



**Arnhold Environmental Graduate Fellowship**  
***Spatial planning for area conservation in the face of climate change (SPARC)***  
Fall 2023

**Project Background**

The University of California Santa Barbara ([UCSB](#)) and Conservation International ([CI](#)) recently launched the Arnhold UC Santa Barbara-Conservation International Climate Solutions Collaborative to unify their demonstrated expertise and networks to conduct cutting-edge applied research to yield tangible, progressive solutions, and propel the careers of emerging environmental professionals. Through this partnership, the Environmental Markets Lab ([emLab](#)) at UCSB and CI are launching several applied collaborative research projects pushing the boundaries on resilient ocean and land conservation, natural climate solutions, and the frontier of impact investing in the blue economy. The Collaborative has also created the Arnhold Environmental Fellows program - a powerful opportunity for undergraduate and graduate students to engage in collaborative research projects and receive mentorship from experts in the fields of environmental and ecological science. We are seeking at least one motivated graduate student to support our project focused on conservation planning and climate change who will work with Bren faculty Ashley Larsen, CI and international colleagues, and undergraduate researchers to produce impactful research.

Climate-driven shifts in both species ranges and in the spatial configuration of threats to biodiversity will affect the success of conservation. In this project, “Spatial planning for area conservation in the face of climate change (SPARC)”, UCSB and CI will further advance the science of planning for projected ecosystem responses to climate change - and provide timely information to ensure conservation area networks are climate-proofed. We are currently hiring at least 1 part-time (10h/week during academic year) graduate research assistant to support projects under this umbrella for the Fall quarter, with possibility of continuation in future quarters. Students will contribute to one of two ongoing projects based on skills, interest and project needs: 1) modeling human-wildlife conflict under climate, crop, and other land cover changes and 2) leveraging current and future agricultural land use change (e.g. agricultural abandonment, multi-functional landscapes) to balance competing demands for agriculture, energy and biodiversity conservation.

**Responsibilities**

During this opportunity, the Fellow will gain experience working on an applied research project and will have the opportunity to engage with the following activities:

- Find and manage spatial and remote sensing data related to land use/land cover, agriculture, climate, energy & biodiversity

- Develop and execute reproducible code for spatial and statistical analyses related to land/climate change, species distribution modeling, connectivity modeling and landscape fragmentation analyses
- Gather and review literature
- Mentor undergraduate student researcher(s)
- Contribute to presentations and reports

### **Desired Skills and Experience**

- Coursework and/or experience with ecology/conservation
- Advanced knowledge of GIS
- Advanced knowledge of R, Google Earth Engine, and/or ArcGIS
- Prior independent research experience
- Interest or experience in mentoring or teaching

### **Fellow Selection Criteria**

Students will be selected as Arnhold Environmental Fellows based on the following criteria:

- Excellence in environmental and ecological science and research
- Interest, skills, and experience related to the project responsibilities described above
- Registered UCSB graduate student in good academic standing

emLab is committed to sustaining an equitable and inclusive workplace and to the goal of reflecting the rich diversity of our campus community within our staff. We encourage applications from students of all backgrounds and majors and special consideration will be given to candidates who enhance diversity in the environmental sciences.

### **How to Apply**

To apply, please send your resume and cover letter to Jen Bone at [jebone@ucsb.edu](mailto:jebone@ucsb.edu). In your application package, please include the following:

1. Your resume
2. A short cover letter (no longer than one page) that includes information on (a) your schedule/availability for fall quarter (b) any relevant work or volunteer experience that relates to the desired skills and experience outlined above, and (c) if applicable, any information how your participation in the Fellowship would enhance diversity in the environmental sciences.

The Arnhold Environmental Graduate Fellowship will be paid between \$18-22/hour commensurate with academic and professional experience and will work for 12 weeks from their start date, which is ideally in October.

**Application Deadline: September 20th, 2023**