



Postdoctoral Fellow, Geospatial Data Scientist (Ref: DDG-R4D/PDF/GDS/12/17)

Background: The International Institute of Tropical Agriculture (IITA) invites applications for the internationally recruited position of **Postdoctoral Fellow, Geospatial Data Scientist**.

The International Institute of Tropical Agriculture (IITA) is a not-for-profit institution that generates agricultural innovations to meet Africa's most pressing challenges of hunger, malnutrition, poverty, and natural resource degradation. Working with various partners across sub-Saharan Africa, we improve livelihoods, enhance food and nutrition security, increase employment, and preserve natural resource integrity. IITA is a member of CGIAR, a global agriculture research partnership for a food secure future. Please visit <http://www.iita.org/> for more information on IITA.

IITA and Bioversity International are recruiting an "Geospatial Data Scientist" to support geospatial data collection, analysis and modelling under a BMZ supported agricultural research for development project in Central Africa. The project aims to use citizen science and ICT to develop (cost-)effective and scalable decision support tools for advancing the prevention and control of Banana Xanthomonas Wilt (BXW) in East and Central Africa. The project has a 3-year timeline and will mainly take place in Rwanda; where the position is based. This project uses ICT-based and geospatial tools to (1) provide extension providers and farmers with decision-support on (cost-) effective BXW control, and (2) crowdsource data to develop a GIS-based early warning system to prevent the further spread of BXW. The postdoc will play a pivotal role in the implementation of the project, working closely together with the PhD researcher(s) and the Rwanda Agricultural Board.

Position Responsibilities

The postdoctoral fellow will undertake the following activities:

- Design, implement and monitor geospatial research in the context of a research for development program.
- Collect, analyse and visualise geospatial data to develop decision support tools for pest and disease control and prevention.
- Geospatial modelling for simulation and prediction of pest and disease spread.
- Lead participatory and inclusive GIS-based tool design and testing with research and development partners.
- Collaborate with scientists and mobile app developers to improve geospatial data collection based on principles of Citizen Science and Crowdsourcing.
- Design, develop and maintain information systems to implement procedures to avail geospatial data using mobile app- and web-based tools to end-users.
- Liaise with software and app developers to integrate prediction models into decision support tools.
- Conduct statistical analyses of experimental and survey-based agronomic, socio-economic and/or health data.
- Collaborate with data scientist to develop prediction models.
- Backstop GIS across the ongoing IITA and Bioversity International R4D project portfolio in Central Africa.

Educational Qualifications

The candidate should have a finalised PhD in human geography, geospatial information systems (GIS) or geospatial modelling preferably applied in the field of agriculture.

Core Competencies:

- Expert knowledge in applied geostatistics, including geospatial data analysis and experimental design.
- Big data collection based on principles of Crowdsourcing and Citizen Science (ODK).
- Experience and knowledge in Mobile GIS and/or WebGIS.
- Experience in using geostatistical software and dynamic visualisation of geospatial data (e.g. for developing disease heat maps).
- Applied knowledge, and experience in food and agricultural sciences.
- Proven track record of scientific publications in high quality scientific journals.
- Strong analytical skills.
- Excellent communication skills, able to interact with a multi-cultural and interdisciplinary team of scientists and development partners in layman language.
- Proactive, innovative and independent problem solver, and excellent team player.
- Supervision of junior research team (research assistants, MSc-students, co-supervise PhD-researchers).
- Experience in implementation, monitoring and reporting of research for development projects.

Duty Station: Kigali, Rwanda.

General information: The contract will be for an initial period of two years. IITA offers an internationally competitive remuneration package paid in US Dollars.

Applications: Applications must include covering letter which should address how the candidate's background/experience relates to the specific duties of the position applied for, curriculum vitae, names and addresses of three professional referees (which **must** include either the Head of the applicant's current or previous organization or applicant's direct Supervisor/Superior at his/her present or former place of work). The application should be addressed to the Head, Human Resources Service. Please complete our online application form using this link: <http://www.iita.org/careers>

Closing Date: 26th January 2018

IITA is an equal opportunity employer and particularly welcomes applications from women candidates.

Please note that only shortlisted candidates will be contacted.