

REQUEST FOR PRE-PROPOSALS FOR FIELD RESEARCH:

SUSTAINABLE AGRICULTURE AND FORESTRY ACTION

Providing food and forest resources to meet the growing needs of humanity in a rapidly changing world is one of our most urgent conservation needs. How we manage agricultural systems and forests has tremendous impact on carbon sequestration and on our ability to maintain ecological resiliency worldwide. Additionally, developing sustainable agriculture and forestry practices is essential to ensure availability of the ecosystem services (food and water; flood and disease control; spiritual, recreational, and cultural benefits; nutrient cycling) necessary to maintain life on Earth and accommodate shifts in resource availability because of global change.

The *Earthwatch Sustainable Agriculture and Forestry Action RFP* invites pre-proposals from scientists for research that will take measurable action to address global change in agricultural and forest ecosystems by:

- Increasing scientific knowledge and public awareness of environmental challenges, while providing locally relevant solutions;
- Increasing partnerships with local people, communities, governmental and non-governmental organizations (NGOs), and corporations at local and international levels; and
- Informing management plans and environmental policies.

All pre-proposals must have an overarching research theme directly related to taking action to address degradation and loss of biodiversity and be based on hypothesis-driven science with quantifiable goals. Because meeting these challenges requires a whole-ecosystem approach and innovation, we are specifically interested in interdisciplinary, solution-based projects. Examples include agro-forestry, defined as agriculture that incorporates the cultivation and conservation of trees (e.g., shade-grown coffee), and incorporation of Tradition Ecological Knowledge (TEK), defined as a cumulative body of knowledge and beliefs handed down through generations about the relationship of living beings (including humans) with one another and with their environment. We strongly welcome pre-proposals aligned with the UN Sustainable Development Goals that will improve human livelihoods and support scientists in emerging nations. We seek projects in South America, Europe, Africa, Asia, and North America.

FOCAL SUSTAINABLE AGRICULTURE AND FOREST ECOSYSTEMS ACTION RESEARCH TOPICS:

We invite pre-proposals for field-based research by qualified scientists on the following topics:

- Climate-change impacts in agriculture and forestry systems on water availability and quality, nutrient flow, maintenance of species diversity, and carbon sequestration;
- Agroforestry that includes ecologically and socially sustainable production of widely-used commodities such as coffee, tea, chocolate, wine, and hops;
- Food-web relationships driven by pollinators, apex predators, and herbivores, and their effects on ecosystem productivity, resiliency, and biodiversity;
- Native seed programs and invasive species control;
- Cooperative sustainable agriculture and forestry strategies;
- Climate-smart agriculture and innovations that address food security and climate change;
- Integration of sustainable agriculture and forest ecology research with local K-12 STEM education, citizen science, and TEK programs;
- Soil conservation and health, soil carbon restoration, and soil erosion control;
- Human-wildlife coexistence, including reduction of wildlife damage to crops and forests, and noninvasive pest control; and
- Ecological restoration, with a focus on repairing the damage humans have done to ecosystems.

HARNESSING THE POWER OF CITIZEN SCIENCE TO TAKE ACTION TO ADDRESS GLOBAL CHANGE: Since 1971, Earthwatch has funded scientists working with citizen-scientist volunteers to increase our understanding of ecosystems and find sustainable solutions to global change. Projects we fund produce rigorous, relevant, and impactful science. Incorporating citizen scientists in fieldwork increases the broader impacts of the research we fund, by increasing their science awareness and conservation commitment.

To fit our citizen-science model, all proposed projects must:

- Have quantifiable goals and measurable impacts of action taken on the project;
- Have a 3-year or longer duration (longer-term research may receive priority support);
- Incorporate field-based research;
- Have data gathered primarily by citizen-scientist participants recruited by Earthwatch;
- Field approx. 4-10 teams per year, with 4-15 volunteers per team as needed for data collection;
- Have short (1-3 day) and/or long (7-14 day) duration teams (projects that enable both short and long duration teams will receive priority support);
- For teams > 1 day, provide reputable housing for volunteers within a 45-minute drive from site;
- Field adult, high school and college student, teacher, and corporate groups;
- Be run in English, with all communications by field staff and supporting documents in English;
- Educate volunteers about the project's science and its relevance to global priorities;
- Engage with, provide outreach to, contribute to conservation actions, or otherwise collaborate with local community stakeholders;
- Share project data with stakeholders, and if possible contribute to open-source datasets;
- Partner with collaborators and receive support from at least one other source of funding.

GRANTS: Earthwatch funding is intended to be supplemental to other sources of funding. Annual grants cover project field expenses including: equipment, research permits, scientist transportation to the field, support staff, and food and housing while in the field. **Grants do not cover scientist salaries, student tuition, overhead, or capital equipment.** Annual budgets for projects with long-duration teams range between US \$20,000–\$80,000, with most of that covering volunteer and staff expenses while in the field. Final grants are provided on a per-capita basis based on the number of participants. Research projects are tenable for three years, subject to annual performance review, and may be eligible for renewal beyond that period.

PRINCIPAL INVESTIGATOR (PI) REQUIREMENTS: All pre-proposals must be submitted by the PI, who is also expected to be the primary leader in the field. All PIs must have a PhD in the area of proposed research and a university, government agency, or science-focused NGO affiliation. We encourage graduate student participation on projects and are particularly interested in helping support early-career scientists and scientists local to the research nation.

SUBMITTING A PRE-PROPOSAL: All pre-proposals and supporting documents must be in English. Earthwatch will select pre-proposals for development into full research proposals. Criteria for selection are: quality and relevance of the project proposed, PI qualifications, and goodness of fit for citizen science. Due to safety concerns, we are unable to support projects in the following areas: Earthwatch No Go List. To submit a pre-proposal, visit <http://earthwatch.org/research-funding/apply-for-funding>.

**PRE-PROPOSALS FOR PROJECTS STARTING IN 2021 WILL BE
ACCEPTED THROUGH 11:59 P.M. (EDT) SUNDAY, JUNE 9, 2019**

Please direct inquiries to: research@earthwatch.org