

Title: Socio-economic-environmental vulnerability due to climate change-induced disasters: A tehsil-level assessment for Madhya Pradesh

Principal Investigator (PI)

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Overview of the project:

In Madhya Pradesh, frequent climate-induced disasters take the shape of droughts, floods, heat waves, and rainstorms. Madhya Pradesh is ranked fourth in terms of its susceptibility to natural disasters. The accelerated warming due to climate change and anthropogenic interventions would aggravate the risks due to climate-induced disasters. The project also explores the sectoral impacts of climate and anthropogenic factors on water, food, industries, energy, and the environment. This study conducts a vulnerability assessment, a crucial step in the adaptation planning and disaster mitigation process, to provide a comprehensive analysis through Madhya Pradesh's past and projected climatic data.



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Research Methodology:

The proposed research will be executed into four work packages (WPs):

- WP 1-Analyze the changes in climate extremes for the state of Madhya Pradesh for the period of 1951- 2020.
- WP 2-Assess the temporal evolution of climate-induced disasters through future climate projections for 2021-2100.
- WP 3-Understand the role of anthropogenic factors in modulating climate change impacts.
- WP 4-Identifying the impact of climate and anthropogenic factors on social, economic, and environmental vulnerability.

Deliverables:

- Develop climate vulnerability atlas with tehsil-level information
- A policy brief highlighting the sectoral impacts of climate and anthropogenic changes will be prepared.
- Generate a dataset for future purpose and result will be shared with the stakeholders.
- Peer-reviewed journal publication and present research in reputed national/international conferences.