

## **Job description**

### **Job title: Consultant – Engineering**

#### **Background**

Bihar is prone to multiple hazards including floods, earthquakes, drought, cyclonic storms, fire, hailstorms, and lightning of high severity. 28 of the total 38 districts in the state are prone to floods. Areas in south Bihar that were historically not flood prone have also started experiencing flooding in recent years due to various climatic and human factors. A large part of the state is also prone to seismic activities and cover multiple seismic zones. In 2018, the State faced serious drought, which affected 280 blocks of 25 districts. The State also faces extreme heat and cold wave conditions in peak summers and winter, respectively. Lightning and high-speed winds in parts of the state have added further distress.

Disaster Management Department is the nodal Department of the Government for effective management of disasters through timely response by coordinating and monitoring emergency relief as well as implementing long-term mitigation measures by mainstreaming Disaster Risk Reduction in development planning.

The Department of Disaster Management (DMD) has signed an MoU with the Development Management Institute (DMI), Patna to establish a 'Centre of Excellence in Disaster Management (CoEDM)' at DMI. This Centre will function as an academic project unit of DMI with its own dedicated human resources team and infrastructure support with focus on disaster management studies through training research, education and consulting activities.

#### **Vacancy**

To operationalize the CoEDM, the DMI Patna requires the services of suitable candidates/officers with strong academic orientation to serve as 'Consultant – Engineering' from open market on contract or on deputation basis, initially, for a term of three years. Officers from relevant departments of Govt. of Bihar are encouraged to apply for the above role of consultants.

#### **Key Responsibilities**

- White paper on assessment of different engineering departments such as Public Health & Engineering, Roads and Building Construction, Irrigation, Rural Works and others for technical assistance in disaster risk reduction.
- Training Need Assessments (TNA) of different categories of functionaries in the various engineering departments involved in disaster risk reduction.
- Develop customised training programmes on the basis of TNA for different engineering departments of Govt. of Bihar and other stakeholders.

- Develop learning materials and conduct academic and professional courses (short and long term) on disaster management with reference to hazard mapping and vulnerability analysis of different engineering systems and structures that are affected by natural and man-made disasters.
- To develop training modules on various aspects of engineering in disaster management and conduct programs in 'training of trainers (ToT)'.
- Research and develop case materials in Disaster Risk Reduction and Disaster Response for use in capacity building programs as well as policy studies.
- Use of management techniques, MIS and GIS to cater to different aspects of engineering in disaster management from planning, upgradation and damage control of vulnerable assets.
- To formulate policies, strategies, disaster management frameworks and develop any other technical assistance required by any departments/organisations involved in disaster management.
- Preparation of hazard reduction plans keeping in view the impact of climate change on soil and water. The hazard planning may also include structural designs to mitigate/insulate damages from terror attacks in buildings/irrigation structures/power installations etc.
- To publish and contribute to reputed journals, author books and develop online knowledge resources.
- Forge academic collaboration and network with various government departments, institutions involved in disaster management within and outside the country for acquisition of new knowledge and developing a culture of innovation.
- Assist Govt. Departments in developing Standard Operating Procedures (SOPs) for dealing with displacement of communities affected by disasters by providing emergency shelters, water supply, sanitation, power supply and related engineering services.
- Conduct independent research, write research proposals, lead and execute projects involving research on technical and engineering support for agriculture, health, irrigation and buildings.
- Participate and present technical papers and research findings at national and international conferences and workshops.
- Document and disseminate data, information, case studies, indigenous knowledge and good practices relating to engineering aspects in disaster management.
- Perform 'After Action Review (AAR)' of disasters affecting the state and disseminate research findings on disaster management among the stakeholders.
- Actively network with relevant stakeholders including the policymakers, public agencies, businesses, subject-matter experts, funding agencies, academia, institutions and organisations working in the similar domain.
- Any other task assigned by the Coordinator-CoEDM, Director, DMI and other senior members of faculty at DMI.

## **Job Requirements**

- A person who has inter-disciplinary understanding and the experience of designing and implementing engineering projects in the context of disaster management
- Minimum 15 years of experience out of which atleast three years should have been in disaster management related work or department
- Good understanding about research design
- Exposure to cutting-edge technologies that aid in disaster management
- Willing to travel for meetings and field work
- Excellent communication skills (written and verbal)
- Self-starter with an ability to mobilise resources
- Design research/program protocols, tools and questionnaires
- Ability to collect, analyze, and interpret quantitative and qualitative data
- Ability to write scientific reports and concepts/proposals
- Ability to manage projects and keep liaison with different stakeholders
- Able to work independently as well as collaboratively with multi-stakeholders
- While the work headquarters would generally be at Patna, should be willing to work in the field intermittently for weeks and months outside the headquarters
- Written and spoken fluency in English and Hindi languages.

## **Qualification required**

### **Essential qualification:**

- (i) Master's Degree in Civil Engineering/ Mechanical Engineering / Electrical Engineering.

### **Desirable qualification:**

- (ii) Ph.D with a consistently good academic record; and
- (iii) Good record of publications
- (iv) A minimum ten years' experience in Post Graduate teaching or training and research at the National or State level Engineering Institutions.
- (v) Contribution to innovation in training or education, design of new curriculum and courses, developing training modules in engineering for Disaster Management.

## **Compensation**

Competitive; Based on qualifications/experience. In case of deputation, the existing pay scale of the selected officer will be protected. Additionally, deputation allowances as applicable to officers of Govt. of Bihar serving on deputation will be payable.

Interested candidates are requested to apply with their updated resume in the format attached to Coordinator, CoEDM [coordinator-coedm@dmu.ac.in](mailto:coordinator-coedm@dmu.ac.in) mentioning the post applied for in the subject line on or before 30 September 2020.