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Memorandum of Understanding
Between

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Indian Institute of Technology Mandi (IIT Mandi)
A research and educational institution of national importance established by a Special Act of Parliament, located at VPO Kamand, District Mandi, Himachal Pradesh, 175075, hereinafter referred to as **"IIT Mandi**," of the FIRST PART;

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And

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Disaster Management Department, Collector Office, Kolhapur
Located at [Address], Kolhapur, Maharashtra, hereinafter referred to as the **"Disaster Management Office"** of the SECOND PART.

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(Hereinafter collectively referred to as the "Parties.")

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1. Objective

This MoU aims to establish a collaborative partnership between **IIT Mandi** and **Disaster Management Department, Collector Office, Kolhapur** to enhance disaster preparedness, response, and mitigation through the following objectives:

- **Technology Sharing and Implementation:** Share and implement advanced technologies for disaster monitoring, prediction, and mitigation, focusing on solutions for landslides, floods, wildfires, and wildlife surveillance.
- **Research and Development:** Jointly conduct research to develop innovative, scalable solutions for disaster management challenges, including:
    - Landslide monitoring and early warning systems.
    - AI-assisted flood prediction and control mechanisms.
    - Drone-based wildfire surveillance and wildlife monitoring systems.
- **Capacity Building and Skill Development:**
    - Organize capacity-building workshops, seminars, and training programs for district officials, emergency response teams, and community stakeholders.
    - Foster knowledge exchange between the Parties to strengthen technical and operational capabilities.
- **Exchange Programs:**
    - Facilitate visits by Kolhapur district officials, disaster management personnel, and community representatives to IIT Mandi for capacity-building programs, hands-on training, demonstrations, and exposure to advanced research and

technologies as per mutual consent and mutually agreed financial arrangements

○ Enable visits by IIT Mandi faculty, staff, and students to Kolhapur for field studies and technology deployment, and provide on-ground support for disaster management initiatives and community engagement activities as per mutual consent and mutually agreed financial arrangements.

- **Community Engagement:** Develop community-centered disaster awareness programs to educate the public on early warning systems, evacuation protocols, and risk mitigation strategies.

- **Knowledge Dissemination:** Publish joint research papers, case studies, and reports documenting the outcomes of collaborative projects and their impact on disaster management practices.

- **Policy Support:** Provide technical consultation and recommendations for drafting and implementing disaster management policies and frameworks tailored to Kolhapur's needs.

- **Sustainability and Innovation:**
  ○ Promote sustainable solutions for disaster mitigation and environmental conservation, leveraging AI, IoT, and other emerging technologies.
  ○ Explore avenues for the development of additional disaster management tools and frameworks in response to evolving needs.

2. Scope of Collaboration

2.1. Initial Areas of Focus:

The collaboration will prioritize the following technologies and solutions:

1. **Landslide Monitoring and Early Warning Systems:**
   ○ Real-time sensors and IoT-based systems for monitoring and predicting landslides.
2. **Flood Monitoring and AI-Assisted Early Warning Systems:**
   ○ AI-driven hydrological models for flood prediction and risk assessment.
   ○ Community-friendly mobile apps for early warning dissemination.
3. **Wildfire Surveillance Systems:**
   ○ Drone-based systems for wildfire detection, monitoring, and response planning.
4. **Wildlife Surveillance and Menace Minimization:**
   ○ AI-enabled tools for tracking wildlife movement and minimizing human-wildlife conflicts.

2.2. Additional Avenues for Collaboration:

1. Conduct disaster simulations and mock drills to enhance preparedness and response strategies.
2. Develop centralized disaster data repositories for better planning and decision-making.
3. Co-deploy and maintain technologies in disaster-prone areas, leveraging joint resources.
4. Facilitate community participation in disaster risk reduction through citizen science initiatives.
5. Provide technical training on data collection, analysis, and reporting to local officials and stakeholders.

2.3. Startup Engagement and Innovation Support:

- IIT Mandi's incubation center will provide access to its database of incubated startups and introduce relevant startups based on the specific problem statements and requirements of the Kolhapur District Collector Office and Disaster Management Office.
- These startups will offer innovative solutions in areas such as disaster management, environmental conservation, and sustainability.
- IIT Mandi will facilitate pilot projects, co-development opportunities, and customized solutions in collaboration with Kolhapur authorities, ensuring the startups' technologies are effectively tested and deployed in real-world scenarios.
- Encourage co-development opportunities where startups can collaborate with Kolhapur authorities to fine-tune their products and services for practical applications in the region.

3. Roles and responsibilities

3.1. Responsibilities of IIT Mandi:

- Develop and share advanced technologies for disaster management and environmental conservation.
- Provide training and capacity-building programs for personnel from Kolhapur.
- Facilitate hands-on exposure for visiting officials through demonstrations and technical workshops.
- Deploy faculty, staff, and students to Kolhapur for on-ground support and studies, as per institute norms.

3.2. Responsibilities of Disaster Management Department, Collector Office, Kolhapur:

- Facilitate on-ground implementation of technologies and solutions provided by IIT Mandi.
- Provide access to district resources, data, and facilities required for collaboration.
- Support the logistics of training and community engagement activities.
- Identify priority areas and disaster-prone locations for intervention.
- Coordinate with IIT Mandi for the deployment and testing of technologies.
- Share feedback and local knowledge to refine collaborative solutions.

4. Financial Arrangements

Financial arrangements will be determined on a project-specific basis and formalized through separate agreements or addenda. Costs will be shared as mutually agreed.

5. Confidentiality

The Parties may need to disclose proprietary or confidential information during this collaboration. The disclosing Party shall inform the receiving Party about the confidential nature of the information. The receiving Party agrees not to disclose any such information, in whole or in part, without the prior written consent of the disclosing Party, except to its authorized personnel strictly for fulfilling the purpose of this agreement.

6. Duration and termination

This MoU will remain valid for **five years** from the date of signing. Either Party may terminate the MoU by providing **30 days' written notice** to the others.

7. Governing Law and Dispute Resolution

The laws of the Republic of India shall govern this MoU. Disputes arising from or related to this MoU shall first be resolved through mutual consultation. If unresolved, disputes shall be subject to arbitration under the Arbitration and Conciliation Act of 1996, with the venue being Delhi.

8. Points of Contact

- Each Party shall nominate a primary Point of Contact (PoC) to oversee the implementation of this MoU and facilitate communication between the Parties.
- The Points of Contact shall be responsible for:
  - Coordinating activities outlined in the Scope of Collaboration.
  - Ensuring timely exchange of information.

o Addressing any issues or concerns related to the collaboration.
- The nominated Points of Contact, including their names, designations, and contact details, shall be identified and listed below:

Nominated Points of Contact

For Disaster Management Department, Collector Office, Kolhapur:
Name: Mr Prasad Sankpal
Designation: District Disaster Management Officer
Email:

For IIT Mandi:
Name: Dr. Satvasheel Powar
Designation: Associate Professor
Email: satvasheel@iitmandi.ac.in

10. Effective Date

This MoU becomes effective on the date of the last signature below.

Signatures

For Indian Institute of Technology Mandi:
Name: _Satvasheel R. Powar_
Title: _Dean (Finance)_
Date: _18.04.25_

For Disaster Management Department, Collector Office, Kolhapur:
Name: _Amol Yedge_
Title: _Collector Kolhapur_
Date: _18-04-25_