



भारतीय आयुर्विज्ञान अनुसंधान परिषद
स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य और परिवार
कल्याण मंत्रालय, भारत सरकार
Indian Council of Medical Research
Department of Health Research, Ministry of Health
and Family Welfare, Government of India

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**CALL FOR RESEARCH PROPOSALS
ON
IMPACT OF CLIMATE CHANGE ON VECTOR-BORNE DISEASES (VBDs)**

According to WHO fact sheet of vector-borne diseases in 2020, Vector-borne diseases account for more than 17% of all infectious diseases, causing more than 700000 deaths annually. It can be caused by parasites, bacteria or viruses. The distribution of VBDs is determined by complex demographic, environmental, and social factors. The increasing rates of these diseases have major social, economic and developmental impacts. Now it is widely acknowledged that climate change has a significant impact on the risk of vector-borne diseases.

India's geo-ecological settings are favourable for most vector-borne diseases (VBDs) in the country. Malaria, Lymphatic Filariasis (LF), Japanese Encephalitis (JE), Dengue (DEN), Chikungunya (CHIK) and Kala-azar (KA) are the major VBDs. Kyasanur Forest Disease (KFD), Crimean-Congo Hemorrhagic Fever (CCHF), Rickettsial infections, Plague and Chandipura virus (CHPV) infections are limited and localized but need attention. Zika is an emerging threat which also needs to be handled on a priority basis. Malaria, LF, JE, DEN, CHIK and Zika are transmitted by different species of mosquitoes. KA and CHPV are transmitted by sand flies, while KFD, CCHF are transmitted by ticks; plague by fleas. Rickettsial diseases including scrub typhus responsible for acute encephalopathy syndrome (AES) is transmitted by the *Leptotrombidium* mite species. Given the diverse biodiversity, it requires a specific and strategic action plan.

A growing number of studies have provided evidence of the effects of climate variability on vector-borne diseases. However, some diseases and regions are not sufficiently studied or lack robust scientific evidence. The relationships between meteorological factors and the components of the transmission cycle (e.g. parasite development rates, vector biting and survival rates) or the observed geographical distribution of disease will be needed to generate predictive models. Time series of disease data is essential for determining the relationship between disease and climate as well as for



validation of tools developed. Therefore, the partnership and collaboration with national programs such as the Integrated Disease Surveillance Project is of utmost importance to support these research programs.

In this context, ICMR launches **Call for Proposals** and invite research proposals under two category, details of which are given below:

A. Call for proposals for Ad-Hoc studies

This Call encourages interdisciplinary, innovative, close-to-practice research in the field of climate change and its impact on vector-borne diseases. Invited proposals may address below mentioned research gaps:

a) Epidemiology

1. To generate local evidence on the impact of climate change on spatio-temporal spread of vector borne diseases listed in the introduction.
2. Spatial temporal distribution of aedes mosquito and dengue virus in context of climate change.
3. Emergence of new foci of transmission due to climate change.

b) Entomology

4. Change in vector behavior and density due to climate change (meteorological or human imposed factor).
5. Mapping of vector species particularly ticks and mites and remedial measures for control.

c) Modeling and Early Warning systems

6. Impact of climate change on dengue, JE, lymphatic filariasis and KFD *via* modeling of vectors and diseases in view of climate change.
7. Prediction and detection of climate-driven outbreaks through digital and technological tools in vector-borne disease [e.g. Early Warning, Alert and Response System (EWARS)].
8. Develop a scenario-based model for impact of future climate change that can help long term preparedness for the prevention and control of vector-borne diseases.
9. Developing model(s) for forecasting and timely interventions by appropriate long term research



cum intervention projects involving various relevant stakeholders.

Adhoc project details and relevant proforma is available at: <https://epms.icmr.org.in/adhoc>

B. Centres For Advanced Research (CAR)

To encourage in-depth research on an identified research problem with the aim of generating new knowledge on the subject of impact of climate change and impact on vector borne diseases the proposal of CAR may be submitted to ICMR. The proposal could focus on one or multiple aspects like causations, progression, management and prevention. The CAR is generally created around a scientist/institute of eminence, who is undertaking excellent work on a specific area of medical importance. After five years, the host institution would be expected to take over the activities of the centre as permanent activity. If the host institution proposed to absorb the staff, undertaking to that effect would need to be furnished.

It is expected that the application would highlight the existing expertise and infrastructure and need for the CAR. Detailed proposal with budget requirement is on the pattern of adhoc research application form but for five years and budget cap of 10 crores.

Details about guidelines of CAR can be found at: <https://main.icmr.nic.in/content/centre-advanced-research-0>

When and how to submit a proposal:

1. The full length research (detailed) proposal should be submitted through online mode only on <https://epms.icmr.org.in/> and no proposal in physical/hard copy/email is to be submitted.
2. Details of the eligibility, format of application, terms & conditions and guidelines of the scheme are available on <https://epms.icmr.org.in/adhoc>
3. All projects involving research on human beings/animals must be cleared by the registered Human Ethics Committee/ Animal Ethics Committee of the respective institute (Registration Number to be provided).

Date for submission of full-length research proposal:

Start Date: 15th January, 2022 Time 09:00 AM

End Date: 28th February, 2022 Time 05:00 PM

Important Note:

1. Open the ICMR Electronic Project Management System (e-PMS) portal <https://epms.icmr.org.in>.
2. Project proposal submission is three steps process in e-PMS.
 - a. Step 1: PI Registration/Login
 - b. Step 2: Verify Email Id and Complete/Update PI Profile
 - c. Step 3: Apply for Grant through submission of Ad-hoc/CAR proposal
3. Click on "**LOGIN**" and select "**Register a new membership**" for new registration OR else if already registered, enter the details to login into the application at e-PMS portal.
4. After registration in the portal, login in the portal. Verify your registered email and complete the PI profile. PI profile includes Personal details such as Salute, Name, DOB, Gender (Male/Female), Category (GEN, OBC, SC, ST), State, District, Institute Name (if name doesn't exist in the drop down list then there is an option to add the new institute also), Designation, Nature of Employment, Department, Broad Area of Research, Subject Area.
5. After completing mandatory section of PI Profile, click on "**Submit New Proposal**" under "**Proposal Submission**" menu. New screen will display. Select "**ICMR Adhoc Project**" from drop down for Adhoc Proposal and select "**Centre of Advanced Research (CAR)**" from drop down for CAR Proposal submission.
6. **Proposal** submission form will be opened. Select "**Research Proposal on "Impact of Climate Change On Vector-Borne Diseases (VBDs)"**" in Advertisement dropdown list. Select Broad area: Epidemiology and Communicable Diseases.
7. The user manual of e-PMS (Guidelines-> e-PMS menu) <https://epms.icmr.org.in/user-manual> and ICMR Ad-hoc Project Program guideline (Guidelines->Ad-hoc Program menu) are available at <https://epms.icmr.org.in/adhoc>. Before proceeding to submission of the proposal, it is suggested to read user manual and guidelines; and make ready all relevant information, documents and research plan.
8. Registration in e-PMS portal and filling the Personal and Education information is mandatory for Co-PI/ Co-I also
9. As per the guidelines for Extramural Research Programme, individuals holding permanent positions in Medical colleges/ universities, educational and research institutes, Govt. and semi

Govt. organizations and NGOs are eligible to apply for the Call. The contractual, adhoc, project staff etc. are not eligible to apply for research grant in this scheme. Therefore, all PIs are advised to ensure the nature of employment of PI/Co-PI/Co-I before process to submission or addition as PI/Co-PI/Co-I (Documentary evidence of their recognition including DISR certificate should be enclosed with the application.

10. Duration of the research proposals should not exceed(a) three years for Adhoc (b) five years for Centres For Advanced Research (CAR)
11. It is mandatory that the proposals must be submitted in the asked format ONLY. The format for proposals can be downloaded from <https://epms.icmr.org.in/adhoc> . The incomplete proposals (if there is no response for any question/section) will be automatically disqualified from the current round. All the proposals will be peer-reviewed and shortlisted for the funding based on the recommendations of reviewers. The applicants may be called for personal discussion, if required.
12. It is suggested to submit your proposal without waiting for the last date and time to avoid last time rush. Last minute request for extension of the due date w.r.t. any technical issue will not be considered.
13. You may contact the following official if you have any queries:

Subject related query	e-PMS and proposal submission related query
<p>Dr. Manju Rahi, MD Scientist-'F' / Deputy Director General (SG) Division of Epidemiology & Communicable Diseases Indian Council of Medical Research New Delhi, India – 110029 Email: drmanjurahiicmr@gmail.com</p>	<p>Dr. Lokesh Kumar Sharma Scientist E & Program Officer Division of Biomedical Informatics Indian Council of Medical Research New Delhi, India – 110029 Email: po.epms@icmr.gov.in Telephone No.: 011-26589571</p>