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: 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, 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: https://www.instagram.com/p/DJtJWalzNwO/?img_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 (Submitted for publication)

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: https://github.com/celeusbaral/certificates/raw/main/MOOC%20Certificate.pdf

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