



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

Memo No. 12.21.0000.043.76.011.19-239

Date: 14 January 2021

Vacancy Announcement

Position

Research Assistant (RA), “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.

Number of vacancies: 02 (Two)

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). Crop type mapping is prerequisite for mapping cropping pattern of an area. Large area crop type mapping with high accuracy from freely available satellite imagery in Bangladesh conditions has been challenging predominantly due to high fragmentation in land parcels and high variability in cropping practices both in temporal and spatial dimensions. 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 Aerial Vehicle (UAV) and earth observing satellites.

Responsibilities of the Research Assistant (RA) to address the following specific problems:

- Collection of geospatial ground data over the project area using different tools (e.g. GPS, GeoODK etc.) for satellite image classification and map validation;
- Assist in the development of resources and constraints geodatabase of the study area from processed remote sensing data and collection from different secondary sources;
- Digitize the project area in GIS environment.
- Assist in use of UAV for collecting multispectral data to be used for efficient crop type mapping over large area for conditions prevailing in the study area;
- Assist in preparing manuscripts for publications in high impact scientific journals, project reports, working manuals, digital contents, and training of staffs from BARI and external agencies;
- Assist in project procurement process and in organizing training and workshops;
- 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 Experiences

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

- have 1st class Bachelor Degree in a field related to Remote Sensing/ Geoinformatics/ Engineering/ Agriculture/ Regional Planning/ Geography.

Continued overleaf



- have experience in geospatial data collection and analysis for natural resources management preferably for crop type mapping and/or cropping pattern analysis. Work experience in remote sensing and GIS including software packages ERDAS Imagine, ENVI, QGIS, etc. and familiarity with spatial databases.
- have post-graduate research experience and/or scientific publication record(s) in a field related to geospatial technologies, drought assessment, ground water modelling, environmental hydrology etc.
- have strong aspiration in developing research career in the application of remote sensing technology, open-source tools, geospatial big data analysis, UAV operation, artificial intelligence in agricultural research.
- be at or under the age of 30 years on 7 January 2021.

Remuneration 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 RA should be available fulltime for the project work during the project period but not for more than twenty (20) months. The RA may be given permission to be enrolled in related research-based MS/doctoral program in a recognized University in home or abroad subject to full-time availability for the research work during the appointment period for the project. In such case, the MS/doctoral research theme of the RA should be closely associated with the project proposal. 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 RA will be maximum **Tk. 20,000/-** per month (consolidated) for the project period but for not more than twenty (20) months.

Information and Application

Suitable candidates are requested to submit the application package as a single PDF document on email on or before 23 January 2021 Saturday 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 (i.) a detailed Curriculum Vitae (affixed with passport photograph) including list of scientific publications in peer reviewed journals having doi hyperlink, (ii.) copies of academic and experience certificates, (iii.) copy of National ID Card, and (iv.) a cover letter elaborating the motivation for the application.

Persons having no experience in remote sensing imagery and/or geospatial data analysis should not apply. Only short-listed candidates will be invited for interview. Persons who are in service must submit their application through proper channel.



Dr. Md. Kamrul Hasan

Director (P & E), BARI

&

Chairman

Recruitment Committee

Email: khasan41@yahoo.com

Distribution for wider circulation:

1. BARI Website (www.bari.gov.bd) and Notice Boards
2. Noticeboard(s) at the premises of-
 - BARC (Farmgate, Dhaka)
 - BAU (Mymensingh)
 - BSMRAU (Salna, Gazipur)
 - BUET (Dhaka)
 - Dhaka University (Dhaka)
 - DUET (Gazipur)
 - RU (Rajshahi)
 - RUET (Rajshahi)
 - SBAU (Agargaon, Dhaka)
3. Mailing lists of related professional fora.