Technology and Knowledge Transfer
Water Supply

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CTARA and CSE

UNICEF-WASH Innovations and Equity
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Broad Objectives Today

- Review the progress of joint interventions
- Good and bad practices, knowledge transfer, community processes
- Convergence within GoM departments and a state-level knowledge-sharing platform
- What to do about SDG 6
- Develop 4-5 key project areas
The development challenge

Other Metrics as well

- Year-round access to DW-74%.
- droughts, chulhas, public transport, small manufacturing etc.
- missing: institutions, community and private sector
District-wise Urban water QoS

Severe Impact on Job Creation.
Different paradigm required?..
Analysis

- State agencies - downward spiral of poor practices, poor output. Small size.

- **New knowledge** -
  - design of PWS, SW and GW assessments, tertiary network and schedules
  - role of planning, linkages of irrigation and DW in both quality and access
  - small-urban water and sanitation systems - New Practice Area

- **New Mechanisms and New Platforms**
  - University interaction - applied research, better understanding of civil society and new ways of engagement
  - given current compulsions - graduated entry of private and civil-society agencies
  - new avenues for fresh graduates to engage professionally
A unique and welcome GR (15th June 2015)

- Every new PWS must undergo 3rd-party assessments, one at 30% and another at 60%.
- Every CEO-ZP to identify govt. college to perform these assessment. 1% of capital costs to be paid.
- Selected college must form an inter-disciplinary cell, prepare success criteria, advise on good practices!

Remarkable on many counts.

- Reporting to CEO and not EE! Assessment team and not a faculty member from Civil Engg.
- Partnership with colleges, the right site for new knowledge and new engagements to develop.
- Recognition that assessment must be done by inter-disciplinary and uninterested agents.
Palghar and Thane

<table>
<thead>
<tr>
<th>District</th>
<th>Palghar</th>
<th>Thane</th>
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</thead>
<tbody>
<tr>
<td>Number of schemes</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>Sanctioned amount</td>
<td>Rs. 28.2 Cr.</td>
<td>Rs. 6.4 Cr.</td>
</tr>
<tr>
<td>Minor Problems (Source)</td>
<td>9/19</td>
<td>10/12</td>
</tr>
<tr>
<td>Major Problems (Design)</td>
<td>7/19</td>
<td>9/12</td>
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Learnings

- Technology sound. Shortcomings in technological processes
- Yield tests missed in all GW-based schemes.
- Detailed survey missing (all). Actual delivery schedule not computed.
- Major design changes to fit final delivery. Scheme at risk.
- Financially, positive returns already for GoM.
Jaltantra-GIS-based design tool

- Partnership between university and government in line with UBA/UMA
- Indigenous, robust, versatile and caters to Indian design scenarios
- Approved for official use by MJP, RWS engineers trained at MEETRA
- Adaptability is important as new areas of interest emerge such as capital vs. operational costs, scheme augmentation etc.
What was expected

- Understand Current Status
- Improve bulk metering

in Alibag and 3 other cities

- poor service areas unidentified
- current operations undocumented

Evaluate MSNA and fill gaps! Save money, bring efficiency
Another Example - Irrigation and DW nexus

- Yuva-Mitra, Sir Dorabjee Tata Trust as clients.
- To examine the performance of diversion-based irrigation in Dev river watershed of Sinnar.
- Sinnar taluka-variety of regimes-high rainfall areas in west to drought-prone in east.
- Extensive and modern agriculture-vegetables, poemgrante, grapes etc.
- At the same time, many villages with water stress.
Broader Connection

- **Methodology**: GW, crop-water demand, supply, allocation, DW
- Water balance frameworks crucial for overall water security
- DW stress related to cropping pattern through GW
- **Equity**: public provisioning of DW essential for landless and marginal/rain-fed farmers. Where is WSSD is JYS?
Other areas

- Large SW-based rural DW grid. AP, Gujarat.
- Separation of drinking water and domestic use water. Karnataka.
- Recognition of DW as a service. Broader Participation of civil society. Tamil Nadu.
- Innovations in Operations. MP.
- Small-town urban operations, MSNA. Maharashtra.
- 24 × 7: what does it imply? Maharashtra
- Jal Yukta Shivar-widespread DW stress. WSSD missing in 1st stage. Maharashtra
- Research. Groundwater, PWS delivery schedules, socio-economics of large grid operations.
The Unicef agenda

- Good and *bad* practices, knowledge transfer, community processes
- Convergence within GoM departments and a state-level knowledge-sharing platform
- What to do about SDG 6
- Develop 4-5 key project areas
What are the take-aways

- Technology-gadgets *as well as* processes and institutions. Focus on new knowledge *as well as* new mechanisms of delivery.

- Knowledge transfer, community processes
  - More and stronger participatory GRs (e.g., 15/06/2015 GR)
  - Linking GPDP with regional institutions via standard knowledge products.

- Convergence within GoM departments and a state-level knowledge-sharing platform
  - **Who.** UMA-MEETRA to report on problems and practices.
  - **How.** More research support-DST and state S&T council.
  - **At.** DPC or suitable planning body.
  - **Supported by.** Civil society, Unicef.
What to do about SDG 6

According to a 2013-2014 Global Analysis and Assessment of Sanitation and Drinking-Water survey, 83 per cent of the 94 countries surveyed reported that procedures for stakeholder participation were clearly defined in law or policy.

Develop 4-5 key project areas—Fund coordination and accountability, rather than interventions or training.

- Strengthen engagements between higher education and WASH agencies
- Develop journal/platform to report on problem areas and solutions
- Operate through fellowships and white-papers.
The Big Picture - What used to be

**People**
State, district, taluka, GP
CEO, Collector

**Government**
Companies

**University**

**Support**

**Serve**

**Employees**
The Big Picture - What used to be

- **People**
  - State, district, taluka, GP
  - CEO, Collector

- **Government**

- **Companies**

- **University**

**What we now need...**

- **People**
  - State, district, taluka, GP
  - CEO, Collector

- **Government**

- **Companies**

**University**

**support**

**serve**

- **employees**
  - new job descriptions
  - knowledge products

- **advise, plan, assess**
Thanks