Setting the context:

Upscaling sustainability in the age of climate change risks

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India's tryst with drinking water and sanitation

- Access to clean drinking water and sanitation is critical for health.
- Over the years, governments have invested in building infrastructure for rural water supply; toilets but
- Past experience was that villages 'slipped' from being water reached to unreached – zero sum game
- Past experience was also that toilets were built; but not used or went into disuse because of lack of water or maintenance or that the faecal sludge was unsafely disposed off; adding to health burden
- JJM and SBM (Rural) have learnt from these past experiences and worked to fix them

JJM: next-gen reform

- JJM states that its objective is to ensure “functional” tap water to all households – to make sure that the water supply is maintained and that the source sustainability is ensured
- JJM has invested in laboratory infrastructure to ensure that water supply is tested so that pollution is monitored
- JJM has innovated with grey water management so that the ‘returning’ 80% water is not wasted and does not add to contamination but is used for reuse and recharge of groundwater

Climate risked world increased vulnerability

The fact is:

- Climate change is **real**
- Resulting in increasing extreme and variable weather events
- Add to this
- Our mismanagement of water is **real**
- Resulting in water scarcity; pollution; flood and crisis of health and loss of livelihood

Rising heat will add to water stress

Rising heat means

- Dry moisture in soils – increase the need for irrigation; add to land degradation and dust formation
- Increased evaporation rate – water will depleted faster that is stored in surface water structures
- Drive up the use of water – from drinking to irrigation to fighting fires in forests and building
- **Water management will be crucially important in the age of climate change**

Agenda: Sustainability needs work

- With climate change rainfall will come in fewer number of rainy days: so we must capture every drop for use in long drought periods
- We can do this through rainwater harvesting; planning deliberately for capture of rain from rooftops; to lakes and ponds..
- Rain is decentralised and so is supply
- Our research finds that though source sustainability is part of programmes; emphasis of engineers still on building pipelines and ‘supply’.
- Convergence is needed with other programmes **(VB–G RAM G)** and also village water assets
- We need to map village water assets; ponds; tanks; watershed in the water plan of the village

Agenda: Greywater needs learning and practice

- Grey water is about improving water balance in villages
- 80% of water that is supplied leaves as wastewater
- Building individual soakpits would make sure this water is not wasted; reused for agriculture.
- We need to upscale implementation

Agenda: Sustainability and resilience needs the community

- The Village Water and Sanitation Committee is key
- But currently is only exists on paper in most cases; it is not made part of the system to plan; to oversee implementation or for the sustainability of the system
- It has little resources – financial or personnel with knowledge
- This role needs to be strengthened; it needs to be an active partner in this change so that the infrastructure that is built is maintained and serviced – only then sustainability will be ensured