



## Tipping Points in the Southwestern Amazon

How diversity regulates soil health, livelihood security, social cohesion and regional climate change - Interdisciplinary postgrad-course taught online by the PRODIGY-Team in 2021/22

### Call for participation

Human-nature relations can be approached from diverse perspectives. We, as an intercultural and transdisciplinary research project, proceed as follows:

In order to tackle ecological, social and economic tipping points in the Southwestern Amazon, we ask how diversity regulates soil health, livelihood security, social cohesion and regional climate change. Starting from functional biodiversity in the soils, we look at the significance of ecosystem services, regional climate change and environmental governance for ecological, economic and societal resilience.

Access to land and natural resources is becoming an increasingly central component of local and national economic strategies in many countries of the world. This competition over land is increasingly influenced by external factors such as climate change, inadequate climate and environmental policies, growing demand for food, water and minerals. Moreover, land grabbing, land and food speculation on financial markets increase the risk of conflicts. In this field of tension, our research aims at co-producing transformation knowledge regarding sustainable solutions and, at best to inform local and political decision-making processes.

Valorizing the research activities and the broad interdisciplinary knowledge of the PRODIGY- project team from Germany, Brazil, Bolivia, and Peru, we provide real world insights into the benefits and challenges of inter- and transdisciplinary research and learning in the context of aforementioned aims. After one exclusively virtual course due to COVID-19, we hope to be able to offer interested participants the opportunity to get engaged with the project through an internship, a master thesis or other collaboration formats.

### About the Research Project

PRODIGY is a scientific cooperation project between Germany, Brazil, Bolivia and Peru. The principal interest of the project is to understand whether a higher diversity within systems spanning from soil health to economic and social aspects enhances the system's resilience. Our research addresses the constantly transforming dynamics between nature and society and is based in the southwestern Amazon, the tri-national MAP region (the states of Madre de Dios (Peru), Acre (Brazil) and Pando (Bolivia), see map). The fact that we are dealing with three different countries, also makes the comparison of its (environmental) governance strategies so interesting. The project aims at describing the complex interdependencies by revealing the respective tipping points of the system's immanent functions and consequently their

interactions and potential feedback mechanisms. Tipping points occur when a system suddenly changes to a different state and they are often irreversible. Consequently, besides the ecological equilibrium, the exceeding of a tipping point often threatens human wellbeing on a mid- to long term scale. Jointly with local stakeholders, PRODIGY aims at contributing to the development of sustainable options for future decisions, which can avoid the crossing of system relevant tipping points and safeguard livelihoods in a transforming world. Additionally, PRODIGY is concerned with guiding young scientists towards transdisciplinary perspectives.

For more information on the project visit our website [www.prodigy-biotip.org/prodigy-postgrad-course/](http://www.prodigy-biotip.org/prodigy-postgrad-course/) and follow us on twitter @ProdigyBioTip.

### **Course-Format**

For our PRODIGY postgrad course, we are looking for approx. 50 participants, preferably balanced between the participating Universities in Germany and institutions and Universities in the MAP region as well as between social & natural scientists & practitioners and all genders.

The teaching language will depend on the composition of participants, English, Spanish and/or Portuguese will be used. Thus, you should have at least a reading and understanding ability in all three languages. Course contents and discussions will happen in all three languages and often there will be no possibility for translation.

### **Criteria for Participation** (in any of the three languages)

- Master-course-level/completed Bachelor or comparable experience in practice
- Openness to collaboration with people from other educational and cultural backgrounds
- Openness to engage with other academic disciplines and with practitioners

### **Submission Requirements**

- C.V. (max. 2 pages) & motivation letter (max. 300 words)
- A reflection of up to 300 words on human-nature-relationships in a context well known to you

### **Course Content**

From October 2021 to March 2022, we offer 6 virtual modules on zoom; the overall workload of the course will be 180 hours, including working group work and preparatory time; participants receive 6 ETCS-points from University Landau/Germany.

In addition to preparatory reading, podcasts on key terms of the project are provided by PRODIGY-team-members as teasers for discussions; practical experiences will be integrated to working group activities. As soon as fieldwork is possible again (after Covid-19), we will allow participants to participate flexibly (internships, master theses, etc.) depending on their location.

## 1. Introduction to the PRODIGY-project

What is the global importance of Amazonia? Why Southwest Amazonia as study case? What is special about the MAP-region? What is the project all about? Which different and holistic perspectives are offered by integrating different disciplines? Which are the key concepts we are dealing with? What do we aim to contribute to improve human-nature relationships and sustainable development?

## 2. Stocktaking of participants' knowledge

Introduction to intercultural learning, inter- & transdisciplinary learning & peer-learning; introduction to research design; formation of working groups. On which previous knowledge can we build on? What can we learn from each other? How do we learn? How can individual research be designed?

## 3. Land Use Science - concepts, approaches and theories

How do the environmental, social, and economic systems influence land use decisions and consequently land use? How do political and cultural backgrounds such as Indigenous vs campesino and western culture impact? Can institutions influence land use decisions? What is the connection between land use and conflicts? What is the connection between land use change and tipping points?

## 4. Research-Methods: qualitative and quantitative, modelling, co-production etc.

How to deal with complexity in interdisciplinary research? Which methods orient research in the respective disciplines? How can they be made compatible? How disciplines integrate (interdisciplinarity, transdisciplinarity) in a research? How to deal with complex systems?

## 5. Policy Frameworks & Instruments (CBD, SDG's, Paris Climate Agreement etc.)

What are the objectives of sustainable development? Which kinds of instruments exist to transform theory into practice and thereby inform policy-making? How does agenda-setting and decision-making work in rural and urban areas and how in global fora?

## 6. Science Communication

How does internal communication work in a transdisciplinary research project? How are the results of a research project produced? What is the impact of the knowledge generation process on the dissemination of results to the region's population and decision makers? How does external science communication work?

## Schedule

**Deadline for applications: 15th of July 2021** send to [regine.schoenenberg@fu-berlin.de](mailto:regine.schoenenberg@fu-berlin.de), [claudia.cuellar@fu-berlin.de](mailto:claudia.cuellar@fu-berlin.de) (Free University Berlin); PRODIGY-course-committee: Foster Brown (UFAC-Rio Branco/Acre & Woodwell Climate Research Center), [fbrown@woodwellclimate.org](mailto:fbrown@woodwellclimate.org), Gália Selaya (EcosConsult, Bolivia), [gselaya@outlook.com](mailto:gselaya@outlook.com)

Acceptance until 15th of August 2021

Virtual preparatory meeting (obligatory): 30th of September 2021

Start of the PRODIGY-virtual-teaching: 7th of October 2021

End of the 6 modules: March 2022



This course will be announced in and taught by all PRODIGY partner institutions. The University Landau who is heading PRODIGY will emit a certificate of participation equaling 6 ECTS (points).

**Participating Institutions (potentially)**

**Germany:** Universität Koblenz-Landau, Campus Landau, Institute for Environmental Sciences (iES Landau); Universität Hannover, Institute of Soil Science; Freie Universität Berlin, Institute for Latin American Studies (LAI); Universität Kassel, Center for Environmental Systems Research (CESR); Universität Bonn, Center for Development Research (ZEF); Universität Hamburg, Institute of Geography.

Sweden: University of Uppsala, Costa Rica: CATIE - (Centro Agronómico Tropical de Investigación y Enseñanza) (requested)

**In the MAP (Madre de Dios-Acre-Pando) region:** Herencia (Bolivia); Universidade Federal do Acre (UFAC, Brasil); Universidad Nacional de San Antonio Abad del Cusco (UNSAAC, Peru); Centro de Innovación Científica Amazónica (CIN CIA, Peru); Asociación Boliviana para la investigación y conservación de ecosistemas Andino Amazonicós (ACEAA, Bolivia); Empresa Brasileira de Pesquisa Agropecuária (Embrapa, Brasil); Centro de Trabalho Amazônico (CTA/Brasil), Instituto de Mudanças Climáticas (IMC, Brasil), Universidad Amazónica de Pando (UAP, Bolivia)

