

GMU-USGS Climate Adaptation Science Center Fellowship Program for Spring 2025-Fall 2025

Program Overview

The department of Environmental Science and Policy offers undergraduate and graduate fellowships in the Fish and Wildlife Adaptation Program with the US Geological Survey's National Climate Adaptation Science Center (NCASC). In this program, fellows will conduct research and develop policy-informing products that support managers adapting to the impacts of climate change on fish and/or wildlife resources. This program provides fellows with the opportunity to acquire professional experience outside of academia, while simultaneously advancing in their degree program.

The fellowship comprises the spring, summer, and fall semesters in 2025. During the summer semester, this position is fully remote part-time (25-30 hours/week), but fellows are encouraged to work in office 1-2 days/week at the NCASC headquarters in Reston, VA. During the spring and fall semesters, fellows will collaborate with mentors virtually or in-person at NCASC headquarters for 10-18 hours per week. Fellows will focus on the background of current issues of climate change and fish and/or wildlife resources and learn the process by which policy and management-informing tools are produced at NCASC. Projects focus on understanding climate change impacts on fish and wildlife, primarily supporting existing research projects with NCASC Principal Investigators (PIs). Each fellow will work on one project (below), working directly with the project PI at NCASC.

Potential projects are as follows:

Projects

1) National Synthesis of Species Responses to Climate Change (Range Shifts)

This internship will involve collecting and analyzing documented effects of climate change on fish and wildlife, with an emphasis on range shifts. As part of an effort to assess the body of evidence about range shifts in response to climate change, this project will involve working with USGS staff to review peer-reviewed articles on species' range shift in response to climate change; articulate and assess hypotheses related to climate change-related range shifts in terrestrial, freshwater, and marine ecosystems; and depending on interest and project progress, participate in a journal publication process.

This project will require strong skills in statistical analysis; experience reading and interpreting scientific publications; data management; and the ability to work independently.

2) Resist-Accept-Direct Case Studies

This internship will focus on developing case studies to support on-going NCASC research on the [Resist-Accept-Direct \(RAD\) Framework](#). Case studies will seek to highlight projects where managers chose to switch management pathways within RAD the framework due to feasibility assessments and objective framing in their decision context. Interns will work with NCASC researchers and resource managers to identify key elements of those decisions and create science communication products highlighting those projects.

3) **Inland Fisheries and Climate Data Informatics**

This internship will focus on supporting NCASC databases related to climate change and inland fish including the [Fish and Climate Change Database \(FiCli\)](#) and the [U.S. Inland Creel and Angler Survey Catalog \(CreelCat\)](#). The intern will learn about systematic literature review approaches and tools and may have an opportunity to contribute to scientific publications.

4) **Wildlife Responses to a Changing Climate**

This internship will focus on synthesizing responses of wildlife populations to a changing climate. Duties may include database searches of the scientific literature, compiling information from published studies, analysis of data, and writing up results in preparation for publication. There may also be opportunities to develop science communication products that can be used for engaging natural resource practitioners.

5) **Using AI and Machine Learning (ML) for Systematic Reviews**

This internship will explore using AI/ML tools to improve systematic literature reviews. Duties will include working with USGS scientists to test approaches for improving literature screening and data extraction using existing systematic review databases related to range shifts and fisheries. This project will require strong computational and coding skills.

Compensation

- Undergraduate students will be funded with \$8,400/year (spring 2025-fall 2025) and graduate students will be funded with a \$11,000/year (spring 2025-fall 2025).
- Students who will earn fellowships may want to register for EVPP 494 Internship or EVPP 894 Supervised Internship.

Eligibility

- Active undergraduate or graduate students in Environmental Science, Environmental and Sustainability Studies program, Conservation Science, Data Analysis or related studies with the project, throughout the entire fellowship.
- This position is fully remote. However, students may come in to the USGS office in Reston, VA for 1-2 days a week, as coordinated with their PI.

Application materials

- Letter of interest (1 page) discussing what you hope to get from the internship and highlighting relevant experiences and skills
- Current resume
- (Un)official transcripts

Application submissions and contact

- Professor Younsung Kim via ykih@gmu.edu

Application deadline

- November 25, 2024, Monday, 11:59 pm (EST)