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PARAMETERS | **AI Forecasts Climate Risks Across MP Till 2040**

IIT-I's HydroVerse AI in NSIC Top 11

Our Staff Reporter
INDORE

The Water, Climate and Sustainability Lab at IIT Indore has secured a place among the top 11 finalists of the National Climate Stack Innovation Challenge (NSIC) 2026. Organised under NABARD, the challenge received more than 150 proposals nationwide. IIT Indore was shortlisted among the top 20 before advancing to the finals with a functional prototype.

Developed under the guidance of Prof Manish Kumar Goyal, HydroVerse AI is an AI-powered Climate Hazard Intelligence Platform. It uses artificial intelligence, machine learning, satellite observations, climate datasets and CMIP6 projections to forecast floods, droughts, heatwaves and agricultural stress at the district level. It provides early warnings and decision-support tools for farmers, policymakers, disaster management agencies, financial institutions and researchers.

CLIMATE TOOLKIT
- District-level climate forecasts
- Hazard maps and risk indices
- Early warnings and advisories
- Climate-smart agriculture support
- Water and disaster management inputs
- Scope for expansion to other states

THE NUMBERS
- 150+ PROPOSALS RECEIVED
- TOP 20 IN INITIAL SHORTLIST
- TOP 11 FINALISTS
- 2040 PROJECTION HORIZON
- ALL MP DISTRICTS COVERED

IIT Indore Director Prof Suhas Joshi said, "Being recognised among the top 11 finalists of the National Climate Stack Innovation Challenge 2026 is a proud moment for IIT Indore. HydroVerse AI reflects how cutting-edge technologies can be harnessed to address critical societal challenges and build a more climate-resilient India. I congratulate Prof Manish Kumar Goyal and his team for translating interdisciplinary research into an innovative solution with the potential to create meaningful impact for farmers, communities and policymakers."

Goyal said, "HydroVerse AI brings together AI and climate science to turn complex data into actionable, localised climate intelligence. Our aim is to make advanced climate analytics accessible for timely and informed decisions on the ground. The NSIC 2026 recognition is an encouraging milestone towards scaling this technology for wider climate resilience."

The prototype has been validated across all districts of Madhya Pradesh using historical climate data and projections up to 2040. It generates hazard maps, risk indices, forecasts and advisories for climate-smart agriculture, water management, disaster preparedness and sustainable planning. It can also be extended to other states under the National Climate Stack ecosystem.

The project team comprises Prof Manish Kumar Goyal, Vishal Gautam, Dr Srija Roy, Dr Kuldeep Singh Rautela and Dr Vinod Kumar Sahu.