Decision Support Tool (DST) for integrated water management

Integrated Rural Urban Water Management for climate-based adaptations (IAdapt) project

Water resources transcend across institutional jurisdictions necessitating cross-sectoral partnerships across the rural and urban stakeholders. The IAdapt project aims to build an enabling ecosystem to empower the two project cities - Solapur, Maharashtra and Vijayawada, Andhra Pradesh and their catchments to transition to an integrated approach of water management using the following enablers,

- Water resources transcend across institutional jurisdictions necessitating cross-sectoral partnerships across the rural and urban stakeholders.
- Collectively map the key challenges
- Deliberate on viable alternatives
- Prioritise solution pathways based on DST inputs
- Develop a joint action plan
- Oversee implementation & monitor progress

Decision making support for the RURBAN platform through the IAdapt project

- Catchment Management Plan (CMP): Consultative process with the RURBAN platform to shift towards catchment-based approaches in water management
- Decision Support Tool (DST): Sensitise RURBAN platform members to capture impacts of climate change and develop innovative project responses to meet water demand
- Capacity Building: Sensitise RURBAN platform members on planning for integrated water management
- Compendium of Financing Sources: Inform the RURBAN platform members on alternative sources of financing to support CMP actions

Terms of reference for the RURBAN platform as conceptualized by the IAdapt project

RURBAN PLATFORM
An unique integrated governance mechanism for bottom up participatory management of water resources among catchment level decision makers and key stakeholders

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Decision Support Tool (DST) for the RURBAN platform in IAdapt

The decision support tool will serve as a review tool for proposed investments in water management. It will aid decision makers in introducing adaptations/augmentations in the proposed investments to promote equitable outcomes on allocation and use of water resource among all catchment stakeholders.

**MODULE 1: Assessment of water balance at a catchment level**

The tool provides a forward-looking framework, that takes into account climate change / new investment scenarios, to estimate the water balance across user groups.

**MODULE 2: Develop and prioritise among solution pathways**

Recommend potential solutions and best practices for each stakeholder group and assist in prioritisation based on financial and risk assessments and stakeholder inputs from the RURBAN platform.

**DST Architecture**

- **WEAP MODULE**
  - Water Evaluation & Planning Module
    - Demand
    - Supply
    - Quality
    - Climate
    - Hydrology
    - Water Balance (Current Scenario)
    - Investment Scenario
    - Revised Water Balance & impact on users
    - Mitigation measures to integrate into the proposed investment

- **ADAPTATION MODULE**
  - WEAP module output
    - Current scenario vs Investment scenario
    - Change in quality
    - Change in quantity
    - Change in risk
  - Mega set of interventions
    - Infrastructure
    - Demand Management
    - Project Governance
    - Sector Governance
  - Intervention options for mitigating the negative externalities in the proposed investment
  - Evaluate based on inputs from the impacted stakeholders
  - Presented at RURBAN platform for participatory consultative decision making to identify most appropriate interventions based on implementation costs and benefits
  - Interventions included in the proposed investment