Aqua-Analytics : An Insight into India's Water Accessibility

State/UT

National Progress Report

Diagnostic Deep Dive

AI-powered Predictive Insights

Download Report

Predicting Implementation Integrity for India's Water Mission

This dashboard analyzes the current state of water access and uses AI to predict future challenges in the certification and implementation of the Har Ghar Jal mission, identifying states that require proactive support.

By Sayantan Naha

Page 2 : The National Progress Report

State/UT

National Average FHTC %

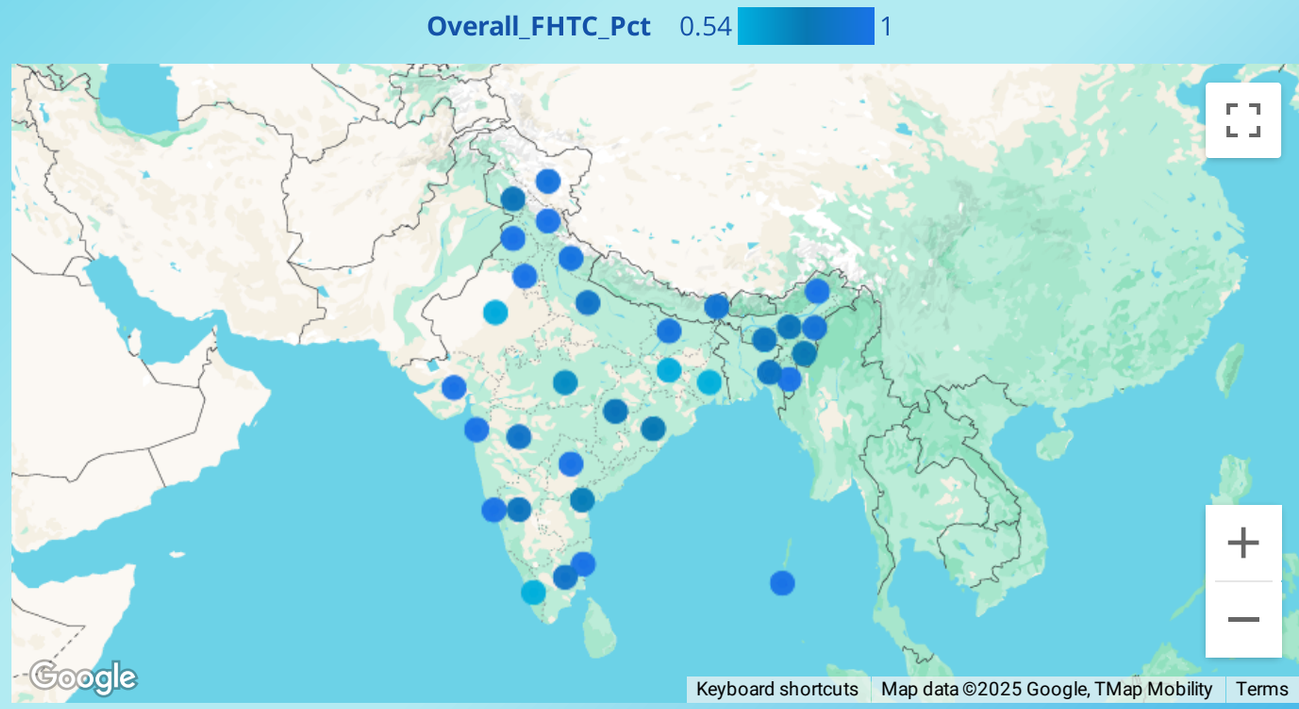
0.86

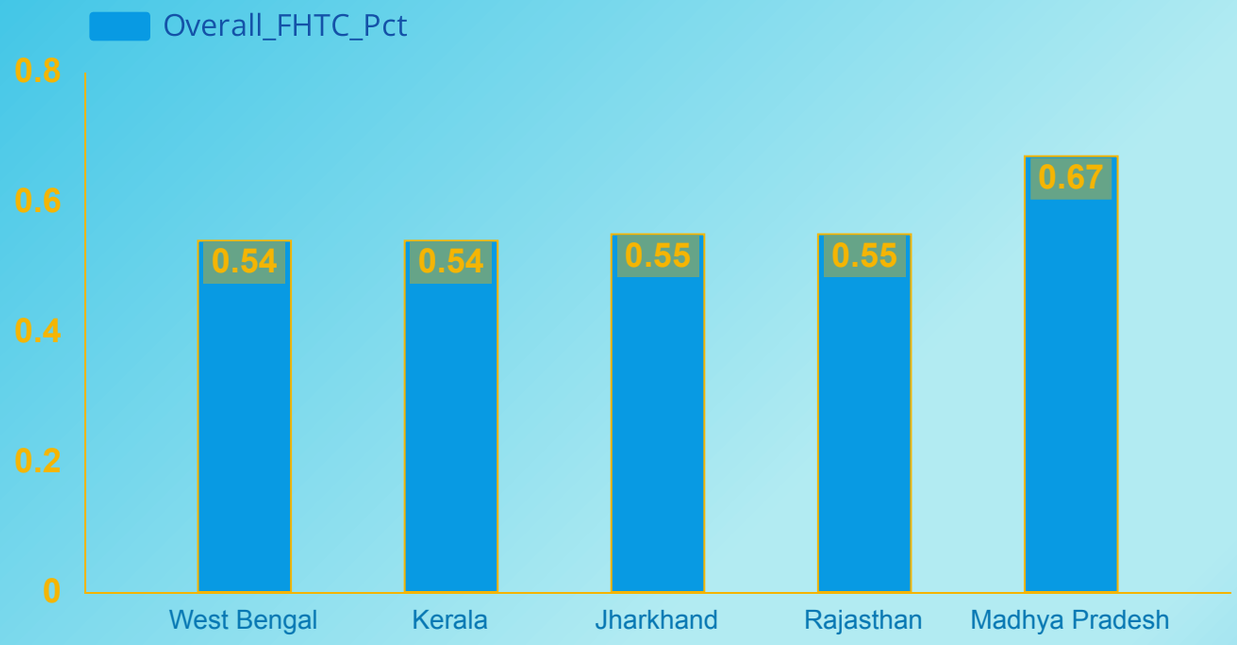
States & UTs Analyzed

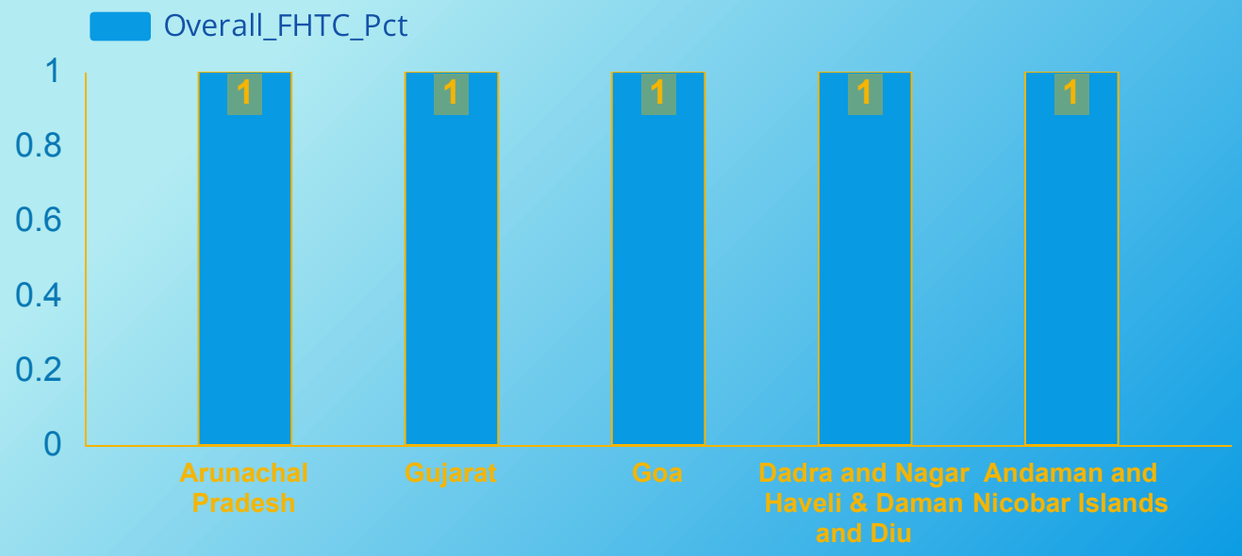
34

Average Certification Deficit

0.25







Page 3 : The Diagnostic Deep Dive

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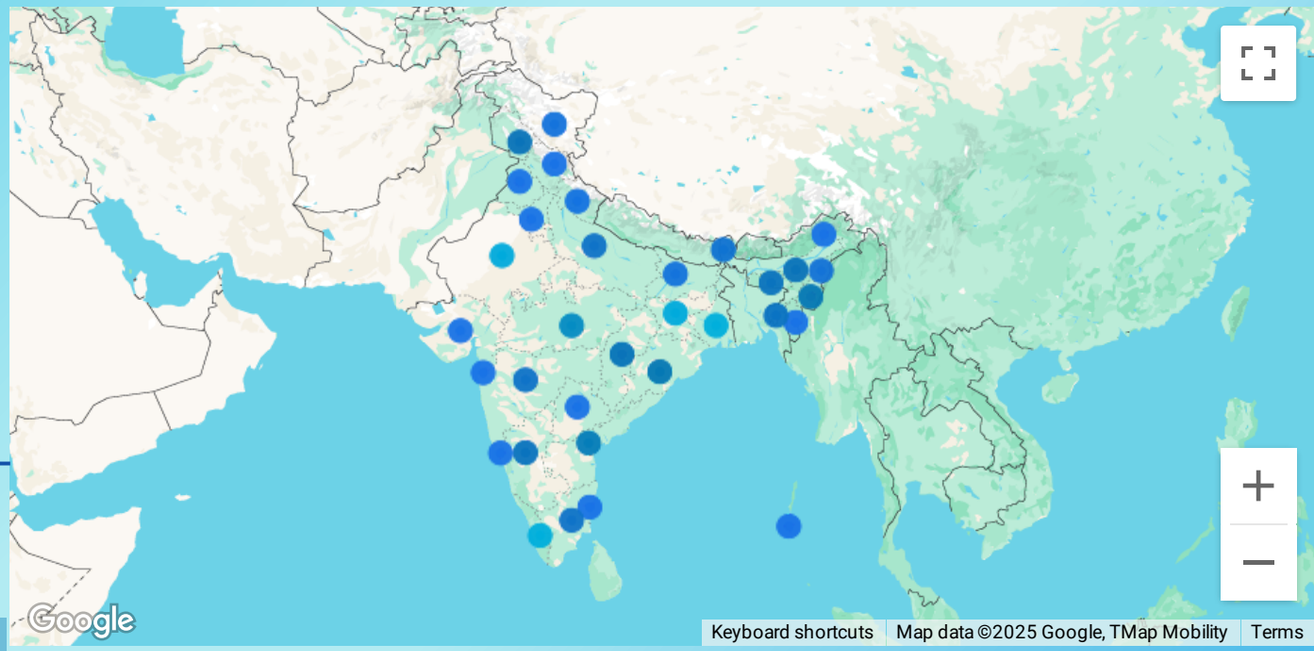
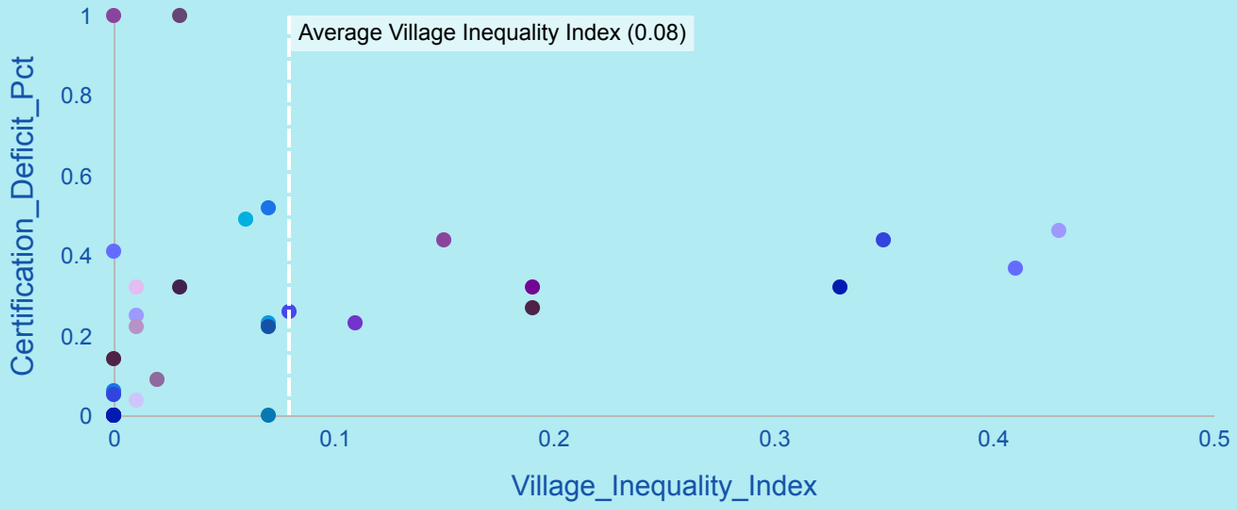
Overall_FHTC_Pct 0.54 1



State-wise Risk Factor Analysis Table

State/UT	Village_Inequality_Index	PWS_Infrastructure_Gap	Certification_Deficit_Pct
West Bengal	0.41	0	0.37
Uttarakhand	0.01	0	0.22
Uttar Pradesh	0.08	0.01	0.26
Tripura	0.01	0	0.04
Telangana	0	0	1
Tamil Nadu	0.02	0	0.09
Sikkim	0.01	0	0.25
Rajasthan	0.43	0.03	0.46
Punjab	0	0	0
Puducherry	0	0	0

The Link Between Inequality and Certification Gaps



Page 4 : AI-Powered Predictive Insights

State/UT

(Uncovering the Key Drivers of Implementation Risk)

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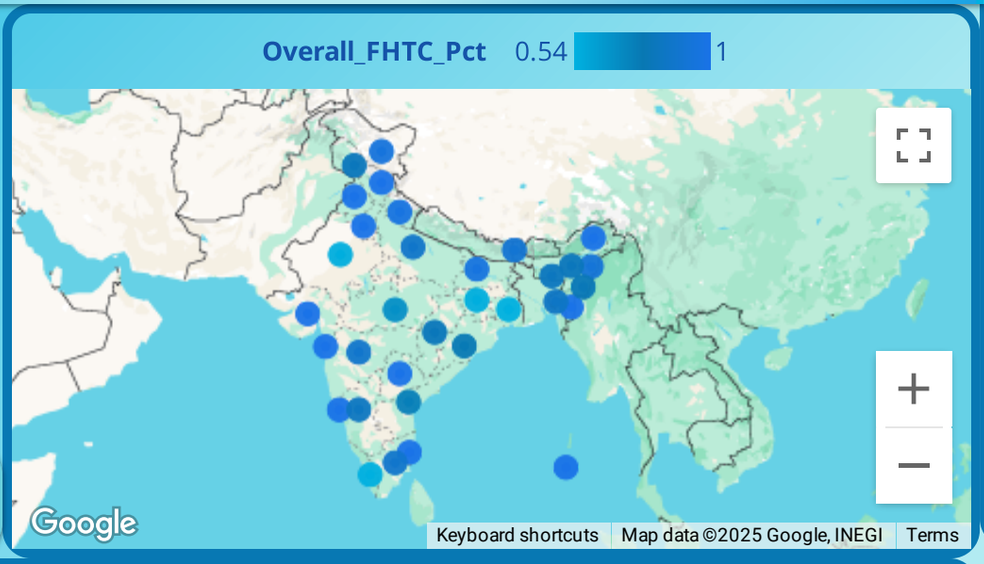

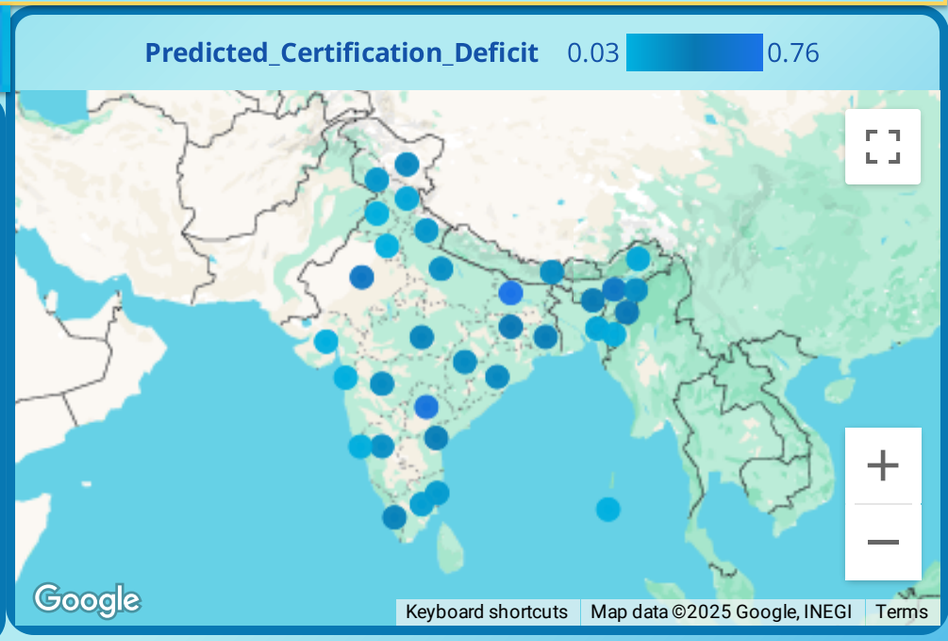

Which factors predict "Implementation Risk"?

Our AI model was trained to predict the "Implementation Integrity Gap" - the difference between reported and certified progress in the Har Ghar Jal mission. Our initial hypothesis was that on-the-ground infrastructure issues would be the most critical factor. However, the AI discovered a more profound and insightful story. The model revealed that the most powerful drivers of implementation success are, surprisingly, human capital and demonstrated momentum.

Literacy Rate (2011) Importance: 41.9% The single biggest predictor is a state's historical literacy rate. This suggests that the success of modern government schemes is less about pipes and taps, and more about the administrative capacity, public awareness, and human infrastructure of a region.

Overall FHTC Coverage % Importance: 21.7% Counter to our initial belief, the model proved that the overall FHTC percentage is not a vanity metric. It's a genuine indicator of a state's ability to execute. States that have successfully rolled out broad coverage have a proven operational capacity that directly translates to better performance in the final certification stage.

Village Inequality Index Importance: 18.9% While still a relevant factor, the disparity in coverage between villages is less predictive than the state's overall human capital and its demonstrated operational success.

PWS Infrastructure Gap Importance: 17.5% The lack of foundational Piped Water Supply is a contributing factor to the problem, but it is the least predictive of the four.

Key Takeaway: *Our project's core insight is that for future government projects to succeed, investment in socio-economic development and administrative efficiency is the most critical factor for ensuring true, verifiable impact.*

Drivers of Implementation Risk