary project. The MOOC serves as a resource for designing, conducting, and coordinating a research project that addresses societal challenges.
- d) Combine your own teaching material with specific elements of the MOOC (specific theory and methodology steps, one or several cases).

The material is entirely for public use; however, it's important to credit the authors or universities that provided the content.

We suggest using the following citation:

Swiss Academies of Arts and Sciences: Swiss Massive Open Online Course on Transdisciplinary Research "Partnering for Change: Link Research to Societal Challenges". *Chapter/Article/Video etc.* provided by *Name, Institution*.

Course Overview:**Chapter 1: Complex societal challenges – a tough nut to crack**

Discuss current societal challenges and get to know the educators.

- 1.1 [Video: Societal challenges – challenges for research](#)
- 1.2 [Article: Simple, complicated, complex, wicked](#)
- 1.3 [Video: Why transdisciplinary research?](#)

Setting the frame – Discuss your personal experiences and motivations to engage in TDR. Explore the features of this six-chapters course that combines theory and real-life cases in order to link existing knowledge with practice.

- 1.4 [Reflection: Which examples come to mind?](#)
- 1.5 [Article: How this course works](#)

Cases – societal challenges addressed: Delve into the five cases that serve as real-life examples of TDR during the whole course. Each of these cases is unique. They cover different topics in different regions of the world.

- 1.6 [Video: Making migration safer: working abroad has risks](#)
- 1.7 [Video: Nomad health: healthcare for mobile pastoralists](#)
- 1.8 [Video: Tackling water scarcity – part 1: addressing the effects of climate change](#)
- 1.9 [Video: Antimicrobial resistance: a wicked challenge.](#)
- 1.10 [Video: Coping with decline in a Swiss mountain village](#)

Reflecting on chapter 1: Reflect what you have learnt about the characteristics of today's complex challenges. Assess which questions you should be able to answer at the end of chapter 1.

- 1.11 [Article: Wrapping up Chapter 1](#)

Chapter 2: Transdisciplinarity – introduction and clarification

What is TDR? – Get acquainted with transdisciplinary research: How do you define it? What goals and principles are there? And when is it especially meaningful to make use of it? You'll collect all the answers in the following activity.

- 2.1 [Article: Transdisciplinarity, an approach developed in different contexts](#)
- 2.2 [Video: Goals and principles of transdisciplinary research](#)
- 2.3 [Article: When is a transdisciplinary approach promising?](#)

Basic concepts in TDR: Discover basic concepts used in transdisciplinary research which will help you reflect on the cases and examples during the course as well as on your own experience.

- 2.4 [Video: Three types of knowledge](#)
- 2.5 [Article: Striving for the common good?](#)
- 2.6 [Article: Societally relevant and scientifically valid](#)

Cases – context and actors: Explore the five cases to gain interesting information on the context in which they are situated and the actors that are involved.

- 2.7 [Article: Making migration safer – context home and host countries](#)
- 2.8 [Video: Mobile pastoralists and communication challenges](#)
- 2.9 [Video: Tackling water scarcity – part 2: actors and context](#)
- 2.10 [Article: The international regime complex about antimicrobial resistance](#)
- 2.11 [Article: Coping with decline: tourism development and residents](#)

Reflecting on chapter 2: Assess what you have learnt about the basics of transdisciplinarity. Identify the concepts with which you should be familiar at the end of chapter 2.

- 2.12 [Quiz: Basics of Transdisciplinarity](#)
- 2.13 [Article: Wrapping up Chapter 2](#)

Chapter 3: Setting up a transdisciplinary research project

Phases of transdisciplinary research: Explore the phases of a transdisciplinary research project and have a closer look into phase 1.

- 3.1 [Article: The stages of transdisciplinary research](#)
- 3.2 [Video: Phase 1: problem framing](#)

Important steps of a co-designing: When it comes to transdisciplinarity, the inclusion of different stakeholders is essential. Get an idea of co-designing a project and which steps and methods need to be considered.

- 3.3 [Article: Context and actor analysis](#)
- 3.4 [Article: Co-design, methods, examples](#)
- 3.5 [Video: International research partnerships](#)
- 3.6 [Article: How could your project make a difference?](#)

Cases – from an idea to a project: Having reflected how to develop transdisciplinary projects, apply your knowledge to the five cases.

- 3.7 [Video: Making migration safer: setting up collaboration](#)
- 3.8 [Video: Nomad health: an Ethiopian One Health initiative](#)
- 3.9 [Article: Water scarcity: design of the MontanAqua project](#)
- 3.10 [Video: Antimicrobial resistance: from a research project to work for the United Nations](#)
- 3.11 [Article: Coping with decline: Initiating the BESTandermatt study](#)

Reflecting on chapter 3: Setting up a transdisciplinary research project involves many challenges. Assess your knowledge and reflect on what you have learnt about phase 1 of the TDR process..

- 3.12 [Quiz: Setting up a TDR project](#)
- 3.13 [Article: Wrapping up Chapter 3](#)

Chapter 4: Knowledge production

Co-producing knowledge – Phase 2 of transdisciplinary projects is about jointly conducting research. Find out what this means, discuss what intensities mark the sequence of interactions, and reflect your own possible role.

- 4.1 [Video: Phase 2: jointly conduct research](#)
- 4.2 [Article: Intensities of interaction](#)
- 4.3 [Reflection: Reflect on your role](#)

Interdisciplinary and participatory aspects: Gain insights on interdisciplinary and participatory aspects that distinguish transdisciplinary approaches from others. Discuss the process, the co-production of knowledge, and the cooperation with stakeholders.

- 4.4 [Article: Interdisciplinary co-production: collective intelligence and cognitive justice](#)
- 4.5 [Article: Co-producing knowledge with travelling concepts](#)
- 4.6 [Article: Cooperation with stakeholders](#)

Cases – co-production processes: Once again you are given the opportunity to link theoretical knowledge with the practical experiences of your educators. Do you recognise concepts you have learnt about this week in the cases?

- 4.7 [Video: Making migration safer: how the project developed](#)
- 4.8 [Article: Nomad health: co-production between academic and non-academic actors](#)
- 4.9 [Video: Tackling water scarcity – joint visioning and strategy development](#)
- 4.10 [Article: Antimicrobial resistance: interdisciplinary approach and co-production process](#)
- 4.11 [Article: Coping with decline: enabling learning and reflection](#)

Reflecting on chapter 4: In Chapter 4 you investigated the co-production of knowledge. Assess your grasp of the concepts, your own role, and reflect on what you have learnt about phase 2 of the TDR process.

- 4.12 [Quiz: Decisive factors when jointly conducting research](#)
- 4.13 [Article: Wrapping up Chapter 4](#)

Chapter 5: Reap the rewards – jointly producing outcomes

Co-production towards action and reflection: Synthesise the third and last phase of a transdisciplinary project and develop an understanding of upscaling transdisciplinarity as well as of what communicating beyond a project means.

- 5.1 [Video: Phase 3: exploring impact](#)
- 5.2 [Video: Upscaling transdisciplinarity through societal learning](#)
- 5.3 [Article: Communication beyond the project](#)

Cases – results and ways of impact: Compare the theoretical insights with the results and impacts described in our five cases. How do you assess these? What questions come to your mind?

- 5.4 [Article: Labour migration: results, impact, and barriers](#)
- 5.5 [Article: Nomad health: impact and results](#)
- 5.6 [Article: Water scarcity: results of the project MontanAqua](#)
- 5.7 [Article: The regime complex about antimicrobial resistance – project outputs](#)
- 5.8 [Article: Coping with decline: a responsive, participatory approach](#)

Reflecting on chapter 5: What do you need to consider if you are jointly producing outcomes? Assess what you have explored in chapter 5 and sum up what you have become familiar with.

- 5.9 [Quiz: Phase 3 of a transdisciplinary research project](#)
- 5.10 [Article: Wrapping up Chapter 5](#)

Chapter 6: Effects of involvement: moments of change

Evaluation: Get an idea of how to evaluate transdisciplinary research projects and reflect on your own development during the last five weeks.

- 6.1 [Video: Reflecting transdisciplinary research projects](#)
- 6.2 [Reflection: Your turn: how you developed during the course](#)

Situating Transdisciplinarity: Find out about what career paths of ‘transdisciplinary’ exist and figure out ethical dimensions of transdisciplinary research.

- 6.3 [Video: Career paths of ‘transdisciplinary’](#)
- 6.4 [Article: Ethical dimensions of transdisciplinary research](#)

Cases – reflection and evaluation: Link the concepts of how to evaluate a transdisciplinary research project to the practical experiences in the case studies. Investigate and discuss how they are reflected and evaluated.

- 6.5 [Article: Making migration safer: reflecting key elements](#)
- 6.6 [Article: Nomad health: reflection and evaluation](#)
- 6.7 [Article: Reflections on the water scarcity case’s process and outcomes](#)
- 6.8 [Video: Reflecting on the Antimicrobial Resistance case: collaboration with the UN system](#)
- 6.9 [Video: Coping with decline: reflecting BESTandermatt](#)

Transdisciplinary research: your own pathway – Assess what you have learnt about the effects of involvement and moments of change. Recapitulate the most important aspects of the course, and discuss how it might influence your future work.

- 6.10 [Reflection: Your future engagement](#)
- 6.11 [Video: Goodbye](#)