Student Thesis Competition (STC) Season 5 on

"Re-imagining Urban Rivers"

URBAN WATERBODY CONSERVATION THROUGH KNOWLEDGE-GUIDED MACHINE LEARNING: AN INTEGRATED APPROACH USING EXPERTS' INSIGHTS

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Delhi has lost 21 lakes since 1997-98: Intach

Jayashree Nandi / TNN / Updated: Sep 10, 2013, 02:42 IST

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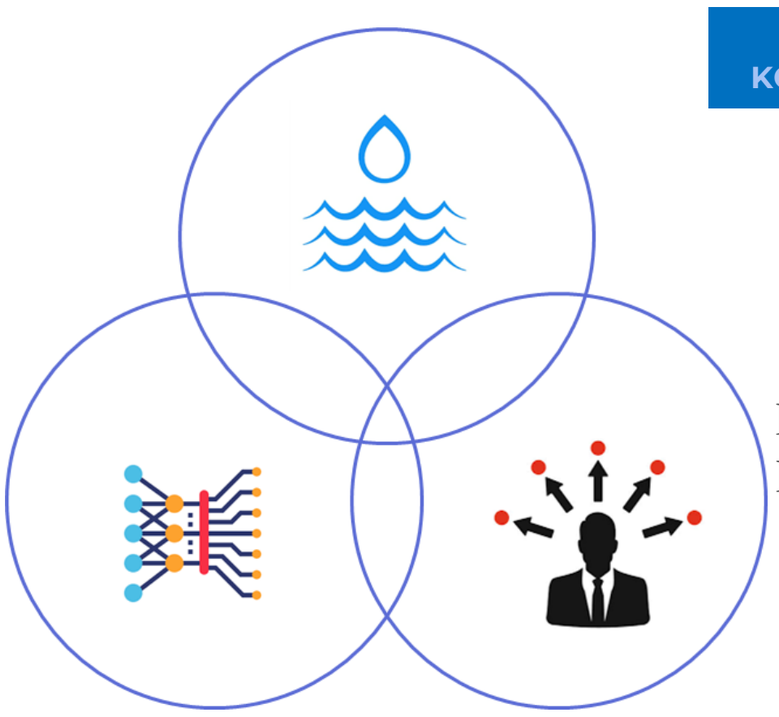
Urban lakes are degrading due to unstructured planning and fragmented policies.

Integrate expert insight + machine learning to identify and respond to conservation issues.

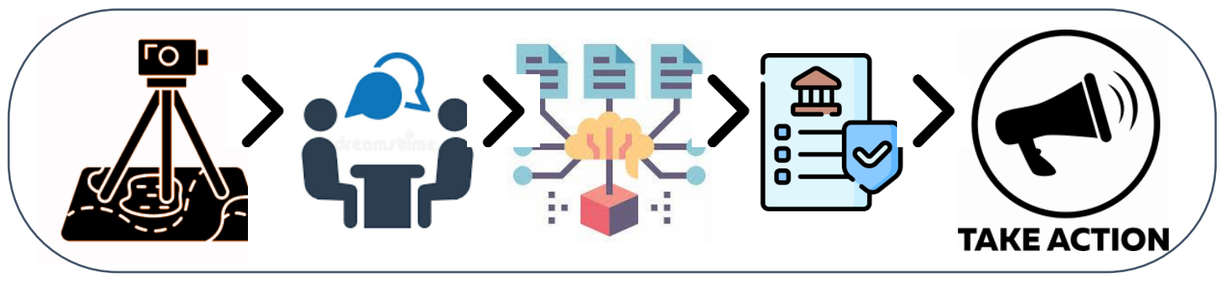


Knowledge- Guided Machine Learning

KGML?

"Machine learning guided by policy text and expert knowledge to make contextual conservation decisions."

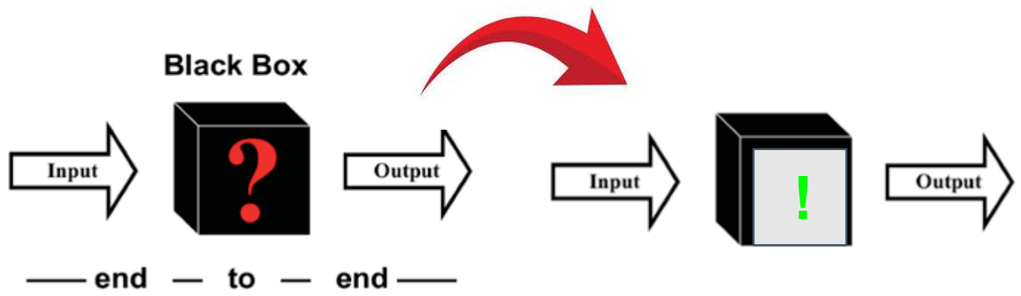
WHAT WE FOUND: ISSUES AND INSIGHTS



Field Data + Interviews → KGML Model → Policy Match → Action

KGML is better than BLACK BOX ML NATURE

KGML provides transparency

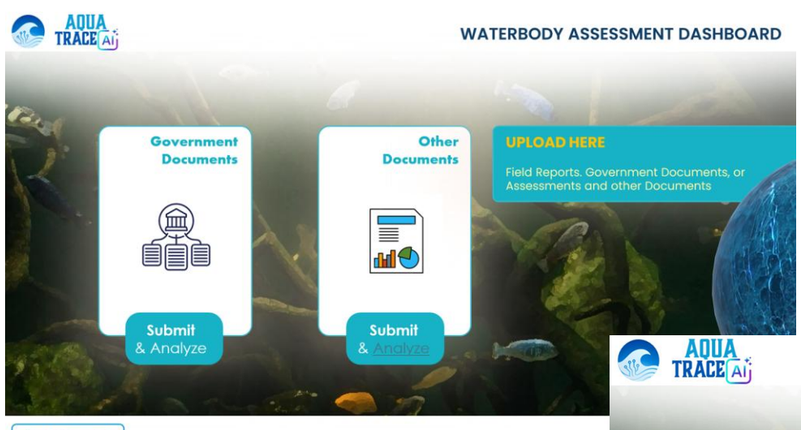


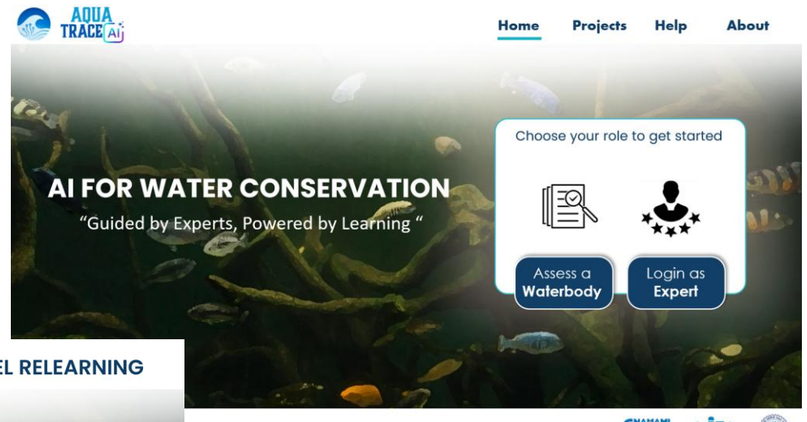
KEY ISSUES

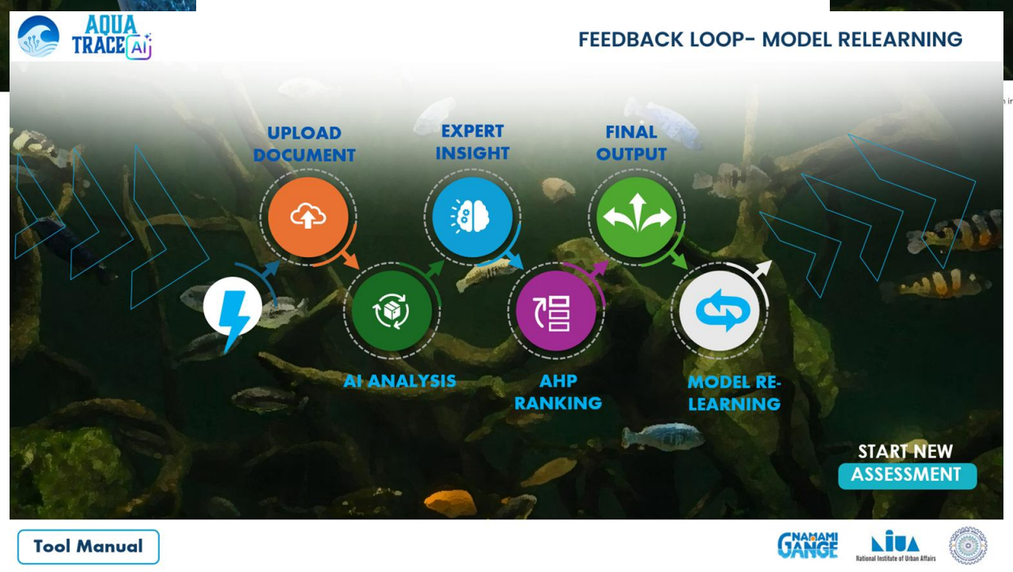
- Encroachment
- Flow obstruction
- Water pollution
- Ecosystem loss
- Lack of public engagement

Atal Mission for Rejuvenation and Urban Transformation

JAL SHAKTI ABHIYAN
Sanchay Jal, Behtar Kal







11 SUSTAINABLE CITIES AND COMMUNITIES

6 CLEAN WATER AND SANITATION