

**Ministry of Earth Sciences (MoES)**  
**Government of India**

*Expression of Interest for Urban Flood Management in India*

**Scope of the Call:** India experiences frequent and devastating urban floods, causing significant loss of life, property damage, and economic disruption. To address this challenge, the Ministry of Earth Sciences (MoES) seeks innovative end-to-end solutions that leverage advanced technologies for Urban Flood Management in the cities of India under the REACHOUT scheme.

MoES, under the aegis of PAMC (Hydrology and Cryosphere) invites **Expressions of Interest (EOI)** (format in Annexure I) from investigators belonging to Universities, Research/Academic institutions with expertise in developing and implementing comprehensive urban flood management solutions for Indian cities under the following two themes:

1. **Flood Nowcasting and Forecasting:** Development and implementation of hybrid models (physics-based and/or data-driven models) for: (i) Identification and characterization of flood-prone zones in urban areas, (ii) deploying a network of monitoring stations in strategic locations, (iii) Nowcasting (short-term) of urban flooding events using real-time data from monitoring stations and weather forecasts, and (iv) Forecasting (long-term prediction) of potential flood events based on historical data, climate projections, and urban development plans/pathways.
2. **Flood Warnings, Risk Reduction Strategies and Capacity building:** Development and deployment of (i) real-time communication applications for flood warnings and alerts targeted at relevant stakeholders (city authorities, disaster management authorities, concerned government organization, citizens), (ii) a digital twin of the city for scenario simulations, flood risk analysis, and infrastructure planning and (iii) capacity-building programs for city officials and stakeholders on flood preparedness, response, and flood risk reduction strategies.

**Targeted Study Area:** The individual EOIs may be submitted in any one of the above-mentioned themes, focusing on one or more cities under the following categories, with a population size of > 4-5 lakhs and with a documented history of flooding:

1. **Cities in Mountainous/Hilly Terrain**
2. **Coastal Cities**
3. **Inland Cities (Lake dominated/with sizeable lakes))**
4. **Inland Cities with river(s)**

**Evaluation of EOIs and Final Project Submission:**

This shall be a two-step process. First, the EOIs received under this Call shall be assessed and evaluated by the PAMC. Secondly, the investigators of the selected EOIs will be amalgamated into consortium project covering the two themes and the cities selected based on the above-mentioned criteria. The potential PI(s) of the consortium will then be asked to submit a full-

fledged proposal, which shall again be peer-reviewed followed by a presentation before the PAMC H&C members.

The decision to fund the project will be taken based on the recommendations of PAMC after the PIs present the proposal before the PAMC.

Note: The project outcomes/applications/databases developed by the supported proposal will be transferred to the MoES for real-time use/applications before the closure of the project.

### **Guidelines and deadlines:**

1. Page Limit of EOI: **4 pages of A4 size**
2. Please submit your EOI online to **pamc.hydrocryo@gmail.com** in the format mentioned in **Annexure I**
3. The last date for receiving the EOI is **7<sup>th</sup> October, 2024**.
4. Kindly note: Only those PI(s) who communicate their EOI within the above-mentioned deadline will be considered for the consortium project. However, sending the EOI does not guarantee acceptance of the proposal by the Ministry.
5. For any further queries, please contact:  
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### ***Annexure I***

1. Name and affiliation of the investigator(s)
2. Themes selected (one of the two themes)
3. Study area (city as per geographical region) with justification
4. Details of Interest which include the following:
  - i. Area of expertise
  - ii. State of knowledge and gaps
  - iii. Hypothesis/Objectives
  - iv. Contribution which the investigators proposes to make to the selected themes including the ones not identified in the present call (pertinent/relevant to urban flooding)
  - v. Methodology (< 500 words)
  - vi. Experience of investigator in the subject of the proposal (please list 5 significant and relevant publications)
  - vii. Anticipated deliverables

**NOTE:** Proposal to be submitted in Arial font with font size 11 and 1.5 spacing