

*Announcement of the 2020 Request for Proposals***Biodiversity Informatics for Africa**

The JRS Biodiversity Foundation is issuing a Request for Proposals (RFP) for multi-year projects focused upon biodiversity data, knowledge and information services related to (1) freshwater biodiversity, (2) pollinator biodiversity, and (3) biodiversity informatics capacity development. The foundation will award about 1.6 million U.S. dollars among qualifying proposals by July 2020. Please write to jrsrpf@jrsmdiversity.org with any questions. Please see JRS 2020 Request for Proposals and 2020 RFP Frequently Asked Questions.

THE JRS BIODIVERSITY FOUNDATION

Our mission is to increase access to and the use of information for biodiversity conservation and sustainable development in sub-Saharan Africa. Since 2007, the foundation has invested more than \$20 million in biodiversity informatics projects to: (1) collect and enhance data, (2) aggregate, synthesize, and publish data, (3) make data more widely available to potential end-users, and (4) inform biodiversity conservation.

The JRS Biodiversity Foundation strategy is to connect data to knowledge use in domains where the demand for information can sustain investment in biodiversity informatics. The J.R.S. Biodiversity Foundation focuses our pollinators- and freshwater-related grantmaking in Botswana, Kenya, Malawi, Rwanda, South Africa, Tanzania, and Uganda. *We may make exceptions to this policy for projects with the potential for exceptional impact upon biodiversity informatics capacity development or highly transferrable models or technologies.*

Please Ask Us Questions

We encourage you to contact us with questions regarding how well your project fits this RFP scope. Inquiries or short concept notes are welcomed by email or via our online forms. Please see our [Grantmaking Basics](#) for a list of what we do not fund.

GENERAL QUALIFICATIONS:

We seek projects that address issues at a substantive spatial scale, can grow to a larger scale, or can be transferred across geographic regions or organizational and institutional contexts. Projects that hold potential to engage with, reinforce, or build upon the results or technologies of our grant portfolio will be preferred. Applications that demonstrate a strong demand for data and ties to decision-making will be most competitive for JRS Biodiversity Foundation funding. All projects must conform to the foundation's [Open Data Policy](#). U.S. law prohibits our financing of projects to influence legislation through advocacy or lobbying (see JRS Grantmaking).

Requirements:

The following conditions ensure that your proposal aligns with the JRS Biodiversity Foundation's strategy and may be used as an eligibility checklist.

- The biodiversity information system is at the center of the project, and there is a clear potential use of and future value to the datasets or technologies.

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- The end-users of the biodiversity information are known and are directly involved in proposal development and project implementation.
- There are specific descriptions of hardware, software, data standards, and related technical tools, and their choice is justified; use of existing biodiversity informatics solutions and infrastructure is preferred.
- All primary biodiversity data and tools generated by the project will be available per the [Open Access Data Policy](#) and its terms for license, timeliness, standards, access, and compliance.
- The grant applicants are African or that African professionals and African institutions play significant roles in project design, implementation, and sustainability, and as recipients of funds for projects that originate outside of Africa.
- Training and capacity development in biodiversity informatics are explicit aims of the project through engagement with trainees, network-building, and sharing of training resources.
- Outputs and outcomes have specific targets that are measurable and time-bound.
- Plans for outreach include efforts to secure future partners and funders.
- Budgets are justified in significant detail regarding cost assumptions, timing, and rationale.

Types of Proposals: The total requested grant for 1-3 years may range from about \$50,000 to about \$250,000. We will accept two types of proposals: 1) proposals for multi-year projects and 2) proposals for co-funding of biodiversity information components of existing projects.

Application Process: All proposals that comply with the application guidelines will be considered. All proposals must be submitted using the online system. Proposals will not be accepted after March 10, 2020.

2020 TIMETABLE FOR APPLICATIONS:

January 7: Grant application portal opens.

March 10: Deadline for submission of proposals.

April 24: Requests, if needed, to applicants for supplementary information.

May 7: Deadline for submission of supplementary information, if requested.

June 2: Funding decision communicated by the Foundation.

August 1: Approximate date of the first payment to grantees.

Thank you in advance for your interest. Please write to JRSRFP@jrsmdiversity.org with any questions regarding this request for proposals.

FRESHWATER BIODIVERSITY SCOPE: PROJECT PROPOSALS

Freshwater ecosystems are under threat from expanding agriculture, human settlement, extractive industries, and climate change. The biodiversity of freshwater ecosystems is critical for ecosystem services for human well-being. Please see our program description at [Freshwater Biodiversity and Resources](#).

We seek projects that increase the access to and use of biodiversity information relating to freshwater biodiversity assessment and the conservation of freshwater ecosystem services in wetlands, rivers, and lakes of Uganda, Tanzania, Kenya, Rwanda, Botswana, Malawi, and South Africa.

All proposals must comply with the General Qualifications described in this announcement, particularly that the biodiversity information system is at the center of the project's aim and, information users are directly involved.

Problem Scope: Projects must address challenges that face freshwater biodiversity conservation and sustainable development. Problems may include but are not limited to (1) assessment of species and ecosystem conservation status, (2) designation or improved management of protected areas, (3) management of fisheries, (4) placement of water and other infrastructure, (5) mitigating impacts of energy and extractive industry development, (6) protection of watersheds for freshwater supply, (7) mobilization of data for and from environmental impact assessments, and (8) trans-boundary management of catchment basins. Species of interest that inhabit freshwater ecosystems may be aquatic and/or terrestrial. *We have a specific interest in projects that contribute to understanding and monitoring climate change.*

Meeting Demand for Knowledge: Approaches to ensure the value and use of data may include but are not limited to: partnerships that include data providers and users, data use for national policies or international environmental agreements, data use for conservation planning and management, and partnerships to mobilize environmental impact assessment data. Users may be in the public, private, and not-for-profit sectors in roles that involve decision-making that influences biodiversity.

Technical Scope: Projects must increase the access to biodiversity data that is valuable to decision-making for conservation and sustainable development. Technical approaches may include but are not limited to mobilizing and enhancing existing data; new or improved information platforms and services; technologies for data collection and publishing; and data visualization tools and platforms. *We have a specific interest in mobile technologies and project innovations that increase the scale and lower the cost of biodiversity data collection.*

Out of Scope: Out of the scope of this call are projects in marine ecosystems, projects primarily aimed at taxonomy or museum collection digitization, projects for livelihood development and ecosystem restoration, and projects without specific end-users and partners. Projects that focus on conservation implementation, basic research, and ecological monitoring without any development of an informatics component are out of scope.

All applicants are encouraged to use the "fast feedback" function in our online system or to write directly to us to check whether your project ideas are in scope and to receive constructive input. Please review the awarded grants in our Freshwater Program to understand our funding interests.

POLLINATOR BIODIVERSITY SCOPE: PROJECT PROPOSALS

Pollination is one of the most important ecosystem services supporting human life and livelihoods as well as natural biodiversity and primary productivity. Please see [Pollinators Biodiversity and Services](#).

All proposals must comply with the General Qualifications described in this announcement, particularly that the information system is at the center of the project's aims and that information users are directly involved.

Problem Scope: Successful proposals will address challenges facing pollinator conservation in Uganda, Tanzania, Kenya, Rwanda, Botswana, Malawi, and South Africa. Challenges to creating access to pollinators data include inadequate expertise, insufficient data on pollinator status and on pollinator-plant interactions, few options to mitigate risks to pollinators, lack of standard field methods and data standards, and lack of economic valuation of pollinator services. *We have a specific interest in projects that contribute to understanding and monitoring climate change.*

Meeting Demand for Knowledge: We seek projects that increase the access to and use of biodiversity information relating to pollinator biodiversity assessment and the conservation of pollinator services in sub-Saharan Africa. Projects may be related to these four areas of conservation and development policy and practice for which pollinator information may be highly relevant:

1. Datasets for monitoring landscape-level climate change impacts;
2. Biodiversity assessments and monitoring in agricultural landscapes;
3. Monitoring the impacts of land use management approaches; and
4. Monitoring the impacts of agricultural productivity strategies.

Technical Scope: We welcome proposals that focus on any significant pollinator group. We have an interest in building our grant portfolio related to the most important crop pollinators. Our technical priorities are:

1. **Methods:** (1) Approaches for large scale/low-cost pollinator data collection; (2) Methods for pollinator identification; and (3) Methodology, standards, and database design for plant-pollinator data.
2. **Platforms:** (1) Develop transferrable database and website models; (2) Develop pollinator knowledge platforms; and (3) Online access to field guides and checklists.
3. **Capacity Development:** (1) Biodiversity informatics expertise; (2) Baseline datasets; (3) High-quality pollinator biodiversity components of agricultural studies; and (4) Network formation and training.

We have a specific interest in mobile technologies and project innovations that increase the scale and lower the cost of biodiversity data collection.

Out of Scope: Out of the scope are projects to develop new agricultural practices, livelihood and community development projects, beekeeping projects, projects that are aimed solely at taxonomic revision and determination, behavioral research, and mass digitization of museum collections.

All applicants are encouraged to use the "fast feedback" function in our online system or to write directly to us to check whether your project ideas are in scope and to receive constructive input. Please review the awarded grants in our Pollinators Program to understand our funding interests.

CAPACITY DEVELOPMENT FOR BIODIVERSITY INFORMATICS SCOPE

The JRS Biodiversity Foundation goal is capacity development for biodiversity informatics in Africa. The bulk of our capacity development activity occurs within the scope of our technical projects in freshwater biodiversity and pollinators biodiversity. We also fund projects solely devoted to training and education such as:

- [Biodiversity Informatics Training Curriculum](#) of Oxford University and the University of Kansas;
- [Masters Program in Biodiversity Informatics](#) at the University of Abomey-Calavi; and
- [The African Biodiversity Challenge](#) facilitated by the South Africa National Biodiversity Institute.

Our [Capacity Development Program](#) also includes sponsorship of biodiversity informatics training at scientific conferences and sponsorship of African participation in international conferences.

Problem Scope: We aim to make a grant for biodiversity informatics capacity development that has a strategic approach to biodiversity informatics training so that the benefits of the training or the training activity itself might be sustained over time. The overall problem we aim to address is the limited scientific capacity for collection, cleaning, curation, publishing, analysis, and communication of biodiversity data. There is a gap between the traditional research disciplines such as taxonomy and ecology and the public and private efforts to conserve biodiversity. There are professional and cultural barriers to sharing data. The tools and processes for open data access and open science are only slowly penetrating scientific disciplines related to biodiversity. Biodiversity informatics is both a toolset and a research discipline and there are no professional networks, professional associations, distance learning programs, or annotated training materials in Africa. There are gaps between scientific disciplines focused upon species occurrence data and museum collections and those that employ ecosystem-level or genetic-level indicators and those that integrate biodiversity, biophysical, geospatial and socio-economic data for decision-making. There are limited examples and little information available in Africa for the successful organization of para-professionals or 'citizen scientists' for biodiversity data collection. Finally, coherent information on the well-proven software and hardware solutions for the handling, publication, and visualization of biodiversity data is fragmented and inaccessible.

Geographic Scope: We will prefer proposals that have some activity in one or more of our focal countries of Uganda, Tanzania Kenya, Rwanda, Botswana, Malawi, and South Africa. Efforts based wholly or in part in those countries will be able to leverage other JRS Biodiversity Foundation projects and networks. However, we would welcome pan-African attendance if training programs are offered.

Technical Scope: Creative solutions are welcome! There has been limited creativity or innovation in how cost-effective biodiversity informatics training is delivered and sustained. Solutions may include but are not limited to course development, degree programs, web-based resources, mentorship schemes, small grant awards, interdisciplinary training, mobile technologies, new partnerships, online courses, policy development, and more! Projects must present a compelling case for how success will be assessed with qualitative and quantitative methods.

Out of Scope: Training conducted outside of Africa is not in scope.

Letters of Inquiry: We strongly encourage applicants to email ideas or project summaries to jrsrfp@jrsbiodiversity.org or to use the feedback functions in the application form. This is a challenging domain and we are happy to exchange ideas to support successful proposals.

SPECIAL STUDIES

In addition to technical projects in freshwater biodiversity informatics and pollinators biodiversity informatics, we wish to fund two related special studies. The available budget for each study is approximately US\$ 60,000.

SPECIAL STUDIES SCOPE 1: STATE OF POLLINATORS BIODIVERSITY KNOWLEDGE IN AFRICA

The J.R.S. Biodiversity seeks to fund a desk study of the state of pollinators biodiversity knowledge in Africa that can establish a baseline against which future assessments might be compared and that might inform strategies to address knowledge needs for pollinators management and conservation. The study will use a rigorous methodology to compare countries and regions of Africa with other examples from other regions. Indicators and inquiry might include but are not limited to:

- Numbers, scientific disciplines, and citations of pollinators research publications over time;
- Quantity, diversity, publishing institution, date, and type of accessible biodiversity data;
- Taxonomic coverage, geographic coverage, and knowledge gaps;
- Survey of and description of the pollinators research community in Africa or a sample of countries;
- Reference to pollinators in national policies, popular press, or grey literature; and
- Assessment of key issues relative to the frameworks and recommendations of other regional or global assessments such as the IPBES pollinators report.

We seek a study that is rigorous and critical and candidly assesses that state of pollinators knowledge, trends, and progress relative to needs. An exceptional study may include recommendations, expert consultation and review, research outputs in the both the peer-reviewed and grey literature, and communication activities.

SPECIAL STUDIES SCOPE 2: FRESHWATER BIODIVERSITY DATA AND THE WATER SECTOR

The JRS Biodiversity Foundation strategy to develop the capacity for biodiversity informatics is to connect data providers to data users related to freshwater ecosystem conservation and sustainable development. In theory, the vital need for freshwater creates a demand for biodiversity information and knowledge that will leverage and sustain investments in human capital and technical infrastructure. We identified a potential need for biodiversity data among the freshwater fisheries sector; the water, sanitation and hygiene sector; and the environmental conservation and the sector. After four years of grantmaking, however, we have seen few cases where biodiversity information and knowledge are an influential consideration in decision-making.

We seek to fund a critical and rigorous study that examines whether and how conservation and economic sectors in Africa use or claim to consider freshwater ecosystem aquatic or terrestrial biodiversity data at species or ecosystem levels. Methods may include stakeholder interviews and surveys, and literature and policy content analysis. The geographic focus may be regional or on a sample of countries. A comparison to select OECD countries may be valuable. We seek a study that is rigorous and critical and candidly assesses the challenges to mainstreaming biodiversity value into water resource conservation and development. An exceptional study may include recommendations, expert consultation and review, research outputs in the both peer-reviewed and grey literature, and communication activities.

Letters of Inquiry: We strongly encourage applicants to email ideas or project summaries to jrsrfp@jrsmdiversity.org or to use the feedback functions in the application form. This is a challenging domain and we are happy to exchange ideas to support successful proposals.