Agricultural Statistics and Information and Communication Technology (ASICT) Division
Bangladesh Agricultural Research institute (BARI)
Gazipur 1701
www.bari.gov.bd

Memo No. 12.21.0000.043.76.009.19(Part-2)-389   Date: 31 May 2021

Vacancy Announcement

Senior Research Fellow (SRF): TF51-SBR/17 Project

Position

Senior Research Fellow (SRF), "TF51-SBR/17: Assessment of cropping patterns for sustainable intensification in drought-prone ecosystem using remote sensing and geospatial modeling" Project, Agricultural Statistics and Information and Communication Technology (ASICT) Division, Bangladesh Agricultural Research institute (BARI), Gazipur 1701.

Scope of Services/Duties and Responsibilities

Bangladesh, faces a great challenge to ensure food security to its ever-growing population from its shrinking agricultural lands. In recent decades, cropping intensification in the drought-prone ecosystems in Bangladesh has been increased by expansion of irrigated boro rice at the cost of rapid groundwater depletion. Agro-Environmental Remote Sensing and Modeling (ARSAM) laboratory of the ASICT Division, BARI is implementing a research project titled "TF51-SBR/17: Assessment of cropping patterns for sustainable intensification in drought-prone ecosystem using remote sensing and geospatial modeling" funded by Krishi Gobeshona Foundation (KGF). This research project is intended to assess cropping patterns for sustainable intensification in the drought-prone ecosystems particularly in the Barind areas located in the north-western part of Bangladesh by harnessing the power of geospatial modeling tools and remote sensing data obtained from Unmanned Arial Vehicle (UAV) and earth observing satellites.

Responsibilities of the Senior Research Fellow (SRF) to address the following specific problems:

- furnishing the specifications of appropriate instruments, hardware and software sets within the project provision and assist in the procurement process;
- development of approaches for the use of UAV and ground data as references to train algorithm(s) for classifying satellite data for efficient crop type mapping over large area for conditions prevailing in the study area;
- collection, processing and analysis of reference data from UAV over the sample study area (with proper permission and guidance from appropriate government authority) and ground surveys using different tools (e.g. GPS, GeoODK etc.) for satellite image classification;
- development of robust methods for mapping of cropping patterns for conditions prevailing in the study area using advanced machine-learning algorithms and BigGoeData analytical platform(s);
- development of resources and constraints geodatabase of the study area from processed remote sensing data and collection from different secondary sources;
- geospatial modeling for suggesting location-specific suitable cropping patterns for sustainable intensification in the drought-prone ecosystem (Barind area);
- dissemination of the knowledge and technologies generated by preparing manuscripts for publications in high impact scientific journals, project reports, working manuals, digital contents, and training of staffs from BARI and external agencies;
- train, support and supervise Research Assistants (RAs) working for the project;
- pursue and coordinate overall project activities to achieve project objectives in time;
- work under direct guidance/advice of the Principal Investigator (PI) and Co-Investigator (CI) of the project;
- any other tasks assigned by the project authority.

Qualification and Experience

The project authority is looking for creative and motivated candidates. The ideal candidates should

- have MSc (with Thesis)/MS/MTech/MEngg/MURP degree, in a field related to geoinformatics, robotics, engineering or agriculture with excellent expertise in remote sensing and geospatial data analysis for natural resources management. Prior expertise in crop type mapping and/or cropping pattern analysis as well as hands-on experience in UAV technology will be an asset.

Fellowship and Compensation Packages

An inspiring multidisciplinary and challenging high standard research environment will be provided. The ARSAM Laboratory offers a dynamic ecosystem with enthusiastic colleagues in which international standard research is an important part of the strategic agenda.

The SRF should be available fulltime for one year from the date of appointment during the project period. Fellowship and compensation package will be in accordance with the scope of the KGF Project (No. TF51-SBR/17) and agreement to be signed during the employment. The fellowship for the SRF will be BDT 40,000/- per month (consolidated) for the project period but for not more than one year.

Information and Application

Suitable candidates are requested to submit the application package as a single PDF document through email on or before 15 June 2021 Tuesday with the words "Application for the position of SRF" in the subject-line to the undersigned with copy (Cc) to Principal Investigator of the KGF Project: TF51-SBR/17,   Dr. Md. Golam Mahboob (Golam.Mahboob@gmail.com). The application package should contain a detailed Curriculum Vitae affixed with passport photograph, list of scientific publications in peer reviewed journals having doi hyperlink, copies of academic and experience certificates, National ID Card, and a cover letter elaborating the motivation for the application.

Candidates submitted Masters' Thesis in geospatial technology domain awaiting final result (appeared) may also apply. Persons having no experience in remote sensing image analysis should not apply. Only short listed candidates will be invited for a virtual interview. Persons who are in service must submit their application through proper channel.

Dr. Md. Saiful Islam
Chief Scientific Officer and Head
ASICT Division
BARI, Gazipur-1701
Email: saifulasict@gmail.com

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• BARC (Dhaka)	• BUET (Dhaka)	• KGF (Dhaka)
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3. Mailing lists of related professional fora.