Request for Proposals

Submission deadline	April 30, 2025
Project	Assessing Applications of Artificial Intelligence for the Conservation of Freshwater Biodiversity
Summary	Monitoring the status of freshwater biodiversity & freshwater ecosystems in relation to conservation interventions remains a challenge. For many of the most biodiverse regions of the world—including many of the places The Nature Conservancy (TNC) works—resources for monitoring are scarce. With nearly one in every three freshwater species threatened with extinction, addressing this information gap is an urgent need. The primary objective of this project is to assess the potential of artificial intelligence (AI) for applications related to monitoring status and changes in freshwater biodiversity & freshwater ecosystems. With emphasis on approaches that enable monitoring at watershed-scales—including within low resource contexts of the Global South—this research project aims to provide a roadmap for TNC to prioritize applications and partnerships for AI for freshwater biodiversity conservation. The consultant will advance these efforts through three primary activities: (1) Leading development of a virtual workshop to assess and prioritize applications of AI for freshwater biodiversity conservation. (2) Assessing key institutions and research groups actively developing applications of AI for freshwater biodiversity conservation. (3) Identifying and describing a selection of exemplary case studies exhibiting impactful applications of AI for freshwater biodiversity conservation.
Background	TNC operates a number of strategic programs toward conserving freshwater biodiversity, including implementing projects to protect the resiliency of watersheds critical for sustaining freshwater species and ecosystems. TNC and partners employ a variety of conservation interventions—from site-based activities to policy actions—in order to achieve watershed-scale outcomes for freshwater biodiversity. Correspondingly, TNC and partners utilize a diversity of approaches to assess the status of freshwater biodiversity and outcomes resulting from conservation interventions. The ability to meaningfully assess conservation status and outcomes is often challenging given system complexity, data gaps, and resource constraints. TNC has already begun exploring the potential for AI to address these challenges. To date, we have identified a number of applications of AI for freshwater biodiversity conservation. However, we still have critical knowledge gaps regarding the specific and practical applicability of these applications for TNC conservation projects, as well as gaps regarding the institutions, research groups, or other organizations that could be partners to advance the development and implementation of these approaches.

	Through this consultancy, TNC seeks to address these knowledge gaps and establish organizational clarity regarding near-term priorities for AI applications for freshwater biodiversity conservation.
Specific tasks	At a minimum, the consultant will complete the following activities and tasks: (1) Lead development of a virtual workshop to identify and assess applications of AI for freshwater biodiversity conservation, including: • Develop agenda in consultation with TNC and meeting facilitator • Identify and invite workshop participants • Support meeting facilitator as needed • Present content as subject matter expert • Summary report and presentation (2) Lead assessment of key institutions and groups actively developing AI for freshwater biodiversity conservation, including: • Desktop search • Interviews with subject matter experts • Summary report and presentation (3) Lead development of report describing a selection of exemplary case studies exhibiting the most promising applications of AI for freshwater biodiversity conservation, including: • Desktop search • Interviews with subject matter experts • Summary report and presentation
Project timeline	All tasks and deliverables are to be completed in full by July 31, 2025.
Qualifications	• Doctoral student or postdoctoral researcher with primary areas of study related to AI and environmental conservation • Record of publications on topics related to AI and freshwater biodiversity conservation • Experience with applications of AI to other conservation fields (e.g., terrestrial biodiversity conservation) will be considered but freshwater conservation experience is strongly preferred • Active affiliation with an institute or organization with programs related to AI and environmental conservation is strongly preferred
Proposal requirements	• Concept note describing general approach for each of the three primary activities (1 page limit) • Description of experience with AI + freshwater biodiversity (300 word limit) • Budget • Curriculum vitae (CV) • Professional references (at least 2)
Submission	Proposals must be received no later than April 30, 2025. Send your submission as email attachments to Nathan Karres (nkarres@tnc.org).