

# Groundwater governance and development Lessons for India

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# “Water governance”

- *Determines* how we as individuals and as a society manage, use and allocate scarce water resources and arrange water supply and sanitation services with PPP, precaution & sustainability in mind
- ‘Good governance’ = process for better organisation and coordination, *based on* transparency, integrity & accountability,
- ... *considering* a range of actors & stakeholders (involvement, ownership)

# Water governance, cont'd

- *Defined by* political, social, economic and administrative *systems that are in place* and which directly or indirectly affect the use, development and management of water resources and the delivery of water services at different levels of society.
- The water sector also impacts on and is affected by decisions and development outside of the water sector (IWRM, W-E-F nexus approach, complex CC relationships)

# Groundwater governance addresses...

Principles of

**equity** and efficiency in water resource and services allocation and distribution, the need for integrated water management approaches and the **need to balance water use between socio-economic activities and ecosystems**

# GW governance addresses, cont'd

Formulation, establishment and implementation of water policies, legislation, institutions and water administration based on aquifer conditions and hydrogeological characteristics rather than administrative boundaries

## GW governance addresses, cont'd

Clarification of the roles of government, civil society and the private sector and their responsibilities regarding **property rights**, management and administration of water resources and services

# Groundwater governance necessitates...

**Monitoring**, assessment, documentation & sharing of best practices

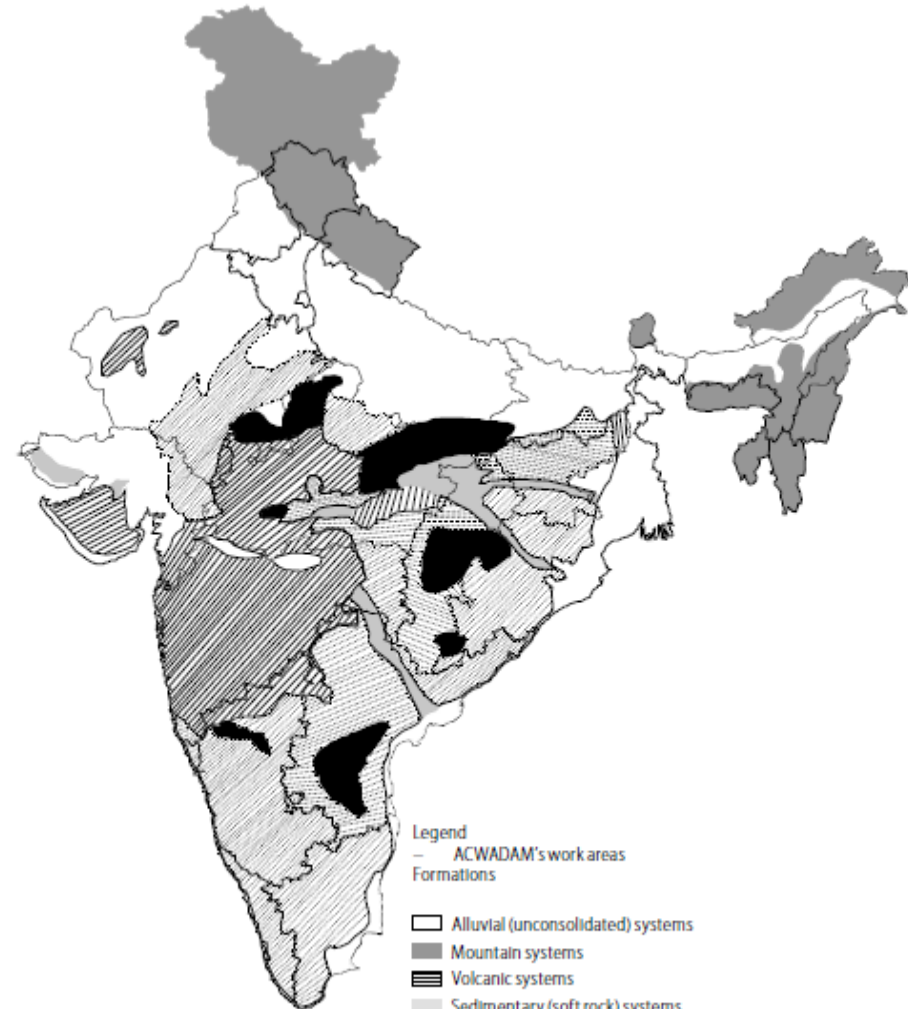
- IGRAC's UN-supported Monitoring Network (country level, transboundary aquifers, ...)
- WB's Hydrology Project for India (mid-90s–2014)
- 'Participatory aquifer mapping': PGM in AP, India (farmer data mgt, crop-water budgeting, community)



# GW governance necessitates, cont'd...

Development of tailored, contextualised knowledge, tools & methods

- Local hydrological conditions → alluvial NE India *not* overexploited ⇒ electrified pump sets
- Leaking pipes → rising GW table in cities ⇒ conjunctive use of GW & surface water possible





# GW governance necessitates, cont'd...

Law & policy **reform** and **implementation** at national, regional, local & river basin levels – & **aquifer (GW body) basis**

- Federal streamlining templates in India (Model Bill 2011, Water Framework Law 2012/2013, NWP 2012, 12th 5-yr Plan 2012)
- Appropriate institutions: *receptive* authorities with sufficient capacity & manoeuvre for dialogue
- AP WaLTA 2002, Maharashtra GW Bill 2009 (2013/14), TN GW Act 2003 repealed 2013

# Implementation & compliance: Lessons from Bangalore, KA, India

Karnataka GW Acts 1999, 2011 (w.e.f. 2013)

- Command & control; no public trust doctrine or CRP
- Provisions apply to CGWA-notified, over-exploited areas – whole B'lr Urban District (≠ scientific)
- GW Authority, delegated to District level → Bangalore Water Supply & Sewerage Board:  
Lack of implementation capacity (know-how, manpower, funding + disinterest in GW as a source)
- Low legitimacy; lack of alternatives to well-water → only 66,000 of ≥ 400,000 registered (despite (empty) threats to cut electricity supply)

# Legal framework for groundwater governance

Should provide answers to key questions such as

- Who can access groundwater, where, for which purposes and under what conditions?
- How are aquifers protected against depletion and pollution?
- According to which criteria are the finite resources of non-recharging aquifers to be allocated and protected?
- What kind of monitoring and planning tools have to be used?
- How will private and public interests be balanced and how are stakeholders to be involved in decision-making and management processes?

(GEF & Mechlem 2012)

# Lessons for India?

Until legislators and existing institutions become responsive to GW governance needs, what alternatives are left?

- You cannot manage what you cannot measure – but what does improved (e.g. satellite) monitoring contribute with unless there is a full picture, & political will?
- Stakeholder involvement, voluntary mapping → informed mgt or reinforced injustices? Beware of the ‘tyranny of participation’