

PhD position, 2027-2031 (4 years)

“Scale-OECM: Cross-scale Impact Quantification, Monitoring and Planning of Other Effective Area-based Conservation Measures”

Background : Nature is declining worldwide, and many species are at risk of disappearing. Protected areas such as national parks are essential for conservation, but they are not always enough to stop biodiversity loss or to balance conservation with human needs. In response, there is growing interest in alternative approaches, known as *Other Effective Area-based Conservation Measures (OECMs)*. These are areas that are not officially protected but can still support biodiversity, often while being used by local communities.

This project aims to understand how these areas can help protect biodiversity and contribute to global targets, such as conserving 30% of the lands by 2030.

The research will address three main questions. First, which types of land management can effectively conserve biodiversity and be recognised as OECMs? Second, how can we monitor biodiversity in these areas using a combination of field observations, drones, and satellite data? Third, where should these areas be located to achieve the greatest conservation benefits?

To answer these questions, the project will combine global analyses with fieldwork in tropical regions of South America (Colombia), Africa (Kenya), and Southeast Asia (Indonesia), where biodiversity is rich but under pressure.

By providing new tools and evidence, this research will support governments, conservation organisations, and local communities in designing more effective and inclusive strategies to protect biodiversity.

Your tasks:

- 1) **Ecosystem structural integrity monitoring at ecoregion scale:** You will rely on different indicators of structural integrity derived from satellite-based remote sensing to differentiate short and open canopy, and recently deforested areas, from tall, closed-canopy, and older primary forests.
- 2) **Ecosystem structural integrity monitoring at case study sites:** You will rely on drone imagery and a terrestrial laser scanning to measure 3D habitat structure. You will compute indicators that are well established and have proven successful to characterize stand structural complexity in tropical human-modified forest landscapes.
- 3) **Cross scale assessment:** We will evaluate the correspondence between the datasets based on terrestrial laser scanning, drone and satellite. This will allow us to evaluate under which conditions the multivariate datasets match or mismatch, and to highlight redundant and complementary information about tropical forest structure in different contexts.

The expected outcomes are three research articles that will be compiled into a PhD thesis; a database of structural complexity across scales.

You will collaborate closely with other team members (PhD students, postdoc) who will monitor mammal species within the same study sites; develop database and synthesize knowledge on OECM; conduct regional prioritization for conservation.

Funding: The position is funded by the Swiss National Science Foundation

Project title: “Scale-OECM: Cross-scale Impact Quantification, Monitoring and Planning of Other Effective Area-based Conservation Measures”

Supervision: Prof. Clara Zemp, Conservation Biology Lab, University of Neuchâtel, Switzerland

Member of advisory committee: Dr. Pablo Negret, Wyss Academy of Sciences, Switzerland

We offer: An inclusive and supportive working environment that encourages scientific curiosity, creativity and engagement with practice and policy. Salary and social benefits follow the rules of the University of Neuchâtel. The position is planned for four years.

Your profile:

- Master degree in ecology, conservation biology or related field
- Motivated by collaborative work; interest in conservation science and practice
- Good organizational, writing and communication skills
- Experience with fieldwork
- Interest in remote sensing from satellite, drone or terrestrial laser scanner
- Fluent English (written and spoken) is essential; Other languages (French, Spanish, Indonesian) is an advantage

Starting date: The anticipated starting date is February 2027.

Application: To apply, please provide until **31/07/2026**: (1) a one-page letter describing your motivation, (2) a CV including contact information of two references. Please, send all the information in a single PDF with the subject “PHD_application_[your name]” to Prof. Dr. Clara Zemp (clara.zemp@unine.ch), with Dr. Pablo Negret in Cc (pablo.negret@wyssacademy.org).

For any questions, contact us using the same email address.