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.

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;
- Informing management plans and environmental policies; and
- Improving the livelihoods of human communities.

Because meeting these challenges requires contributions from many research fields, we are particularly interested in interdisciplinary proposals.

FOCAL SUSTAINABLE AGRICULTURE AND FOREST ECOSYSTEMS PROGRAM RESEARCH TOPICS:

We invite proposals by qualified scientists on a broad range of sustainable agriculture and forestry topics, including:

- Climate change impacts in agriculture and forestry systems on water availability and quality, nutrient flow, maintenance of species diversity, and carbon sequestration;
- 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;
- Ecological approaches to forestry that incorporate innovative data collection, mapping, and analysis;
- 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;
- Keystone species and biodiversity, particularly studies of food web relationships driven by apex predators and other keystone species [e.g., pollinators] and their effects on ecosystem productivity and biodiversity, and
- Ecological restoration, with a focus on repairing the damage humans have done to ecosystems.
HARNESSING THE POWER OF CITIZEN SCIENCE TO ADDRESS GLOBAL CHANGE:
For over 40 years, in order to understand and find sustainable solutions to global change, Earthwatch has sent scientists into the field assisted by citizen scientists. Participation by volunteers increases the broader impacts of the research we support. Citizen scientists return home with a deeper understanding of what is at stake and greater commitment to address conservation challenges.

To fit our citizen scientist 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 from 4 up to 20 volunteers per team;
• 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
• Have a strong interest in engaging with citizen science volunteers and educating each team of Earthwatch volunteers about the project’s science and its relevance.

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 participants. Grants do not cover scientist salaries, student tuition, overhead, capital equipment, or post-expedition data analysis.

For successful proposals, the Principal Investigator (PI) will negotiate a budget in partnership with Earthwatch. Typical budgets average between US $20,000 – $80,000, with approximately half covering volunteer expenses while on the project. Final grants received are based on the number of volunteers participating. Research projects are tenable for three years and potentially renewable beyond that period. All projects are subject to an annual performance review.

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. 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. To submit a pre-proposal, visit earthwatch.org/scientific-research/scientist-opportunities/working-with-earthwatch.

PRE-PROPOSALS FOR PROJECTS STARTING IN 2017 WILL BE ACCEPTED THROUGH 11:59 PM (EST) THURSDAY, JUNE 25, 2015
Please direct inquiries to: research@earthwatch.org