Session 9: Climate change and resilience

National Drinking Water Grid – an enabler for climate resilient water and sanitation?

April 25 - 27, 2023
Structure of Presentation

Contents...

• Perceiving the realities
• Building on the present
SABARMATI (river), Ahmedabad, Central Gujarat
A tiny tributary of BRAHRAMI (river), Surendranagar, central Gujarat

IRRIGATION CANAL, near Surendranagar, central Gujarat
WETLANDS, towards the west and north of Nal Sarovar, central Gujarat
IRRIGATION CANAL, Dharoi west, Mehsana, north Gujarat

PUSHPAVATI river, Modhera, north Gujarat
GROUNDWATER, Dediapara, south Gujarat
Narmada waters have

- provided water security to Gujarat
- enabled the growth of cities
- boosted industry and commerce
- altered irrigation practices
- led to possible impacts on land and biodiversity

Time to rethink INTERBASIN TRANSFERS???
River basins provide basis for ecosystems and biodiversity;

Therefore, NOT advocating fundamental alterations like river-linking;

But, urban water needs are not guided by ecological considerations;

Or even amenable to traditional behaviour.

Time to think of a GRID for drinking water security?
A National WaterGrid is emerging, possible, and desirable

Emerging:
• already pipelines are the mainstay of many cities;
• indigenous capacity in pipeline technologies

Possible:
• can be linked with highway, and railway, networks under construction
• completes *bijli-sadak-pani* as networked infrastructure

Desirable:
• builds resilience, like the power grid, or any other grid;
• better than interlinking of rivers (an ecologically disastrous, but mainstream, proposition)
Emerging National waterscape

Ganga waters to sustain Gaya/ Bodh Gaya in Bihar
National WaterGrid for climate resilient cities

- It will build the infrastructure for possible water trade
- It will incentivise local sources, storage, and reuse
  - Sources will include rainwater harvesting, desalination, dew, hydrogen etc.
  - Storage will include tanks (surface storage), aquifer (sub-surface storage)
  - Reuse will include wastewater treatment and reuse options
Thank you!

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Working towards a paradigm shift in the global south…