

REQUEST FOR PROPOSALS FOR FIELD RESEARCH:

EARTHWATCH SUSTAINABLE AGRICULTURE AND FOREST ECOSYSTEMS PROGRAM

The global human population currently numbers over 7 billion and will reach 8 billion by 2026. 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 conditions for life on Earth and to accommodate shifts in resource availability due to global change.

Managing our agricultural and forestry resources sustainably requires an adaptive approach rooted in best science. To that end, we are seeking research proposals from scientists for projects that will address global change impacts on agriculture and forestry by:

- Increasing scientific knowledge and public awareness of environmental challenges to sustainable agriculture and forest ecosystems, while providing locally relevant solutions;
- Increasing partnerships with grassroots organizations, as well as with governmental and non-governmental organizations (NGOs) at local and international levels; and
- Informing management plans and environmental policies.

All proposed projects must enable citizen-science participation. Because meeting these challenges requires contributions from many research fields and leveraging the power of data, we are particularly interested in interdisciplinary proposals and those that involve open-source, shared data. We strongly welcome proposals for project that will improve the livelihoods of human communities and will help develop scientists in emerging nations.

FOCAL SUSTAINABLE AGRICULTURE AND FOREST ECOSYSTEMS PROGRAM RESEARCH TOPICS:

We invite 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;
- Keystone species and biodiversity, food web relationships driven by pollinators, apex predators, and herbivores, and their effects on ecosystem productivity and biodiversity;
- The effects of anthropogenic land-use and land-cover changes on ecosystem function;
- Cooperative sustainable agriculture and forestry strategies;
- Development of tools to create and monitor resilience in agriculture and forestry systems, including erosion control, soil conservation and soil health, and weed control;
- Climate-smart agriculture (food security and climate change);
- Ecologically and socially sustainable production of widely-used commodities such as coffee, tea, chocolate, wine, and beer;
- Integration of sustainable agriculture and forest ecology research with local K-12 STEM education, citizen science, and Traditional Ecological Knowledge programs;
- Human-wildlife coexistence, including the reduction of conflict between humans and wildlife, the 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.

**PRE-PROPOSALS FOR PROJECTS STARTING IN 2018 WILL BE
ACCEPTED THROUGH 11:59 PM (EDT) JUNE 12, 2016**

Please direct inquiries to: research@earthwatch.org

HARNESSING THE POWER OF CITIZEN SCIENCE TO ADDRESS GLOBAL CHANGE:

For 45 years, in order to find sustainable solutions to global change, Earthwatch has sent scientists into the field assisted by citizen-scientist volunteers. Collectively, our goal is to support projects that produce rigorous, relevant and impactful science. Participation by volunteers increases the broader impacts of the research we support. Citizen scientists return home with a deeper awareness of what is at stake and greater commitment to address conservation challenges.

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

- 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 volunteers recruited by Earthwatch;
- Field 4 to 10 teams per year that span 7 to 14 days, each accommodating 4 to 20 volunteers per team as needed for data collection;
- Provide housing for volunteers within a reasonable distance from the research site;
- Be open to graduate, college, and/or high school student participation;
- Be run in English, with all communications and supporting documents in English;
- Educate each team of Earthwatch volunteers about the project's science and its relevance; and
- Share project data with managers and if possible contribute to open-source datasets to maximize the impacts of the project.

GRANTS:

Annual grants cover project expenses while in the field including: equipment (limited), tools, and supplies; research permits; scientist transport to the field; support staff; food and housing for principal investigators, staff, and Earthwatch volunteers. Grants do not cover scientist salaries, student tuition, overhead, capital equipment, or post-fielding data analysis.

For successful proposals, the principal investigator (PI) will negotiate a budget in partnership with Earthwatch. Typical annual budgets average between US \$20,000–\$80,000, with approximately half of the total budget covering volunteer expenses while on the project. Final grants received are based on the number of volunteers participating. Successful proposals are funded for three years, subject to passing an annual performance review. Funding is potentially renewable beyond that period, upon submission of a research renewal proposal.

PRINCIPAL INVESTIGATOR REQUIREMENTS:

All proposals must be submitted by the PI. All PIs must have a PhD and an affiliation with a university, government agency, or NGO. We strongly encourage graduate student participation in projects as co-PIs as permitted by their universities. We particularly are interested in helping support emerging scientists from developing nations.

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 earthwatch.org/scientific-research/scientist-opportunities/working-with-earthwatch.

**PRE-PROPOSALS FOR PROJECTS STARTING IN 2018 WILL BE
ACCEPTED THROUGH 11:59 PM (EDT) JUNE 12, 2016**

Please direct inquiries to: research@earthwatch.org