

Call for Research Proposals under Weather and Climate Science for Service Partnership India (WCSSP-India)

Introduction

Weather and Climate Science for Service Partnership India (WCSSP-India) is a collaborative science initiative between the UK and India, aimed at advancing scientific understanding and modelling capabilities for improved weather and climate services by MoES with a focus on extremes and associated multi-sector impacts. It currently involves the Met Office, UK academic partners, and the Ministry of Earth Sciences (MoES), Govt. of India. Key science objectives of WCSSP-India project include research on natural hazards in South Asian Monsoon system (focus on days to season timescale and global to regional scale drivers); Improve capability of global coupled, regional convective scale coupled and sub-km city-scale modelling frameworks; Observation and process studies, Improve tools and techniques for risk-based forecasting of natural hazards at a range of prediction timescales. WCSSP-India aims to help MoES to deliver services with enhanced local scale forecast skill with anticipated impacts to the disaster management authorities so as to plan for appropriate emergency response to ensure public safety. To achieve desired goals aimed under WCSSP-India, participation of Indian Universities and other Indian research Institutes are very essential. To attract Indian academia/researchers, it is decided to invite projects proposals under WCSSP-India themes. WCSSP India research is composed of four inter-dependent work packages (WP).

WP1: Developing seamless coupled ensemble systems across scales

WP aims: In partnership, develop cutting-edge seamless modelling systems that underpin environmental predictions across space scales and time scales from hours to seasons ahead. Specific aims include development of global coupled ensemble systems, regional coupled ensemble systems and improvements to urban-scale atmosphere modelling.

WP2: Evaluation and understanding of monsoon processes focusing associated incidence of high frequency and high intensity hazards including anticipation of cascading and compounding impacts

WP aims: In partnership, develop novel diagnostic tools and use observations to assess critical processes of monsoon prediction and associated hazards, and carry out process research to understand the predictability and systematic errors of coupled models at seasonal and sub-seasonal timescales.

WP3: Observing the environment fortaking up targeted process studies for improved predictions

WP aims: In partnership, improve hazard prediction through the collation and use of observations for model evaluation and support development of improved physical parameterizations of sub-gridscale processes, with particular relevance to precipitation, lightning and fog hazards in India.

WP4: Risk based forecasting of high impact weather events for guiding emergency response strategies

WP aims: In partnership, develop research, methods and processes that underpins the effective translation of global and regional-scale model outputs to improved early warning and communication of high-impact weather events from days to seasons ahead and enhance impact-based forecasting capabilities.

Work packages 1 to 3 concentrate on targeted foundational research to advance various aspects of observation, process understanding, and prediction of natural hazards. The aim is to enhance the quality of modeling systems used for predictions. Work package 4, on the other hand, is dedicated to developing methods and processes that leverage this research to improve impact-based forecasting capabilities and their effectiveness in India. These work packages and their activities are carefully designed to align with the overall vision and objectives of the project, acknowledging that some activities will necessitate collaboration across work package boundaries.

Purpose and focus

The call for proposals aims to advance the understanding of India's weather and climate processes, hazards, and risks, through scientific innovation and the development of new approaches in areas such as numerical weather prediction, post-processing, and impact-based forecasting. It seeks to strengthen scientific and technical capabilities in the observational and modeling chain, supporting the evolution towards global and regional coupled prediction capabilities. Additionally, the call seeks to translate underpinning research into improved impact-oriented forecasting and warnings, facilitating the development of prototype forecast applications and enhancing the understanding of different impact-based techniques. Alignment with other weather and climate programs and initiatives in the UK, India, and internationally is also important, to create efficiencies, share learning, and avoid duplication. The application should specify the expected long- or short-term impact of the project. The projects must generate impact or new knowledge in their respective fields and contribute significantly to WCSSP-India. Proposals should clearly outline the research objectives, methodology, expected outcomes, and potential impact on weather and climate services.

Project proposals should articulate how they will enhance collaboration with MoES institutions and with UK partners on research and development themes.

Instructions to Applicants

1. The completed application along with the duly signed endorsement letter from the HoD and certificate from the investigator be submitted to email director@ncmrwf.gov.in by 30th April 2025.
2. Incomplete applications will not be considered. Once the application is submitted, any modification to the application will not be considered
3. The overhead charges will be as per the GoI norms, namely as follows:

Following amount will be provided to the host institution as part of the project budget towards meeting their costs for overhead expenses including infrastructure facilities etc :-

(1) 20% of the total project cost with an upper limit of Rs.5.0 lakh for educational

institutions and Rs.3 lakh for laboratories and institutes under S&T agencies/departments, will be provided as a part of the project, and

(2) On projects costing more than Rs.50 lakhs, the quantum will be decided on a case-to-case basis.

Multi-institutional PIs (excluding MoES Co-PIs) should share the overhead between them appropriately.

4. Travel (including domestic and international, if any) should be a maximum of 5% of the total project cost with maximum limit of 2.5 L.
5. All project proposals should have a component of Research to Operations (R2O) and the same should be handed over to the WCSSP (MoES) at the end of the project.
6. The disbursement of the funding will be in a phased manner, and as per the progress as evidencing in the review meetings. The final installment of 20% will be disbursed only after successful completion of the project with project reports, along with deliverables, R2O etc. are handed over to the WCSSP (MoES).
7. Project proposals should have one or more members from the MoES institutes working under the WCSSP themes (above) as a co-investigator. It is the responsibility of the PIs to find suitable collaborative PIs of the MoES institutes working on the WCSSP objectives. The project office will not assist in attaching the Co-PIs to any projects. It is the sole responsibility of the investigator to find out and discuss with suitable Co-PIs from the MoES institutes working on WCSSP themes while formulating the proposals.
8. It is highly encouraged to include UK-MO Co-PIs on these science themes without any financial obligations. Although involving UK-MO Co-PI is not a mandatory condition.
9. The proposals will be reviewed by the expert committee and shortlisted proposals will be called for presentation.
10. There is no fixed upper limit for the proposal amounts however proposals are not expected to cross 50L. On projects costing more than Rs.50 lakhs, it can be examined and will be decided on a case-to-case basis.
11. The proposals strictly should avoid any duplication/overlap or repetition of case studies which was implemented as part of an existing/previous projects.

Format for submission of Research Proposals **under “WCSSP-India”**

1. **Title of the proposed project :**

2. **Brief information about Principal Investigator (PI) and Co-PI(s) :**

PI:

Name:-

Date of birth:-

Institution:-

Official website:-

E-mail Id:-

Qualification:-

Co - PI (1):

Name:-

Date of birth:-

Institution:-

Official website:-

E-mail Id:-

Qualification:-

Co - PI (2):

Name:-

Date of birth:-

Institution:-

Official website:-

E-mail Id:-

Qualification:-

3. **Project Summary (1 page) :**

(a) Intellectual merits of the proposed work

(b) Broader impacts of the proposed work

Project Description:

1. Research Objectives

1.1 Intellectual merit of the proposed work

1.2 Broader Impact of proposed work

2. Technical Section

2.1 Technical subsection

2.2 Technical subsection

3. Statement of Work (methodology to be adopted)

3.1 Schedule (Year wise)

Year	Expected Outcome	Deliverables
Year – 1		
Year – 2		
Year – 3		

3.2 Team Composition and expertise

Investigator	Qualification	Expertise
PI		
Co-PI (1)		
Co-PI (2)		

3.3 Connections to Operational forecast and Human resource development

4. Related works and project assessment :

4.1 National status

4.2 International status

4.3 The mechanisms adopted in your institute for internal review (assessment) and validation of this Project Proposal.

5. Results from prior MoES support (if any)

[Describe any prior MoES funded work by the PI, Co-PI(s)]

Investigator	MoES grant no.	Title	Year	Description
PI				
Co-PI				

6. Facilities available at the workspace

(e.g., existing computer facilities)

7. Total Budget (Rupees in Thousand) requirements (with justifications)

S. N.	Item Name	1st Year	2nd Year	3rd Year	Total	Justification
A)	Man Power					
	1) Key personnel					
	2) Other personnel (e.g. Research Assistants)					
	3) Technical Assistant					
	<u>Total budget for Manpower</u>					
B)	Travel					
	1) Domestic Travel					
	2) Foreign Travel					
	<u>Total budget for Travel</u>					
C)	Other Direct Costs					
	1)					
	2)					
	3)					
	<u>Total budget for (C)</u>					

D)	Indirect Costs (If any)					
	1)					
	2)					
	3)					
	Total budget for (D)					
Grand Total (Rupees in Thousand)						

8. Bio-data (CV) of the Investigators :

8.1 PI Biography (Person A)

Name:-

Date of birth:-

Institution:-

Address (Residence):-

Tel. No:

Mob No:

E-mail Id:

Address (Office):-

Tel. No:

FAX:

Official E-mail Id:

Official website address:

Educational Qualification:-

School/College/University	Degree	Year	Main subjects	Division/Class

Awards / Honors / Fellowship etc. :

Appointments (Professional experience/employment record):

Organization	Designation / Position	Duration (Year / date)

List of important and relevant research publications:

Other publications:

Participation in Conference/Seminar/Workshop/ Summer Schools

Recent collaborations:

Research Guidance:

No. of Ph.D. students enrolled/ completed

No. of Graduate/Postgraduate students enrolled/ completed

Synergistic Activities:

Activity 1

Activity 2

8.2 Co-PI (1) Biography (Person B)

Name:

Date of birth:

Institution:

Address (Residence):

Tel. No. :

Mob No:

E-mail Id:

Address (Office):

Tel. No. :-

FAX:-

Official E-mail Id:-

Official website address:-

Educational Qualification:

School/College/University	Degree	Year	Main subjects	Division/Class

Awards / Honors / Fellowship etc.:

Appointments (Professional experience/employment record):

Organization	Designation / Position	Duration (Year / date)

List of important and relevant research publications:

Other publications:

Participation in Conference/Seminar/Workshop/ Summer Schools

Recent collaborations:

Research Guidance:

No. of Ph.D. students enrolled/ completed

No. of Graduate/Postgraduate students enrolled/ completed

Synergistic Activities:

Activity 1

Activity 2

8.3Co-PI (2) Biography (Person C)

Name:

Date of birth:

Institution:

Address (Residence):

Tel. No. :

Mob No:

E-mail Id:

Address (Office):

Tel. No. :-

FAX:-

Official E-mail Id:-

Official website address:-

Educational Qualification:

School/College/University	Degree	Year	Main subjects	Division/Class

Awards / Honors / Fellowship etc.:

Appointments (Professional experience/employment record):

Organization	Designation / Position	Duration (Year / date)

List of important and relevant research publications:

Other publications:

Participation in Conference/Seminar/Workshop/ Summer Schools

Recent collaborations:

Research Guidance:

No. of Ph.D. students enrolled/ completed

No. of Graduate/Postgraduate students enrolled/ completed

Synergistic Activities:

Activity 1

Activity 2

9. List of supplementary documents :

(e.g., Authorization letter from the Head of the organization, endorsements etc.)

10. Complete Address of the financial authority of your Organization:

11. References cited :

ENDORSEMENT FROM THE HEAD OF THE INSTITUTION
(Please print on letter head)

Date:

Project Title: _____

Certified that the Institute welcomes participation of _____
as the Principal Investigator and _____ as the
Principal Co-Investigator for the project and that in the unforeseen event of
discontinuance by the Principal Investigator, the Principal Co-Investigator will assume
the responsibility of the fruitful completion of the project (with due information to
Monsoon Mission Directorate).

Certified that the equipment and other basic facilities as required by the PI from your
Institute and such other administrative facilities as per terms and conditions of the grant,
will be extended to the investigator(s) throughout the duration of the project.

Institute assumes to undertake the financial and other management responsibilities of the
project.

Name and Signature of Head of Institution

FORMAT FOR CERTIFICATE FROM THE INVESTIGATOR
Certificate from the Investigator(s)

Project Title: _____

I/ We agree to abide by the terms and conditions of the Monsoon Mission-III research grant listed in **Annexure I**.

I/ We did not submit the project proposal elsewhere for financial support.

I/ We agree to acknowledge the financial support given by Ministry of Earth Sciences in all publications (reports/scientific papers/review articles etc.) emerging out of the research/activity undertaken under this project as per the following format.

“The author/authors gratefully acknowledge the support from the ESSO, MoES, Government of India to conduct this research, as a part of Monsoon Mission”

(Signature of the Investigator)