

Legal Framework For Protection of Groundwater



Indian Environment Law Offices



What I want to talk about today....

- Water – a few facts
- Ownership of Ground Water (GW)
- Water: A state subject
- Law and institutional framework at the federal level
- A brief introduction and analysis of state/UT GW laws
- 2011 Model GW bill put forward by Planning Commission



Water - most precious and unforgiving natural resource*

- Fundamental to human existence, development and economic growth
- Rightly perceived and acknowledged by the Government of India, in its various policy and vision documents, as a
 - national resource requiring national perspective for its management and governance
 - SC has also put its stamp on this school of thought
 - however, seems like an insurmountable task as water in Indian polity is a state subject and state legislatures are the competent authorities to legislate upon it within their territorial jurisdiction

**unforgiving because difficult to purify, expensive to transport, and impossible to substitute*



Some well known but important statistics

India has

- 2.45% of world's landmass
- home to nearly 16% of the world's population
- Has 4% of world's fresh water resource

Rainfall in India*

- 1170 mm average annual rainfall
- 328 million hectare of land area,
- receives nearly 4000 billion cubic meter of rainfall

* *This is extremely abundant by global standards*

1320 billion
cubic meters
(30%) as
evaporation

Nearly 1780
billion cubic
meters (45%)
goes as surface
run-off

Where does this rainfall go?

900 billion
cubic meters
(25%) as sub-
surface
infiltration

Much of this rain falls in relatively brief deluges during the monsoon (June to Sep) and there is a significant disparity across different regions.

Our capturing and storage capacity

Our per capita annual av fresh water availability has reached 1,820 cubic metre in 2001 from 5,177 cubic metre in 1951. By 2025, it will be approx 1,340 cubic metre

Depending on the site conditions, about 2–20 % of rainfall can contribute to groundwater recharge, the average for the country is 10 %

Only 18% of harvestable rainwater can be utilized due to lack of capturing and storing facility

China is able to store 5 times as much water per person as India

As the renewable water supply falls below 1,000 cubic meters per person, the more serious "water scarcity" begins to occur

Uneven seasonal distribution of rainfall should have spurred robust capturing and storage capacity and infrastructure

Ground water share in water usage in the country

Total water used in our country

SECTOR	Water Usage	Groundwater contribution
Irrigation	80%	65%
industrial	12%	
domestic	8%	85%

Estimated 30 million groundwater extraction structures already in existence in India

Who Owns Water in India

- There isn't any law which specifically confers the ownership of water on the state or determines water rights*
- As per collective interpretation of various irrigation Acts , the Easement Act of 1882, Transfer of the Property Act of 1882 and Land Acquisition Act 1894
 - Ground water is considered an Easement connected to land
 - The Easement Act of 1882 made all rivers and lakes the absolute right of the state

An easement is a right which the owner or occupier of any land possesses as such for the beneficial enjoyment of that land, Ownership of ground water accrues to the owner of the land above. Ownership of ground water is transferred along with the transfer of ownership of land. Thus, ground water is viewed as an appendage to land.

* In Israel under 1959 Water Law, water is defined as a nationalized public good; all water is the property of the state, including waste, sewer and runoff water that can be used commercially.

Water Ownership Internationally

- Worldwide state ownership of water and specifically GW is not a true proprietary claim but rather a regulatory or a supervisory claim which is held by the governments in trust for collective public good.
- Ground Water rights of people in most of the countries are usufructuary rights rather than ownership or possessory rights.

Proposed Model GW Bill 2011 also endorses this view .The import of the common law principle into our jurisprudence linking water rights with land rights are still in vogue. This very principle is however under judicial scrutiny in a matter pending before Supreme Court of India in Plachimada case

Legislative Competence Regarding Water in India

- India is a quasi-federation with division of legislative powers between the central and the state governments mandated in the constitution of the country. There are three legislative lists mentioned in the seventh schedule of the constitution
 - Federal list (I)
 - State list (II)
 - Concurrent list (III)

These lists specifically mentions subjects on which central government, state government or both can legislate

- Water is a state subject Entry 17, list II (state list) of seventh schedule of the constitution of India and this is in continuation of the legacy of the colonial rule*
 - Anything that is not covered under these lists is taken care of by the central government under the residuary power given to it by Article 248 of the constitution of India

* As per Government of India Act 1935 subject of water was given to provincial governments

Legislative Competence Regarding Water in India

- The entry does not make any mention of surface or ground water but is assumed that both are meant to be covered under this entry
- As per the definition of environment given in the Environment Protection Act, 1986 (EPA) water is included within the meaning of the term environment (Section 2a EPA).

Therefore water to an extent it constitutes a part of the environment comes under Union domain

- As per 73rd and 74th amendment to the Constitution 1992, “water supply of domestic, industrial and commercial purposes” is listed under the heads that could be delegated to Panchyats and ULBs



Legal and institutional framework related to GW management and regulation at federal level

- No law at the federal level dealing with GW management and regulation
- GW monitoring in India is being done by CGWB since 1969
- GOI and state governments have started various initiatives with the objective of achieving long term sustainability of GW resources.
- 433 bcm of replenishable GW, only 58% is being utilised but use is highly uneven..north western, western and peninsular over exploited...puddle rice cultivation main culprit acc to rainfed authority of India

National Water Policy (draft) 2012 acknowledges GW as a community resource to be administered under *public trust doctrine* by the state. But Policies are not justiciable

The logo for the Central Ground Water Authority (CGWA) features a stylized, layered blue and white wave-like shape at the top. Below this graphic, the acronym "CGWA" is written in a bold, blue, sans-serif font.

CGWA

- Supreme Court of India directed in a PIL*, to set up CGWA, for regulating the indiscriminate boring and withdrawal of ground water in the country and to issue necessary regulatory directions to preserve and protect GW.
- CGWA was set up by the Central Government in January 1997, under section 3(3) of EPA and is taking regulatory measures
Conserve GW resources and its economical use, control GW over drawl in critical areas, recharge GW in areas of overexploitation, maintain GW quality, control discharges of GW system, to help set up state level GW authorities, educate people
- CGWA has notified 162 critical/ overexploited areas in parts of NCT Delhi, Haryana, Punjab, Andhra Pradesh, Rajasthan, MP, Gujarat, West Bengal, Uttar Pradesh, Karnataka, Tamil Nadu, UT of Puducherry and UT of Diu for control, regulation and development of ground water resources.

* order dated 10.12.1996, in I.A. No. 32 of CWP No. 4677 of 1985



CGWA

- Central Ground Water Authority is regulating
 - *withdrawal of ground water by industries/ projects in 802 Over-exploited and 169 Critical Assessment Units.*
 - *List of these critical areas has been circulated to the State Pollution Control Boards and Ministry of Environment & Forests*
 - *new industries/ projects are referred to CGWA for obtaining permission*
- For enforcement of the regulatory measures in these areas, concerned Deputy Commissioners/ District Magistrates have been directed under Section 5 of Environment (Protection) Act, 1986 to regulate ground water development in these notified areas.
- Construction of new ground water structures is prohibited in the notified areas. Permission of drilling tubewells is being granted only to the Govt. agencies responsible for drinking water supply. RWH being made mandatory in new constructions.

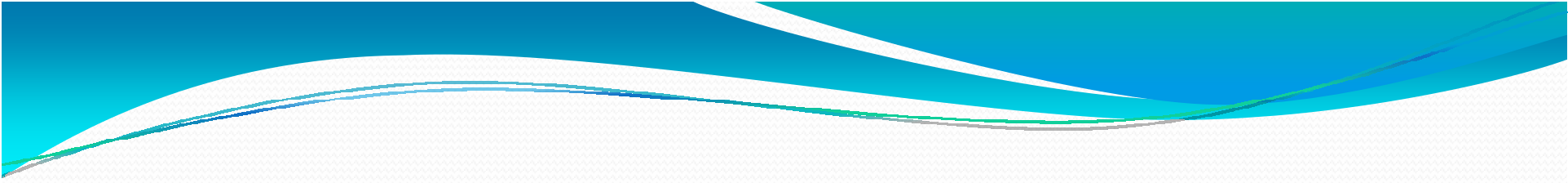


GW Legislation in States

- **On the basis of Model GW Bill put forward by GOI in 1970, revised in 1992, 1996, 2005, several states have enacted GW legislation. All these models**
 - *introduce a limited regulatory framework to address groundwater depletion without changing the legal status of groundwater.*
 - *Do not break the nexus between land and access to groundwater;*
 - *Do not address existing GW overexploitation*
 - *Do not conform to the spirit of 73rd and 74th constitutional amendment as there is no provision for any institutional structure below the state level.*
- **Following states have enacted and implemented ground water legislation**
 - ⑫ States have Acts
 - ④ States have introduced the requisite bill out of which Haryana and Maharashtra already have some limited vision law in place
 - ② States/UTs have regulation or direction

Therefore out of 28 states and 7 UTs, 16 states/UTs have GW regulation

State	GW Law
Andhra Pradesh	Andhra Pradesh Water, Land and Trees Act and Rules, 2002) Andhra Pradesh Ground Water (Regulation for Drinking Water Purposes) Act, 1996
Bihar	Bihar Groundwater (Regulation and Control of Development and Management) Act, 2006
Chhattisgarh	Chhattisgarh Ground Water (Regulation and Control of Development and Management) Bill, 2012
Delhi	Delhi Groundwater Regulation Direction, 2010
Goa	The Goa Ground Water Regulation Act, 2002
Punjab	Punjab Preservation of Subsoil Water Act, 2009
Haryana	Haryana Preservation of Subsoil Water Act, 2009) and (Haryana State Groundwater Management and Regulation Bill, 2008)
Tamil Nadu	The Tamil Nadu Groundwater (Development and Management) Act, 2003 and Chennai Metropolitan Area Groundwater (Regulation) Act, 1987
Kerala	The Kerala Ground Water (Control and Regulation) Act, 2002
Karnataka	Karnataka Ground Water (Regulation and Control of Development and Management) Act, 2011 and The Karnataka Ground Water (Regulation for Protection of Sources of Drinking Water) Act, 1999



State	GW Law
West Bengal	The West Bengal Ground Water Resources (Management, Control And Regulation) Act, 2005
Himachal Pradesh	The Himachal Pradesh Ground Water (Regulation and Control of Development and Management) Act, 2005
Lakshadweep	Lakshadweep Ground Water (Development and Control) Regulation, 2001
Pondicherry	The Pondicherry Ground Water (Control and Regulation) Act, 2002
Maharashtra	Maharashtra Groundwater (Development and Management) Bill, 2009) and The Maharashtra Groundwater (Regulation for Drinking Water Purposes) Act, 1993
Chandigarh	
Dadra Nagar Haveli	

What do state GW Laws mandate

- Barring Chennai (1987) all GW laws in the state were enacted between 1993 and now.
None of these Act create a mandate for protection, preservation and augmentation of GW in general but calls for regulation of GW extraction and use only in notified areas
- By and large all these Acts mention that such areas can be notified if the government is of the opinion that GW is required to be regulated in *public interest* and the same is not defined
- None of the GW authorities envisaged to be set up under these Acts have any representation from industry neither from the government side nor from the industry bodies side (2011 model has)
- Penalty for offences under GW Acts are paltry and therefore don't serve as deterrent.
- Punjab and Haryana laws are for preservation of sub soil water.....aims to regulate paddy nursery and paddy cultivation to preserve sub-soil water.

What do state GW Laws mandate

- Variation in the mandate regarding registration of GW users in these Acts
 - Some of these Acts mandate registration of all existing and new users of GW in notified areas only and
 - others in both notified and non notified ,
 - some require only industrial and commercial GW users to get registered in non notified area etc
- In Kerala and Chennai , TN (30days) Act
 - If after applying for permission to use ground water by digging a well or to convert an existing well in to a pumping well, in the notified area the same is not communicated with in 90 days ... permission is deemed to be granted
- In Delhi, Lt Governor of Delhi has issued directions in May 2010, under section 5 of EPA
 - permission mandatory for any abstraction of GW through borewell or tubewell, in national capital territory of Delhi
 - Existing users also need to take permission if they are operating without CGWA's permission.
 - Rainwater harvesting and recycle and reuse has been made mandatory over 200m2 for residential and all commercial and industrial abstraction
- Goa Act is more broad based, envisages varying degree of stringency in regulation in different categories of areas..



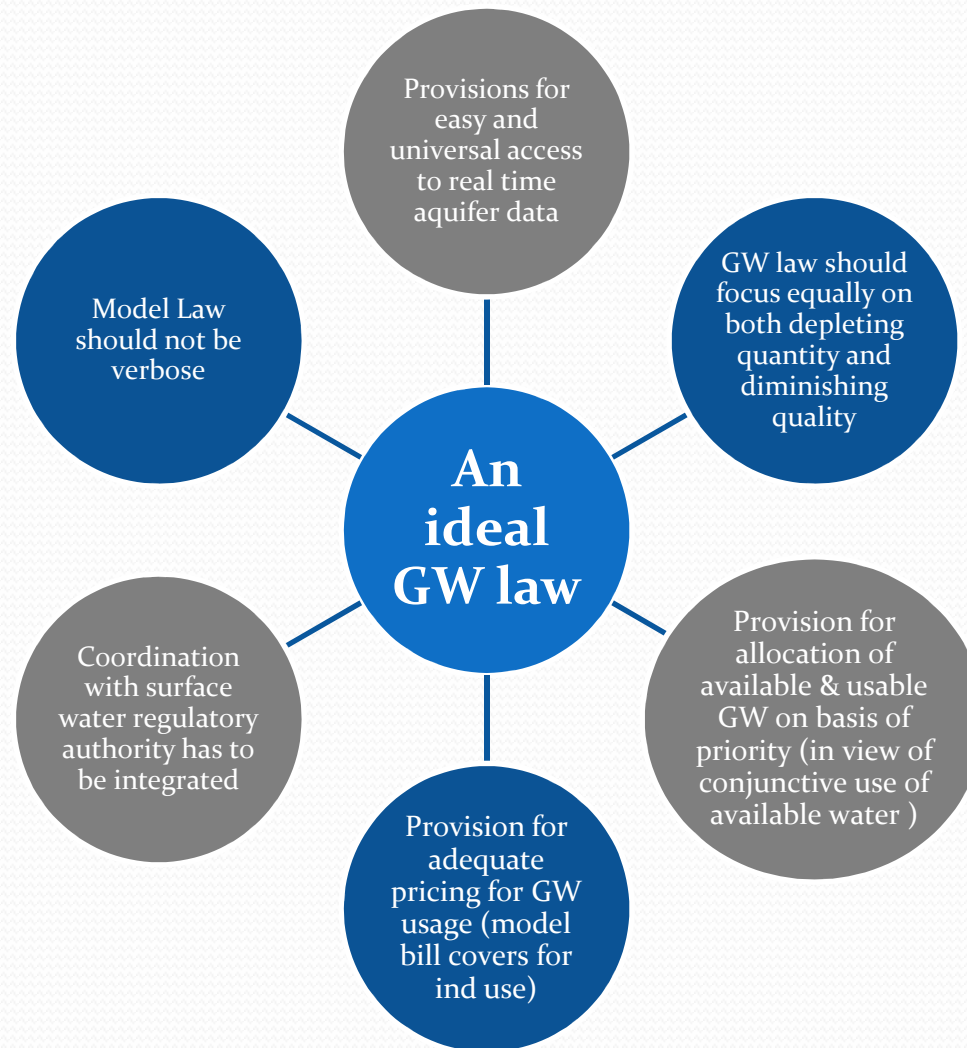
What do state GW Laws mandate

- Maharashtra Bill proposes to make State Water Resource Regulatory Authority as GW authority
 - mandates to have an institutional framework in place in the form of watershed water resources committee, for management for such a watershed.
 - Drilling of deep well for industrial and agricultural purposes can be prohibited by the state authority and the existing one in non notified area will be levied with a cess.
 - Notified areas to have prospective crop plan based upon ground water use plan
 - any usage of GW in contravention of this plan shall be an offence under this act.
 - State water council under WRRRA shall be notified as state watershed management council. Watershed and area of influence in notified area will have to be identified by GSDA
- WB GW Act envisages a District level authority and a Corporation level authority for Calcutta. All GW extraction needs permission except where extraction is done manually



Model GW Bill 2011

- GW is a public trust. State at all levels (from the Panchayat to the state government) is the custodian of the resource
- Right to water is an integral part of right to life, a FR
- Proposes institutional framework for protection, conservation and regulation of GW in the spirit of 73rd and 74th amendment
- Proposes a new legal framework to ensure effective regulation of large-scale groundwater use (industrial commercial and infrastructure)
- Built around the need to regulate unreasonable uses of sources of groundwater that threaten the aquifer to ensure that the resource itself is protected
- Promotes conjunctive use of GW and surface water
- Recognizes and accords protection to critical natural GW recharge zone
- Aquifer based GW security plan
- Proposes to set up a transparent information regime
- Penalties for offences have been made more stringent



Objective should be to create institutional structures, processes, mechanisms and policy tools for harmonizing the interest of resource users, society at large and future generations (diff for where GW is underdeveloped or over developed)



An ideal GW law

Additionally related international experience should be taken into account

Western US, Spain, Oman, Mexico do provide some lessons in GW governance... experience with direct regulation has been poor, economic instruments have had mixed results

Australia and US, the state provide an overarching and facilitative framework with users evolving mechanisms for self governance of the resource

