



**G. B. PANT NATIONAL INSTITUTE OF HIMALAYAN ENVIRONMENT  
KOSI-KATARMAL, ALMORA 263643 (UTTARAKHAND)**

Applications are invited for following purely temporary positions of consultants under various Centres/Projects at Kosi-Katarmal (Almora) campus of the Institute/ Ministry of Environment, Forest and Climate Change, New Delhi. Candidate having appropriate qualifications in relevant subject/specialization with consistently good academic records and experience may send their application form in the prescribed format (**Enclosure-1**) with all supporting documents and CV to the undersigned by e-mail ([os@gbpihed.nic.in](mailto:os@gbpihed.nic.in)) on or before **14 August, 2020**. **It is essential to mention the name of project and position applied for and post code number in the subject area of mail.** Application in the prescribed format will only be accepted. The shortlisted candidates will be informed separately about date of interview. **The interview will be held through virtual mode (Audio/Video).**

**S. No.-1**

<b>Position (No.)/ Emoluments and age</b>	<b>Post Code</b>	<b>Qualification &amp; Experience</b>	<b>Responsibility</b>
<b>Title - National Mission of Himalayan Studies (NMHS)</b>			
<b>Senior Consultant (i.e., Distinguished Scientific fellow) (1 No.)</b>  @ Rs. 1,25,000/- PM fixed) (Subject to deduction of applicable taxes)  <b>Max. Age Limit:            65 Years</b>	PC-01	Senior Consultants should have Master's degree in Science or Bachelor's Degree in Engineering/ Medicine/ Technology or Ph.D. from a recognized University with Minimum of 15 Years of experience in implementing and analyzing National Programme/monitoring projects/ policy planning with Environmental Management, Biodiversity Conservation, natural Resources Management and Development of Mountain Eco-system.  OR  The Retired Scientist/ Technician/Government employees of the level of Joint Secretary/Advisor/ Scientist 'G' with experience and knowledge in the required field would also be eligible.	i. Implementation of projects under the National Mission on Himalayan Studies (NMHS) in the state of Indian Himalayan Region (IHR); ii. Monitoring of the ongoing activities/projects under NMHS across IHR; iii. Documentation of the project activities highlighting products and outcomes of different activities under NMHS; iv. Better co-ordination with Project Management Unit (PMU) of NMHS, project proponents and MoEF&CC; and v. Preparation of material for correspondence with the International Centre for Mountain Development (ICIMOD). vi. Any other related task assigned in Mountain Division and NMHS.

**Sl.No.-2**

<b>Position (No.)/ Emoluments and age</b>	<b>Post Code</b>	<b>Qualification &amp; Experience</b>	<b>Responsibility</b>
<b>Title-</b> Centre for Socio-economic Development (CSED)			
<p><b>Consultant-A (i.e. Fellow) or Associate (01 No.)</b></p> <p>@ Rs. 40,000/- PM fixed for Associate and @ Rs. 60,000/- PM fixed for Consultant-A</p> <p><b>Max. Age Limit: 65 Years</b></p>	PC-02	<p><b>For Consultant A-</b></p> <p>Master's degree in Science or Bachelor's degree in Engineering / Technology with good knowledge of MS office and experience of 1-3 years on implementing / analyzing efficacy of environment-friendly rural technologies and rural development in Himalayan mountains.</p> <p><b>For Associate-</b></p> <p>Master's degree in Science or Bachelor's degree in Engineering / Technology with good knowledge of MS office and experience of 3-5 years on implementing / analyzing efficacy of environment-friendly rural technologies and rural development in Himalayan mountains.</p> <p>OR</p> <p>The Retired Scientist/Technician/Government employees with (i) Grade pay of Rs. 4600/- and above and knowledge of M.S. Office (ii) experience of working in the Himalayan area in the relevant field for a period of 3-5 years.</p>	<ul style="list-style-type: none"><li>• Proper / authentic scientific documentation of the environment-friendly rural technologies demonstrated and promoted by RTC.</li><li>• Analyze the feedback forms available at RTC and seek fresh feedback from the representative beneficiaries (if required) to determine the efficacy of these technologies.</li><li>• Writing comprehensive syntheses document with supporting facts/figures/photos/ maps / audio-video etc.</li></ul>

**Cont/.....**

**Sl.No.-3**

<b>Position (No.)/ Emoluments and age</b>	<b>Post Code</b>	<b>Qualification &amp; Experience</b>	<b>Duties</b>	<b>Assignments</b>
<b>Title-</b> Centre for Environmental Assessment and Climate Change (CEA&CC)				
<b>Consultant-A</b> <i>(i.e. Fellow System Administration)</i> <b>(01 No.)</b>  @ Rs. 60,000/- PM fixed)  <b>Max. Age Limit:</b> 65 Years	PC-03	Master's degree in Science or Bachelor's degree in Engineering / Technology with experience of more than 3-5 years in data base management, system administration, networking, DBS, etc.  OR  The Retired Scientist/Technician/Government employees with (i) Grade pay of Rs. 4600/- and above and knowledge of M.S. Office (ii) experience of working in the Himalayan area in the relevant field for a period of 3-5 years.	System Administration	i. To look after the optimal and uninterrupted performance of server ii. To assign job to server for execution over Linux environment
			Networking	i. To guide the process of optimal networking for hosting a portal ii. LAN connectivity with NAS and other nodes
			Database Management System	i. To guide the database creation and its management for existing data ii. To ensure data standards, formats, quality and consistency. iii. To ensure the data security in case of emergency or failure
			Liasoning with RnD Institutes, universities, line dept, other data generating agencies	i. To involve in partnership for data sharing ii. To popularise the Data centre for its effective use
			Other Duties	To execute any other assignments related to proper functioning of Dat Centre
<b>Position (No.)/ Emoluments and age</b>	<b>Post Code</b>	<b>Qualification &amp; Experience</b>	<b>Duties</b>	<b>Assignments</b>
<b>Title-</b> Centre for Environmental Assessment and Climate Change (CEA&CC)				
<b>Associate</b> <i>(i.e. Portal Development Associate)</i> <b>(01 No.)</b>  @ Rs. 40,000/- PM fixed)  <b>Max. Age Limit:</b> 65 Years	PC-04	Master's degree in Science or Bachelor's degree in Engineering / Technology with experience of 1-3 years in Data Management / Analysis as well as good knowledge of MS office.	Portal Development	i. Development of geo-portal for IHR data archival and dissemination ii. To configure the server for in house portal hosting and ensure uninterrupted operation iii. To provide the access privilege for different user group iv. To develop the standard protocol for data sharing referring to NDSAP v. To evolve the portal design every year with respect to functionality and ease of use
			Domain name registration	i. To finalize the process of domain name registration from NIC/ERNET ii. To host the portal over the registered domain
			Other Duties	To execute any other assignments related to proper functioning of Data Centre

**Cont/.....**

**Sl.No.-4**

<b>Position (No.)/ Emoluments and age</b>	<b>Post Code</b>	<b>Qualification &amp; Experience</b>	<b>Responsibility</b>
<b>Title-</b> Centre for Biodiversity Conservation and Management (CBCM)			
<b>Consultant-A (i.e. Fellow)</b>  <b>(01 No.)</b>  @ Rs. 60,000/- PM fixed)  <b>Max. Age Limit:</b> 65 Years	PC-05	Master's degree in Science with good knowledge of MS office and experience of 3-5 years on Atmospheric dynamical/ Air quality/ emission models/ climatic modelling and implementing/ analyzing to provide model base projection.  OR  The Retired Scientist/Technician/Government employees with (i) Grade pay of Rs. 4600/- and above and knowledge of M.S. Office (ii) experience of working in the Himalayan area in the relevant field for a period of 3-5 years.	(i) Data collection on hydro-meteorological (e.g. rainfall, temperature, evapotranspiration, soil moisture, etc.), geomorphological (e.g. slope, elevation and aspect) and vegetation (e.g. LAI, NDVI, etc.) parameters with spatio-temporal scales over western Himalayan through literature survey.  (ii) Collection and compilation of gridded hydro-meteorological, geomorphological and vegetation parameters.  (iii) Estimation of elevation dependent trends of the hydro-meteorological parameters using non-linear nonparametric methods <ul style="list-style-type: none"><li>• Application of spatial principal component analysis to gridded hydrometeorological parameters.</li><li>• Development of multiple non linear regression models for two contrasting selected forest over stories.</li><li>• The bias corrected multiple non linear regression model would be simulated for evaluating forest responses under hypothetical scenarios such as increase (or decrease) of temperature of 2-5° C, increase (or decrease) of annual precipitation (0 to 200 mm), etc.</li></ul>

**Note: - Detailed Terms of Reference and General Conditions of each post are provided at Enclosure-2.**

Administrative Officer

**G B Pant National Institute of Himalayan Environment  
Kosi-Katarmal, Almora-263643, Uttarakhand**

**Instructions to fill in Application Form:**

**General**

- (a) Please download the attached Form, complete it, and return.
- (b) No Column of application form should be left blank.
- (c) Use additional sheets where necessary, with relevant columns drawn thereon, inserting proper references.
- (d) Completed application should be accompanied by all the requisite documents. You are requested to go through the “check list” of documents before submitting the application. **Incomplete applications are liable to be rejected.**
- (e) Photocopies of documents asked for need self-attestation.

Item No. 1. Name given here should be the same as given in your matriculation/higher secondary certificate and degree certificates. If there is a change, addition or deletion, an affidavit from a Notary Public/Magistrate is necessary.

Item No.9. In case grades are awarded, please attach the sheet giving conversion of grades to percentage of marks.

Item No. 11(Annexure IIa). Specializations may be indicated in terms of (a) Subject (b) Broad Area(s) of specialization and (c) Exact area(s) of specialization.

**Check list of documents to be attached**

1.	Photograph on the main application form	Yes/No
2.	Affidavit if you carry different name/surnames in your certificates	Yes/No
3.	Attested copy of School Leaving/High School/Secondary School Certificate (For date of birth)	Yes/No
4.	Attested copies of Mark Sheets/Grade Cards & Degrees for BSc/MSc/MPhil/PhD/ BE/ME/PhD	Yes/No
5.	List of Publications, if applicable	Yes/No
6.	Experience certificates	Yes/No

**G B Pant National Institute of Himalayan Environment  
Kosi-Katarmal, Almora-263643, Uttarakhand**

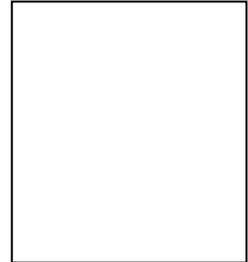
**APPLICATION FORM**

**Position Applied For**.....

**Title** .....

.....

**Post Code No.:** .....



**Please use BLOCK LETTERS:**

1. Full Name:..... Sex M/F):.....

2. Father's/Husband's Name:.....Father's/ Husband's National.....

3. Present Address: .....

.....  
.....

4. Permanent Address.....

.....  
.....

5. Email id :.....

Telephone/Mobile No.....

6. a) Date of Birth.....(b) Birth Place :.....

(c) State of Domicile.....

7. Citizenship: .....

8. Do you belong to: (a) Scheduled Caste- Yes/No (b) Scheduled Tribe - Yes/No  
(c) OBC - Yes/ No

9a. Academic and Professional qualifications (from High School onwards):  
Attach self-attested certificate

Degree/ Diploma	Subject	Percentage of Marks or Grade	Name of Univ./Institution	Duration of Course	Month & year of passing

9.(b) If PhD degree not awarded, please give whichever applicable :

Date of thesis Submission.....

Likely date of submission: .....

10. Title of PhD Thesis .....

.....  
 .....

11. Specializations, in terms of Broad Area of Specialization and Exact Area of Specialization:

(a) Subject	(b) Broad Area of Specialization	Exact Area of Specialization

12. Publications and Patents: **(Please attach list of publications in SCI journals with full references and corresponding with those in the list) (If available)**

(a) No. of Papers (i) Published.....(ii) Accepted.....

(b) No. of Books published.....

(c) No. of patents: (i) Filed :.....(ii) Granted:.....

13. Prizes, Honours, Awards, Distinctions, if any:.....

.....

14. Experience held: (Please attached copy of experience certificate)

Position	Name of the organization/ agency	Dates		Pay/wages	Nature of duties
		From	To		

15. Please indicate in case you are shortlisted whether you would like to attend the interview through video calling or telephonically. If you wish to attend interview through video call please provide your Identity and mode preferred by you for video call.

.....

16. Any other information.

.....  
.....

**17. Declaration**

I have read the terms and conditions of the Institute. I accept and agree to abide by these if the Fellowship is offered to me. I certify that to the best of my knowledge and belief the particulars given in the application are correct. I understand that the decision taken on my application by GBPNIHE will be final. If false and suppression of factual information in the application form comes to the notice of GBPNIHE at any time during the tenure the fellowship would be liable to be terminated.

Place.....

Signature of the candidate .....

Date.....

**NMHS-PMU, GBPNIHE**

**Sub: Hiring of full time Senior Consultant under NMHS-PMU.**

**Terms of Reference (ToR) for Engaging Consultant in Mountain Division**

Under the National Mission of Himalayan Studies (NMHS) number of research/project proposals are being funded for implementation of Projects supporting key thematic areas of (i) Water Resource Management (ii) Livelihood Options and Employment Generation (iii) Biodiversity Conservation and Management (iv) Skill Development and Capacity Building (v) Infrastructure Development (vi) Physical Connectivity and (vii) Handling of Hazardous substances. To achieve a better outcome under the NMHS, NMHS-PMU intends to engage a Senior Consultant on a contractual basis with the following details:

**(a) Reporting and Outline of the tasks**

Consultant will work fulltime in Mountain Division of MoEF&CC and report to Joint Secretary (in charge of Mountain Division/NMHS) in the Ministry for the following activities:

- vii. Implementation of projects under the National Mission on Himalayan Studies (NMHS) in the state of Indian Himalayan Region (IHR);
- viii. Monitoring of the ongoing activities/projects under NMHS across IHR;
- ix. Documentation of the project activities highlighting products and outcomes of different activities under NMHS;
- x. Better co-ordination with Project Management Unit (PMU) of NMHS, project proponents and MoEF&CC; and
- xi. Preparation of material for correspondence with the International Centre for Mountain Development (ICIMOD).
- xii. Any other related task assigned in Mountain Division and NMHS.
- xiii.

**(b) Reporting and Monitoring:** Consultant would submit progress report on a quarterly basis. Annual progress will be evaluated on the basis of progress made against the TOR.

**(c) Place of posting:** Mountain Division, Indira Paryavaran Bhavan, New Delhi. Consultant would be provided a suitable workspace in the Ministry, Indira Paryavaran Bhawan (IPB) along with Computer/Phone/Fax/Internet and Printer. Support staff of NMHS-PMU at MoEF&CC may be provided from the NMHS scheme;

(d) Details of the qualification and experience for the post:

Category of Consultants	Qualification and Experience	Remuneration/ Fee (Rupees/ month fixed )
Senior Consultant  [i.e., Distinguished Scientific fellow]	Senior Consultants should have Master's degree in Science or Bachelor's Degree in Engineering/ Medicine/ Technology or Ph.D. from a recognized University with  Minimum of 15 Years of experience in implementing and analyzing National Programme/ policy planning with Environmental Management, Biodiversity Conservation, natural Resources Management and Development of Mountain Eco-system.  OR  Retired Scientist/ Technician/Government employees of the level of Joint Secretary/Advisor/ Scientist 'G' with experience and knowledge in the required field would also be eligible.	1,25,000  (subject to deduction of applicable taxes)

(e) **Age Limit** – The maximum age limit for all categories of Consultants shall be 65 years.

(f) **Period of Engagement:** The initial tenure of engagement for a person would be for 1 year which can be extended up to a period of three years (1+1+1) (subject to performance and presence of the professional in the NMHS-PMU/ Mountain Division being highly useful). Continuation of the Consultant beyond three years for up to additional two years will be considered on case to case basis with the approval of Competent Authority.

**(g) General Conditions:**

The general conditions for engagement of Consultants/ subject experts in the Institute (GBPIHED) are hereunder:-

- (i) Consultants would be engaged for a fixed period of time for providing high quality services to NMHS-PMU, GBPNIHE or for attending to specific and time-bound jobs like preparation of project reports, etc.
- (ii) Remuneration/ Fee and TA/DA will be paid for tour and field visits as per rules from NMHS PMU funds.
- (iii) The candidates shall submit their application mentioning education qualification and experience details along with the supporting documents as per qualifications and experience given in the advertisement. Retired Scientists/Government employees with experience in relevant subject would also be eligible for engagement as Consultants;

- (iv) The appointment of Consultants would be on full time basis and they would not be permitted to take up any other assignment during the period of Consultancy with the GBPNIHE
  
- (v) The Consultant shall not, except with the previous sanction of Competent Authority of NMHS in the bona fide discharge of his duties, publish a book or a compilation of articles or participate in a radio broadcast or contribute an article or write a letter to any newspaper(s) or periodical(s), either in his own name or anonymously or pseudonymous in the name of any other person, if such book, article, broadcast, uses any information that he may gather as part of this Consultancy assignment.
  
- (vi) Official (Government) e-mail id and access to intranet system can be provided to Consultant with the approval of the concerned Divisional Head. This will be done in consultation with IT cell. The sensitivity and confidentiality of the documents being handled by the Division and the nature of job of the Consultants will also be kept in view.
  
- (vii) The appointment of Consultants is of a temporary (non-official) nature and the appointment can be cancelled at any time by the Institute without assigning any reason. GBPNIHE shall have powers to terminate any or all the professionals at any time without assigning any reason, with the approval of the Competent Authority. Absence from duty for a continuous period of 8 days, without any information or any valid reason shall lead to automatic termination of contractual engagement.
  
- (viii) As the post are temporary in nature and purely contractual, in no case any request for promotion of a candidate shall be entertained.
  
- (ix) Other term of GBPNIHE guidelines for engagement of consultant will be applicable.

**Centre for Socio-economic Development (CSED)**

**Terms of Reference (ToR) for engagement of Consultant-A or Associate**

**(i) Precise statement of objectives**

This Terms of Reference (ToR) is for defining specific work elements to be carried out to achieve the CSED mandate being implemented through RTC. The work carried out under this assignment will be the intellectual property of GBPNIHE. The terms and conditions under the Consultant Engagement guideline of GBPNIHE will be applicable for the engagement.

**(ii) Outline of the tasks to be carried out:**

S.N.	Duties / Assignments	Qualifications, experience and Remuneration
1  2  3	<ul style="list-style-type: none"> <li>• Proper / authentic scientific documentation of the environment-friendly rural technologies demonstrated and promoted by RTC.</li> <li>• Analyze the feedback forms available at RTC and seek fresh feedback from the representative beneficiaries (if required) to determine the efficacy of these technologies.</li> <li>• Writing comprehensive syntheses document with supporting facts/figures/photos/ maps / audio-video etc.</li> </ul>	<p><b>For Consultant A-</b></p> <p>Master's degree in Science or Bachelor's degree in Engineering / Technology with good knowledge of MS office and experience of 1-3 years on implementing / analyzing efficacy of environment-friendly rural technologies and rural development in Himalayan mountains.</p> <p><b>For Associate-</b></p> <p>Master's degree in Science or Bachelor's degree in Engineering / Technology with good knowledge of MS office and experience of 3-5 years on implementing / analyzing efficacy of environment-friendly rural technologies and rural development in Himalayan mountains.</p> <p>OR</p> <p>The Retired Scientist/Technician/Government employees with (i) Grade pay of Rs. 4600/- and above and knowledge of M.S. Office (ii) experience of working in the Himalayan area in the relevant field for a period of 3-5 years.</p> <p><b>Remuneration:</b> Rs. 60,000/- or 40,000 /- per month</p>

**(iii) Schedule for completion of tasks**

1. Draft Report– 120 days
2. Final Report - 160 days

**(iv) The support of inputs to be provided by GBPNiHE to facilitate the Consultancy**

Dr. G.C.S. Negi  
Scientist G & Head, CSED, GBNIHE,  
Kosi-Katarmal, Almora, Pin-263643,Uttarakhand

**(v) The final outputs, which shall be required of the Consultant at the end of the consultancy period:**

A comprehensive syntheses document (with relevant Annexures) focusing in details on scientific basis and efficacy of various R&D based rural technologies popularized and upscaled by RTC in achieving environmental conservation and socio-economic development of rural people of IHR. This document should also identify socio-economic and environmental implications and scaling up potential of the selected technologies, and institutionalization mechanism through rural development schemes / programmes of State / Central Govt.

## Centre for Environmental Assessment and Climate Change (CEA&CC)

### Terms of Reference (ToR) for engagement of Consultant-A

**(vi) Precise statement of objectives**

This Terms of Reference (ToR) is for defining specific work elements to be carried out to achieve CDMA objectives. The work carried out under CDMA will remain intellectual property of GBPNIHE. The terms and conditions under the Consultant Engagement guide line of GBPNIHE will be applicable for the appointment.

**(vii) Outline of the tasks to be carried out:**

S.N.	Duties	Assignments	Qualifications, experience and Remuneration
1.	System Administration	iii. To look after the optimal and uninterrupted performance of server iv. To assign job to server for execution over Linux environment	Master's degree in Science or Bachelor's degree in Engineering / Technology with experience of more than 3-5 years in data base management, system administration, networking, DBS, etc.  OR  The Retired Scientist/Technician/Government employees with (i) Grade pay of Rs. 4600/- and above and knowledge of M.S. Office (ii) experience of working in the Himalayan area in the relevant field for a period of 3-5 years.  <b>Remuneration:</b> Rs. 60,000/- per month (fixed)
2.	Networking	iii. To guide the process of optimal networking for hosting a portal iv. LAN connectivity with NAS and other nodes	
3.	Database Management System	iv. To guide the database creation and its management for existing data v. To ensure data standards, formats, quality and consistency. vi. To ensure the data security in case of emergency or failure	
4.	Liaisoning with RnD Institutes, universities, line dept, other data generating agencies	iii. To involve in partnership for data sharing iv. To popularise the Data centre for its effective use	
5.	Other Duties	To execute any other assignments related to proper functioning of Dat Centre	

**(viii) Schedule for completion of tasks**

3. System Administration – 180 days
4. Networking: 90 days
5. Database Management System – Continuous Process
6. Liaisoning with Departments: Atleast 1 department every month
7. Other responsibility: Based on timeline as per needs

**(ix) The support of inputs to be provided by GBPNiHE to facilitate the Consultancy**

Dr. J.C. Kuniyal  
Scientist G &Head, CEA&CC, GBNIHE,  
Kosi-Katarmal, Almora, Pin-263643,Uttarakhand

**(x) The final outputs, which shall be required of the Consultant at the end of the consultancy period**

1. Overall co-ordination and operation of CDMA for data management
2. Operational and duly configured server connected with Nodes (Clients, NAS, etc.) through LAN
3. Synchronizing the backup unit of CDMA at HPRC for daily data backup
4. Creation of theme-wise relational Database for data archival and management
5. To conduct capacity building programs for stakeholders for effective portal usage for data upload and downloads

## Terms of Reference (ToR) for engagement of Associate

**(i) Precise statement of objectives**

This Terms of Reference (ToR) is for defining specific work elements to be carried out to achieve CDMA objectives. The work carried out under CDMA will remain intellectual property of GBPNIHE. The terms and conditions under the Consultant Engagement guide line of GBPNIHE will be applicable for the appointment.

**(ii) Outline of the tasks to be carried out**

The following activities need to be carried out:

S.N.	Duties	Assignments	Qualifications, experience and Remuneration
1.	Portal Development	vi. Development of geo-portal for IHR data archival and dissemination vii. To configure the server for inhouse portal hosting and ensure uninterrupted operation iii. To provide the access privilege for different user group ix. To develop the standard protocol for data sharing referring to NDSAP x. To evolve the portal design every year with respect to functionality and ease of use	Master's degree in Science or Bachelor's degree in Engineering / Technology with experience of 1-3 years in Data Management / Analysis as well as good knowledge of MS office.  <b>Remuneration:</b> Rs. 40,000/- per month (fixed)
2.	Domain name registration	iii. To finalize the process of domain name registration from NIC/ERNET iv. To host the portal over the registered domain	
3.	Other Duties	To execute any other assignments related to proper functioning of Data Centre	

**(xi) Schedule for completion of tasks**

1. Portal development: First phase to go online in six months
2. Registration process with validation: 3 months after first phase roll out
3. Data dissemination based on NDSAP: Ninth months onwards
4. Portal design evolution: Annual
5. Domain Name registration: One month
6. Other responsibility: Based on timeline as per needs

**(iii) The support of inputs to be provided by GBNIHE to facilitate the Consultancy**

Dr. J.C. Kuniyal  
Scientist G &Head, CEA&CC, GBNIHE,  
Kosi-Katarmal, Almora, Pin-263643,Uttarakhand

**(iv) The final outputs, which shall be required of the Consultant at the end of the consultancy period**

1. A domain name with gov.in or res.in extension over which the portal would be hosted
2. A user friendly geo-portal for data archival and dissemination with user privilege access control
3. Portal featured with data upload, download and visualization.

Centre for Biodiversity Conservation and Management (CBCM)

**Terms of Reference (ToR) for engagement of Consultant-A**

**Title of the project:** *Understanding impact of hydro-climatological parameters on the abundance of Western Himalayan Alpine meadows and subtropical forests under changing environment*

**(xii) Precise statement of objectives**

This Terms of Reference (ToR) is for defining specific work elements to be carried out to achieve the objectives of the proposed consultancy project entitled "Understanding impact of hydro-climatological parameters on the abundance of Western Himalayan Alpine meadows and subtropical forests under changing environment".

The work carried out under project will remain intellectual property of GBPNIHE. The terms and conditions under the Consultant Engagement guide line of GBPNIHE will be applicable for the appointment.

**(xiii) Outline of the tasks to be carried out:**

**(xiv)**

<b>Specific tasks/ Activities</b>	<b>Qualifications, experience and Remuneration</b>
(iv) Data collection on hydro-meteorological (e.g. rainfall, temperature, evapotranspiration, soil moisture, etc.), geomorphological (e.g. slope, elevation and aspect) and vegetation (e.g. LAI, NDVI, etc.) parameters with spatio-temporal scales over western Himalayan through literature survey.	Master's degree in Science with good knowledge of MS office and experience of 3-5 years on Atmospheric dynamical/ Air quality/ emission models/ climatic modelling and implementing/ analyzing to provide model base projection.
(v) Collection and compilation of gridded hydro-meteorological, geomorphological and vegetation parameters.	OR
(vi) Estimation of elevation dependent trends of the hydro-meteorological parameters using non-linear nonparametric methods	The Retired
<ul style="list-style-type: none"><li>• Application of spatial principal component analysis to gridded hydrometeorological parameters.</li><li>• Development of multiple non linear regression models for two contrasting selected forest over stories.</li><li>• The bias corrected multiple non linear regression model would be simulated for evaluating forest responses under hypothetical scenarios such as increase (or decrease) of temperature of 2-5° C, increase (or decrease) of annual precipitation (0 to 200 mm), etc.</li></ul>	Scientist/Technician/Government employees with (i) Grade pay of Rs. 4600/- and above and knowledge of M.S. Office (ii) experience of working in the Himalayan area in the relevant field for a period of 3-5 years.  <b>Remuneration</b> Rs. 60,000/- per month (fixed).

(xv) **Schedule for completion of tasks**

- Finalization of data - 60 days
- Collection and compilation of data - 90 days
- Estimation of elevation dependent trends - 120 days
- Application of spatial principal component analysis - 180 days
- Development of multiple non linear regression models - 240 days
- Bias correction and simulation for hypothetical scenarios - 300 days
- Preparation of report, peer review publication - 365 days

(xvi) **The support of inputs to be provided by GBPNIHE to facilitate the Consultancy**

1. A dedicated computation facility with internet access for numerical analysis
2. Expert opinion and timely advice

**Dr. I.D. Bhatt**

Scientist F & Head, CBCM, GBPNIHE,  
Kosi-Katarmal, Almora, Pin-263643, Uttarakhand

(xvii) **The final outputs, which shall be required of the Consultant at the end of the consultancy period**

- A numerical model will be developed to assess futuristic response of alpine meadows and target forest type under changing environmental factors.
- Identification of sensitive habitat/sites in target area and define local biodiversity hotspot across the western Himalayan alpine meadows and subtropical conifer forests to strengthen the ongoing institutional project on biodiversity conservation and management.
- The project outputs related to changes in alpine meadows and forest type with respect to environmental factors will be used for long term biodiversity monitoring.