

Institute of Environmental Studies and Wetland Management

Department of Environment, Govt. of West Bengal
DD – 24, Sector – I, Salt Lake City, Kolkata – 700064

Terms of Reference (ToR) for engagement of Junior Research Fellow (JRF), for the study of Converting Waste into Wealth: Water Hyacinth Bio-char for Enhanced Crop Productivity

Ref. No.: 229- IESWM/1E-228/25-26/617)

Date: 22/09/2025

A. Background:

The Institute of Environmental Studies and Wetland Management (IESWM) is a Research Institute functioning under Department of Environment, Govt. of West Bengal and is carrying out various research works related to the Environment and Ecosystem.

B. Objective:

The purpose of the assignment is primarily to convert the abundantly available water hyacinth biomass into bio-char and to evaluate how the temperature of pyrolysis affects the physico-chemical properties of the bio char, characterization of the prepared bio-char and the effect of Water hyacinth bio-char in the external morphology of plants.

Also, analysis of the heavy metals shall be carried out in the water hyacinth plant, in the soil utilised for plantation, in the prepared bio-char, and in the vegetables thus produced, using different ratios of bio-char and soil.

C. ToR for engaging Junior Research Fellow:

- a) JRF will be required to go to the designated sites of bheris and other relevant sites for collection of water hyacinth samples. The soil samples will also be collected from any agricultural field that would be suitable for the production of plants. Collection of seeds and seedlings of the targeted plants will be done from the commercial market.
- b) JRF shall help/assist in conducting the analysis of the heavy metals present in the samples using Atomic Absorption Spectrometer (AAS), and other parameters in the samples using suitable instrument, in the laboratory of the Institute.
- c) JRF will work on all environmental related jobs or any other project as and when taken up by the Institute.
- d) JRF should be ready to go to field for the collection of samples, for any project related activities and other research associated work.

D. Other Details:

- 1) Name of the Post: Junior Research Fellow (JRF)
- 2) No. of Post : 1
- 3) Tenure : 24 months
- 4) Remuneration: 25,000/- per month (Consolidated)
- 5) Age: Maximum 40 years as on 01/01/2025

E. Eligibility:

The Junior Research Fellow should have:


- a) Master degree in Chemistry/ Botany /Zoology/ Environmental Science/ Marine Science/ Agricultural Science/ Microbiology, from any recognized University.
- b) Desirable experience two (2) years experience in the relevant field.

F. General Instructions:

- a) Application in plain paper, giving full bio-data (with contact phone no.) with a recent passport size photograph (pasted on application) along with self attested photocopy of all the testimonials, should be addressed to the Additional Director, IESWM, DD-24, Sector-I, Salt Lake City, Kolkata-700064, and submitted within one hour prior to the time of interview.
- b) The envelope containing the application should bear the advertisement no. and duly marked, "*Application for the post of Junior Research Fellow*".
- c) Application received after the due time, unsigned application or incomplete application in any form, will not be considered.
- d) Applicant will have to produce proof of details in original during the time of interview or as required.
- e) It may be noted that if at any stage, it is discovered that an attempt has been made by the applicant to willfully conceal/misrepresent the fact/s, his/her candidature will be summarily rejected or the engagement will be terminated, as the case may be.
- f) The said post is purely temporary and contractual in nature.
- g) This engagement will not confer you any claims, rights, interests or further claims for any job or further engagement/appointment in IESWM. IESWM has no obligation to extend the engagement period.
- h) This engagement can be terminated after issuance of a month's notice or making payment of a month's salary from either side. The termination in the manner prescribed does not cast any aspersion on the performance of the appointee.

- i) It is expected that the candidate will execute the work in a mission mode, so he/she may be required to work on Saturdays, Sundays, holidays and beyond office hours, if necessary. He/she should be ready to stay at the place(s) related to the work, within India, for the interest of the projects and of the Institute, as well.

Date and time of the interview: 19/11/2025 at 1.00 pm


Additional Director
IESWM