# **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"

## **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: <a href="https://github.com/celeusbaral/Thesis-/raw/main/Celeus-ENV4101">https://github.com/celeusbaral/Thesis-/raw/main/Celeus-ENV4101</a> 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, IHHR, 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: <a href="https://www.instagram.com/p/DJtJWalzNwO/?img">https://www.instagram.com/p/DJtJWalzNwO/?img</a> index=2

# **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 (currently developing)

# **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

## **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: <a href="https://github.com/celeusbaral/certificates/raw/main/MOOC%20Certificate.pdf">https://github.com/celeusbaral/certificates/raw/main/MOOC%20Certificate.pdf</a>

#### 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