Possible Research and Development in Rural Drinking Water

CTARA and Inter-disciplinary Group
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Basic Themes

- What should be the GP-level documentation.
- Data-current and past, governance and monitoring.
- Single and Multi-village schemes.
- Wider issues-regeneration of groundwater.

All from the perspective of sustainable access to sufficient good quality drinking water.

- allied issues if necessary-irrigation, livelihoods

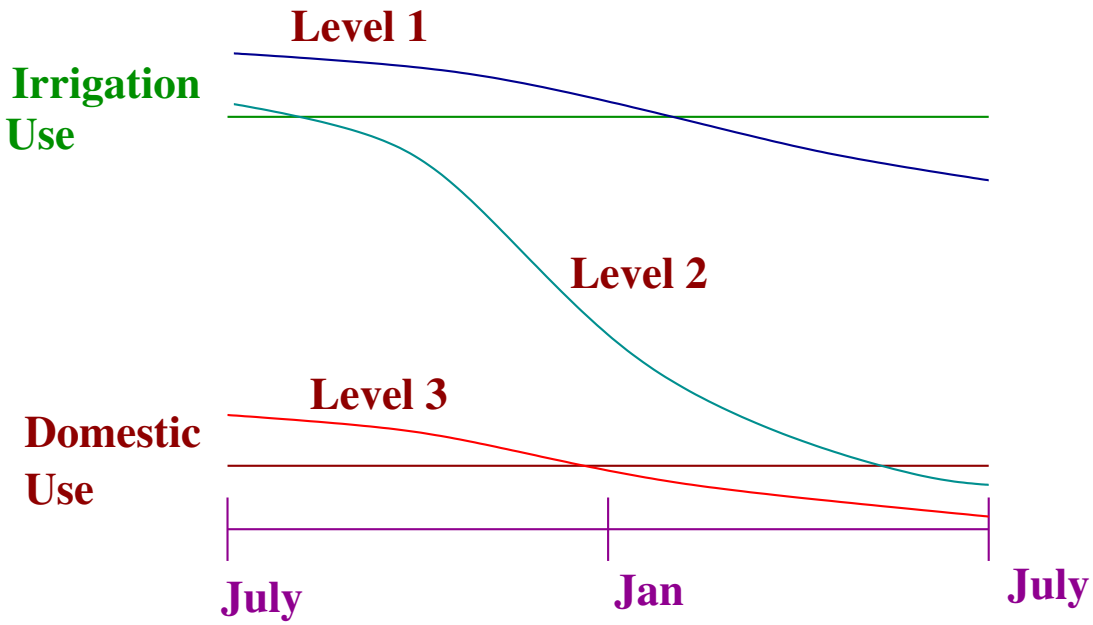
1 GP-level documentation

Objectives

- Reliable measure of the water status of the habitation.
  - quantity and quality
- Planning and prediction.
  - long term and short term
  - by the village, taluka and GSDA
- Enable response, governance and monitoring.
  - shared formats and official sanction

- Eventual platform for groundwater/surface-water regulation.

Three Broad Types



- Plentiful year-round irrigation
- Seasonal irrigation but eventual stress
  - proximate surface water
- No irrigation and eventual severe stress

Different Issues, different data need to be stressed.

Supply Side

- Wells and Borewells, Other Sources
  - location, yield, ownership, use, seasonality
  - Research : effective yield test.
- Piped water schemes.
  - Design document-maps, engg.
  - Threats: opt-out, QoS differential, O& M, private vs. standpost, institutional
- Data acquisition
  - quality and quantity
  - formats and capacity-building

- Technical and official document
  - MVS/SVS plan, habitat-level maps and locations of wells, match with 7/12.
  - Source Strength

Demand and Institutional Side

- Habitat level demand models
  - Population model
  - Other needs such as live-stock and household demand
  - commercial needs
- Irrigation
  - cropping data and worksheet
  - rotations and sharing, access
- Institutional issues
  - O&M capabilities
  - GP level meetings and resolutions, coordination

Research

- Ability to pay and opportunity costs
  - Norm: 40-110 LPCD -livelihood norms.

Research

- Technical Documentation
  - GIS, one-time and maintenance
  - matching taluka level system
  - partner: Unicef-GSDA
- Source strength
  - new yield tests, access to results, ability to perform test
  - partner: GSDA
- Irrigation
  - organization of data
  - new ideas on groundwater use and room for internal regulation.
  - partner: GSDA, MWRRA, Irrigation

2 Data analysis, governance and monitoring

- GSDA data set-its analysis
  - mining, correcting, mathematical modelling
- Organization and transfer of data
  - who, what, when and to where?
  - technology-SMS vs. hand-held
- Governance
  - taluka vs. central monitoring agency
  - more formal-at GP gram-sabha or panchayat samiti meetings
  - setting up accountability and response mechanisms

Research

- Study of Unicef-GSDA data at pilot villages.
- Mining of GSDA data set.
- Coordination and monitoring protocols.

3 SVS and MVS

- Eventually, success lies in the correct design and implementation of water supply schemes.
- Correct understanding of all issues important.

- Single village schemes
  - review of overall SVS framework-demand, tariff, capacity
  - GSDA and technical support are key input
  - weakness analysis-typically source
- Multi-village schemes
  - Will be increasingly needed-N. Karjat, E. Chiplun, S. Guhagar
  - weakness-institution, ownership, cost recovery
  - need expression and project initiation

Departments and Governance

- MJP-little delivery in rural systems

Konkan	
Urban	60 lakhs
Rural	3 lakhs

  - coordination with MSEB
  - All reservoirs being used up for urban demand.
  - MJP vision on wide-area rural needs
- Unreliable information at taluka level
  - about SVS and MVS performance
  - about actual scarcity

Research

- gathering of accurate scarcity in pilot talukas
- analysis of SVS schemes and need for MVS

4 Long Term-largely research

- Groundwater recharge and Surface storage
  - planning for larger structures for rural domestic use
- Watershed management and recharge
  - procedures, afforestation
  - modelling and simulations
  - quantitative analysis and cost-benefit analysis
- Regulation

Thanks