Partner Organization Project Proposal
Conservation Leadership through Learning - Colorado State University

Thank you for your interest in CLTL. We are excited to work with you to develop Final Project opportunities for our students. Please read through our Project Partner webpage, and then fill out this project interest form to let us know about your project ideas.

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<th>Organization Information</th>
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<tr>
<td>Organization Name: Round River Conservation Studies</td>
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<tr>
<td>Primary Contact: Doug Milek</td>
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<tr>
<td>Office Phone Number:</td>
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<td>Primary Contact Email:</td>
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<td>Alternate Phone Number:</td>
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<td>Students will participate in coursework at CSU from August 2016 to May 2017. In-situ work will commence June 2017 and be completed by October 1, with all deliverables completed by December 1, 2017.</td>
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<td>✓ Please check this box to acknowledge these dates.</td>
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Brief Project Description:
The Okavango Delta supports a vast array of critical ecosystem services within an otherwise semi-arid region of northern Botswana. Biodiversity values are one of the highest in southern Africa, and an important tourism economy in the region is based upon wildlife viewing opportunities. Aerial wildlife surveys completed in 2010 documented a dramatic decline in several ungulate species across the region. Consequently, there is a need to develop a regional understanding of the distribution and availability of habitats for key wildlife species and how these habitats may change.

Research efforts have been undertaken on the dynamic relationships between flooding regimes and vegetation, groundwater levels and vegetation and on predicted climate changes for vegetation distributions. There is also a significant amount of ecological research and inventory information available for key wildlife species. Synthesizing these efforts through species habitat and connectivity modeling can provide a regional perspective on the current abundance, distribution and availability of habitats for key wildlife species. Additionally, the linking of species habitat models to future climate change conditions can provide the ability to assess how habitats may change over time.

Such an analysis will assist decision-making for habitat and wildlife management by providing a current assessment of wildlife habitats, wildlife and human use patterns, ecological and human interface and dynamics. These analyses will also provide a tool or platform for examining the impacts of possible future changes due to human uses, climate change and proposed management regimes.

The proposed study area for the wildlife habitat and connectivity modeling is encompassed by Reserves, Parks, Wildlife Management Areas and Pastoral Areas. The effort is in two major phases with stand-alone deliverables anticipated for each, which would be completed with the assistance of a senior scientist.

Below are the project criteria. Please check each criterion the project would likely meet.

✓ Community-based: on-the-ground work at a community/regional level, including interactions with and/or exposure to local decision-makers and/or stakeholders
✓ Multi-disciplinary: analysis and investigation of a conservation issue through multiple lenses (e.g., ecological, economic, social, political)
✓ Cross-cultural: opportunities for students to interact with individuals and/or in a culture vastly different than their own
✓ Networking: opportunities for students to interact with other conservation professionals

Final projects should provide opportunities for students to apply knowledge from their CLTL coursework. Please check the topics the proposed project would address:

✓ Biodiversity
✓ Governance/Decision-making
✓ Facilitation
✓ Spatial analysis
✓ Social science research methods
✓ Multi-level views of conservation
✓ Systems thinking
✓ Policy
✓ Ecosystem services
✓ Collaborative conservation
✓ Ecological research methods
✓ Outreach
Students are required to provide their project partner with a professional-level deliverable (e.g., management plan, technical report, communication materials, set of policy briefs, series of podcasts, etc.). Please provide a brief description of potential deliverables for your project:

During Phase I, deliverables will be based upon best available existing information on vegetation classification and the seasonal habitat requirements of selected ungulate species. Key deliverables, completed with assistance from a senior scientist, are anticipated to include: compilation of data on vegetation classes and their distribution and on selected wildlife species; development of seasonal habitat models; prediction of the current amount and distribution of seasonal habitats for selected species; habitat models may be applied to existing predictions of vegetation conditions under climate change scenarios; and report documenting assumptions, methods, results and limitations of the effort, as well as recommendations for next steps and management applications.

For Phase II, the data compilation, synthesis and model development undertaken in Phase I will be used to identify critical information gaps in our ability to understand and model current and potential future habitat distributions for key wildlife species in the Delta. Key deliverables are anticipated to include: incorporating ongoing field data collection efforts to increase the robustness and precision of existing vegetation modeling; examination and potentially field population relative abundance and structure data to habitat predictions of regional distributions; and the development of decision-support tools including a regional conservation area design identifying key areas for wildlife conservation under current and future conditions.

Please describe the project team, including who the student(s) would likely work with at the project site or if it would be mostly independent:

Students will coordinate field efforts with Round River research staff and the Okavango Research Institute. On the ground work will require some partnership with Round River’s local Botswana field staff. Field efforts will require significant time interacting with local communities.

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**Project Details**

**Project location (city, state/province, country):** Okavango Delta, Botswana

**Desired Number of Students:** Min 1  Max 4

Please indicate in-kind support, if any, the student would receive (check all that apply):

- [x] Room and board during fieldwork  - [ ] Room and board during entire project
- [x] Translators                          - [x] Research assistant(s)
- [ ] Travel to/from U.S. to project location  - [x] Travel within/around project location
- [x] Additional support  Please describe: Orientation to area, use of facilities and equipment during orientation

Please elaborate on any of the checked items above:

English is spoken by most people in Botswana, even within rural areas, but working closely with a local guide provides much greater access and acceptance, at least during initial visits. Round River employs such individuals. Depending on the interest of CLTL students, Round River operates an undergraduate student program that is on the ground working to complete fieldwork as described previously. CLTL students may have access to these students depending on specific needs and timing. The Round River student program may also serve as a partner in assisting with field efforts.

**Preferred/Required skills and experience of the student(s):**

Language proficiency:  [x] Preferred  [ ] Required  Specify language:

Technical skills:  [x] Preferred  [ ] Required

Please specify: Basic understanding of ecological processes.

Prior experience in country/region:  [ ] Preferred  [x] Required

Please describe the connectivity at project site (e.g., internet access, mobile phone coverage):

Cellular coverage is increasing throughout the region, and there is often coverage even in rural areas. Internet is available in most towns and cities. Satellite phones are used if desired for emergencies.

**Additional Comments:**

This is a dynamic project that has multiple aspects that can be further developed beyond the scope of objectives and deliverables described in this proposal. For example, there are developing economic issues affected by the current ban on hunting, which in turn influencing poaching in the region. Performing research in Botswana may require a permit and associated fees; please visit the following website for more information:


Thank you for proposing a CLTL Final Project. We will contact you with any further questions about the proposed projects. If you have questions, please feel free to contact us at Terra.Smith@colostate.edu. We look forward to working with you.