

# Celeus Baral

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## ACADEMIC QUALIFICATION

**Bachelor of Science with Honors in Environment science**, NAMI College, Kathmandu, University of Northampton, UK, First-Class Honors, 75.20%; November 2024

- **Thesis: "Species Diversity, Richness, and Distribution Patterns of Lepidoptera in Semi-Urban Farmland and Various Habitats Surrounding Lumbini Parsa-Chauraha, Rupandehi District"**

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## WORK EXPERIENCE

**Research Intern, Red Panda Network, Kathmandu**

**07/2025 - Present**

- Contributing a project to develop the first comprehensive checklist of Lepidoptera species across three key districts in Eastern Nepal, with a focus on butterflies and moths of ecological and conservation interest.
- Conducting moth diversity surveys using light-trapping techniques to document species richness and abundance for future conservation planning.
- Training local community members in moth-trapping methods to promote citizen science initiatives and strengthen community involvement in biodiversity monitoring.
- Managing, maintaining, and sorting camera trap images and videos for accurate species identification and integration into wildlife monitoring databases.
- Contributing to research and development efforts within the Red Panda Network, integrating Lepidoptera data into multi-species conservation strategies.

**Disaster Risk Reduction and Climate Change Intern, NAXA, Kathmandu**

**12/2023- 03/2024**

- Conducted integrated qualitative and quantitative analyses for Groupe Spéciale Mobile Association (GSMA) and Digital and Spatial Technologies for Anticipatory Action (DASTAA) initiatives in Parshuram and Dodhara Chandani Municipalities, Nepal.
- Collaborated with remote enumerators to ensure robust and accurate data collection.
- Leveraged Geographic Information Systems (GIS) and remote sensing technologies to generate spatial insights for disaster risk management.
- Enhanced data quality for anticipatory action, improving disaster preparedness strategies and supported climate resilience efforts by aligning local analyses with broader climate change adaptation frameworks.

**Research Assistant Intern, Kathmandu Institute of Applied Sciences, Lalitpur**

**03/2023 – 09/2023**

- Conducted quantitative and qualitative analyses of water and vegetable samples to assess protozoan pathogens as indicators of water quality and ecosystem health.
- Utilized flocculation, centrifugation, staining, and smartphone-based microscopy for innovative, low-cost pathogen detection.
- Advanced One Health and Planetary Health perspectives by documenting Giardia and Cryptosporidium (oo)cysts, linking human health risks with environmental contamination.
- Strengthened evidence-based public health surveillance while ensuring rigorous biosafety protocols and ecological relevance in monitoring pathogen dynamics.

## ACADEMIC PROJECTS

- **Title: Species Diversity, Richness, and Distribution Patterns of Lepidoptera in Semi-Urban Farmland and Various Habitats Surrounding Lumbini Parsa-Chauraha, Rupandehi District**

**Duration:** March 2024 - September 2024

**Team size:** 01

**Summary:** Assessed Lepidoptera assemblages in semi-urban agro-ecosystems of Lumbini, documenting 30 moth species (six families) and 39 butterfly species (five families) over a 14-day survey. Observed dominance of Erebidae and Nymphalidae, with resilience and ecological plasticity evident in disturbed habitats. Abiotic factors: microclimate, lunar cycles, and habitat structure; shaped species abundance, while habitat heterogeneity emerged as a key driver of richness, evenness, and functional diversity. Findings elucidate habitat-mediated interactions and underscore the need for longitudinal monitoring to inform evidence-based biodiversity conservation in dynamic ecosystems

**Document:** [https://github.com/celeusbaral/Thesis-/raw/main/Celeus-ENV4101\\_DI\\_Written-Dissertation\\_22429947.2024.docx](https://github.com/celeusbaral/Thesis-/raw/main/Celeus-ENV4101_DI_Written-Dissertation_22429947.2024.docx)

- **Volunteer for Lumbini to Lo-manthang, Planetary Health Field Lab**  
**Nicholas School of Environment, Duke University; Institute of Himalayan Risk Reduction (IHRR); International Centre for Integrated Mountain Development (ICIMOD) and Himalayan University Secretariat (HUC)**

**Duration:** May 16, 2025 – June 07, 2025

**Team size:** 30

**Summary:** Volunteered as an environmental and ecological science practitioner on an interdisciplinary field expedition from Lumbini (150 m a.s.l.) to Lo-Manthang (3,500 m a.s.l.), organized by Duke University, ICIMOD, IHRR, and HUC. Investigated the impacts of global change on ecosystems and human health through a planetary health lens, while advancing community engagement, leadership, and sustainable resilience in high-altitude socio-ecological systems

**Document:** [https://www.instagram.com/p/DJtJWalzNwO/?img\\_index=2](https://www.instagram.com/p/DJtJWalzNwO/?img_index=2)

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## PUBLICATION

### Research Paper

**08/13/2025**

Lepidoptera diversity, richness, and distribution in semi-urban farmland and other habitats around Lumbini, Rupandehi

LINK: <https://doi.org/10.1101/2025.01.26.634957>

Conservation of Nepal's threatened lowland grasslands: home to the avian faunal assemblage of international importance (Submitted for publication)

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## TECHNICAL SKILLS

**Geospatial & GIS:** QGIS, habitat mapping, spatial risk assessment

**Data Analysis & Statistics:** R, Excel, SPSS, data visualization, statistical modeling

**Climate & Environmental Modeling:** Impact assessment, climate risk modeling

**Scientific Writing & Documentation:** Ecological reporting, data analysis, research documentation

**Collaboration & Laboratory Skills:** Teamwork, leadership, lab techniques, biosafety compliance

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## CERTIFICATIONS

### Quantitative Ecology and Lichens Taxonomy

**10/18-20/2023**

- Participated in a three day workshop on advanced ecological survey techniques, learned to use lichens as bio-indicators for assessing environmental health.
- Gained hands-on experience in monitoring ecosystem quality and evaluating anthropogenic impacts.
- Certificate: <https://github.com/celeusbaral/certificates/raw/main/Lichen%20ecology.pdf>

**Digital Champion Award in Risk Mapping and Spatial Technologies, ADPC, NAXA** 01/24-25/2024

- Recognized as a Digital Champion for the Digital & Spatial Technologies for Anticipatory Action. (DASTAA) project
- Digitized elements-at-risk in Parshuram and Dodhara-Chandani Municipalities, Nepal.
- Contributed to implementing digital and spatial technologies for anticipatory action, supported by ADPC iCARE Innovation.
- Certificate: <https://github.com/celeusbaral/certificates/raw/main/celeus.pdf>

***Youth Speak Forum, AISEC Nepal***

01/07/2023

- Represented as a young leader advocating for Sustainable Development Goals (SDGs)
- Engaged in discussions on environmental stewardship and community-driven conservation.
- Certificate: <https://github.com/celeusbaral/certificates/raw/main/Celeus%20Baral.png>

**Nature-Based Solutions for Disaster and Climate Resilience, Partnership for Environment and Disaster Risk Reduction (PEDRR), United Nations Environment Programme (UNEP), European Union (EU) and SDG Academy** 03/07/ 2025

- Gained expertise in ecosystem-based approaches to disaster risk reduction and climate resilience.
  - Explored strategies linking sustainable development, environmental management, and resilience planning.
  - Certificate: <https://github.com/celeusbaral/certificates/raw/main/MOOC%20Certificate.pdf>
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**CO-CURRICULAR ACTIVITIES**

***Volunteer at Autism Care Nepal Society***

09/2021-01/2022

- Volunteered with Autism Care Nepal, enhancing learning outcomes for children with autism through tailored support and interventions.
- Contributed to measurable improvements in the organization's educational impact, advancing inclusive learning and developmental support.
- Experience letter: <https://github.com/celeusbaral/certificates/raw/main/Celeus%20Baral.pdf>

***Co-founder and Documentation Head at NAMI ECO club***

06/2022- 08/2023

- Co-founded NAMI ECO Club, establishing its vision, mission, and operational framework.
- Led documentation and knowledge management, ensuring accurate records of projects, events, and research initiatives.
- Coordinated and guided team activities, fostering collaboration and leadership development among members. .
- Link: [NAMI ECO CLUB - It is our pleasure to welcome, Ms. Celeus... | Facebook](#)

**Media feature**

27/04/2024

- Featured in *The Kathmandu Post* ("**Patience, Passion and Pastries,**") for founding **Bakeleus**, an online bakery integrating sustainable, eco-friendly baking practices.
- Advocated **locally sourced ingredients and zero-waste techniques**, linking culinary innovation with environmental stewardship and resource efficiency.
- Link: <https://kathmandupost.com/recipes/2024/04/27/patience-passion-and-pastries>