

LEGAL PROVISIONS ON WATER CONSERVATION AND WATER USE EFFICIENCY-INTERNATIONAL AND NATIONAL PERSPECTIVE



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Why are we talking about Urban Water Conservation and Water Use efficiency? Is there a critical need for Water Use Efficiency

Facts point in that direction

- Usable water resources are to the extent of **1123 BCM** of which 690 BCM is surface water and 433 BCM is ground water (MoWR&GR)
 - India's demand for water **843 BCM for the year 2025 and 1180 BCM for the years 2050** (*National Commission of Integrated Water Resources Development*)
 - *double that of China's 818 billion cubic meters*
 - Experts predict that India would be **water stressed* by 2020**
 - Impacts of climate change to affect country's water availability
 - Increased urbanization- increased migration to urban areas on account of unviable agriculture practices
 - Urbanization of India is taking place at a faster rate than in the rest of the world
 - Currently 28.4% of population lives in urban areas
 - By **2030 40.76%** of India's population will be living in urban areas
 - Water conservation and efficiency in water use is a strategy to meet this ever rising demand is one of the most critical component.
- *Defined as demand exceeding availability or when poor quality of water restricts its use.*



What is meant by Water Use Efficiency (WUE) ?

- The commonly understood, general concept of water use efficiency which can be applied in all context, includes
 - **Minimization of wastage** in transportation, distribution and in actual usage
 - **Optimization of usage** by
 - *Benchmarking and setting water usage norms*
 - *Better management tools*
 - *Water sensitive technology*
 - *Changes in attitudinal and behavioral approach*
 - *Recycle and reuse of waste water*
 - *Storm water management*
 - **conservation and augmentation of the resource**-*Groundwater recharge-rainwater harvesting (lakes/wetlands/waterbodies_*



Locating Water Use Efficiency(WUE) in the National Legal Framework

- Water is a state subject/quasi federal structure (Constitution of India)
- Administration of water is based upon administrative boundaries and projects rather than on hydro-geological /water basin boundaries
- Water related legal provisions are dispersed across
 - Various irrigation Acts- *Bihar Irrigation Act, Madhya Pradesh Irrigation Acts*
 - Central and state laws
 - Provisions in the constitution
 - Orders/decrees of the courts, customary laws and various penal and criminal procedure codes-(states of North East such as Meghalaya and Nagaland-recognition of customary law and practices)

Currently there is no legal definition of the term “water use efficiency” due to

- Grossly under regulated water sector
- Lack of a comprehensive water law at the national level
- Lack of urgency to internalize the concept in water management



WUE is already a critical component in Water Policy and Planning

- The following policy, mission and plan documents take cognizance of WUE's criticality and recommend several similar measures to have WUE
 - National Water Policy, 2012
 - National Urban Sanitation Policy
 - National Water Mission-20% by 2017 (**National Action Plan on Climate Change (NAPCC)**)
 - National Mission on Sustainable Habitat
 - 12th plan period Approach Paper
 - National Environment Policy, 2006
 - National conservation strategy and policy statement on environment and development 1992
 - Report of the Inter ministry task group on efficient utilisation of water resources 2004



Ownership of water resources in India

No specific legal framework regarding water rights in terms of who owns the resource

- The Easement Act 1882 however makes all rivers and lakes an absolute right of the state

- A landowner can have right to the groundwater as it is considered as an easement of the land* (water below the land is with the owner)

- * *As per the provisions of the Transfer of Property Act 1882 and Land Acquisition Act 1894*



Water resource ownership in other countries

- Worldwide state ownership of water is not a true proprietary claim but rather a regulatory or a supervisory claim
- Water rights of people in most of the countries are usufructuary rights rather than ownership or possessory rights.
- National Govt- as custodian of water resources (common resource)- *(South African National Water Act, 1998) (Principle 3 There shall be no ownership of water but only a right (for environmental and basic human needs) or an authorisation for its use.)*

Water has multiple characteristics both public and economic, it is both an economic good and public resource



Water legislation and its focus at national level

- Water legislation at national level is aimed only at preventing pollution of water and its various resources
- Current legislations don't cover the area of conservation of water as a resource and its usage in an efficient and sustainable manner
- No comprehensive or framework law at national level that deals with the issue of water Use efficiency
- Existing acts in the legal framework on water at the National level
 - ***The Water (Prevention and Control of Pollution) Act 1974*** (amended 1988 & 1992)
 - ***The Water (Prevention and Control of Pollution) Cess Act 1977*** (amended 2003)
 - **EPA** (Environment Protection Act) is another relevant legislation



Water legislation and its focus in India

- Salient points of the Water Cess Act
 - to provide for levy and collection of a cess on water consumed by certain industries and by local authorities, to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974
 - The Water Cess Act also mandates that all the industries and local authorities shall affix a meter to measure the quantity of water being used by them for the computation of the cess
 - The rate of cess (very low) is linked with fulfillment of conditions related to pollution effluent standards and not at all concerned with the quantity of water being used.

The objective of the Cess Act is to generate money for the Institutional framework created to enforce water pollution laws and not to acknowledge that water is a scarce and precious national resource



Water legislation and its focus in India

- Salient points of EPA

- A general umbrella legislation on environmental protection that enables government to create authorities for environment protection and improvement
- Environment definition includes water, air and land /interrelationship amongst water, air and land and human beings, other living creatures, plants, microorganism and property
- Section 3 of EPA empowers central govt to take all such measures as it deems necessary for protecting and improving the quality of the environment
- Section 3(2) illustrates without being exhaustive the specific matters in relation to which the government can take action which include
 - *Laying down standards for the quality of environment in its various aspects*
 - *Other matters that govt deems necessary for securing effective implementation of this Act*
- Wetlands (Conservation and Management) Amendment Rules, 2016
- National Water Framework Act, 2016 (Draft)***(Urban Water Management–Service Level Benchmarks for water supply, sanitation, solid waste management and storm water drainage, net metering of water, annual water accounts and water audit reports etc)*

** Rule 5 fleshes out the detail*

Regulatory Framework for WUE at National level

- Guidelines by CPCB, CWC, CGWA and MOEF & CC

- No specific regulatory framework in place.
- *Guidelines for recycle, reuse of waste water and rain water harvesting* etc. issued from time to time and recommendations by CPCB, CWC, CGWB/CGWA MOEF&CC playing a crucial role in WUE.
- Guidelines on identification of wetlands (MoEF&CC)

- CGWA has notified some areas as critical assessment units where ground water use is controlled and regulated for water conservation in terms of rain water harvesting for artificial ground water recharge etc are made mandatory but enforcement desires a lot to be done.

- CWC's "***Evaluation of Water Utilisation Directorate***" has issued general guidelines* for water audit and water conservation in December 2005 meant to
 - serve as a useful reference for undertaking water saving measures in all sectors of water use
 - facilitate State Governments to formulate their own region-specific, project-specific, system-specific or service-specific guidelines
 - identify specific action points needed to be taken for water conservation in domestic, municipal and industrial sector



Regulatory Framework for WUE at National level

- Guidelines by CPCB, CWC, CGWA and MOEF

- Water aspects of EIA framework

- Form 1 of EIA has many provisions related to water usage regarding which general information is required to be submitted

- Form 1A which is required to be submitted by construction projects mandates submission regarding water and socio economic environment and includes

- Water balance statement for the project
 - Capacity of the proposed source of water
 - Waste water treatment
 - Recycle and reuse
 - Rain water harvesting
 - Quantum of ground water abstraction and its effect on other competing uses
 - Dual piping

EIA is also silent on what should be the quantum of water used per unit of production and why?



- Service level benchmarking (SLB) initiative has been started by MOUD which sets minimum set of standard performance parameters that are commonly understood and used by all stakeholders across the country. This also has persuasive value only.
- A pilot study was carried out in 28 cities with the support of MOUD and other funding agencies. PIPs and ISIP were also incorporated in these pilot projects. Institutional mechanism were created at national and state level to monitor these SLB exercise.
- Principle of SLB has also been endorsed by 13th Finance commission and it has been made one of the conditions for allocation of performance based grants to ULBs.



Institutional Framework for WUE and its regulation

- If laws and policies provide a framework for the actions of the executive, institutional structures provide the enabling circumstances for the action. Due to lack of a specific law and mandate for WUE different institutions are trying to regulate different aspect of it.
- CPCB, CWC, CGWA, MOEF etc collectively can be said to constitute the existing institutional framework for WUE- guidelines
 - *These guidelines in some cases have persuasive value only and in some they are mandatory as in EIA*
 - *Compliance, monitoring and enforcement desires a lot to be done as the concerned institutions*
 - Do not have adequate prosecuting authority to bring erring persons to book
 - Are not being able to have deterrent effect (EIA monitoring is a case in point)
 - No adequate institutional capacity in terms of finances, manpower and expertise



Fallouts of a fragmented and scattered approach

- The direct fallout of this fragmented approach to deal with WUE is our inability to deal effectively with
 - *High percentage of unaccounted for water in water utilities*
 - *High water consumption by industry as compared to International standards*
 - *High incidence of water pollution*
 - *Inadequate water recycle and reuse*
 - *Inadequate treatment of waste water*
 - *Ineffective rain water harvesting inspite of high annual rainfall*
 - *Plummeting water tables*
 - *Unsustainable / Inefficient use of water*
 - *Irrational water tariff of fresh and recycled water which neither encourages conservation nor efficient use*



What has been International Experience in regulation of Water Use Efficiency

Legislation for water conservation and enhancing WUE is one of the major tools in many Countries. Countries across the world set water consumption standards and targets for industry and service delivery utilities and regularly revise the standards in a bid to control water use

- In the US water is a state subject
 - **California has enacted Water Conservation Act in 2009** with a goal of **reducing per capita urban water use by 20% by December 31, 2020**
 - "Efficient use" has been defined as those management measures that result in the most effective use of water to prevent its waste or unreasonable use or unreasonable method of use
 - This Act requires all water suppliers to increase water use efficiency. Each urban retail water supplier shall develop water use targets
 - **Effective 2016**, urban retail water suppliers not meeting water conservation requirements established by this bill are not eligible for state water grants or loans



International Experience in regulation of WUE

- Washington State Legislature passed the **2003 'Municipal Water Law'** (MWL) aimed at ensuring municipalities use water efficiently which must
 - *Publicly establish water savings goals for their customers.*
 - *Evaluate or implement specific water saving measures to achieve customer-based goals.*
 - *Develop a WUE planning program to support the established goals.*
 - *Install meters on all customer connections by January 22, 2017*
 - *Achieve a standard of no more than 10% water loss.*
 - *Report annually on progress towards achieving these goals*
- **European Union Water Framework Directive** (2000)-integrate water reuse in water planning and management, (guidelines-2016), urban waste water



International Experience in regulation of WUE

- Australia - The Water Efficiency Opportunities program seeks to support and encourage water efficiency within Australia's commercial and industrial sectors
- Israel - has had a comprehensive water law since 1959 which made water resources public property
 - Regulates water resource exploitation and allocation, as well as pollution prevention and water conservation.
 - All available water resources are made accessible to consumers, as directed by the Water Commissioner while conserving and preserving water resources
- China – 2002 Water Law strengthens 1988 China Water Law provisions regarding conservation and WUE



Way Forward

Passing of a national framework water law (Draft)

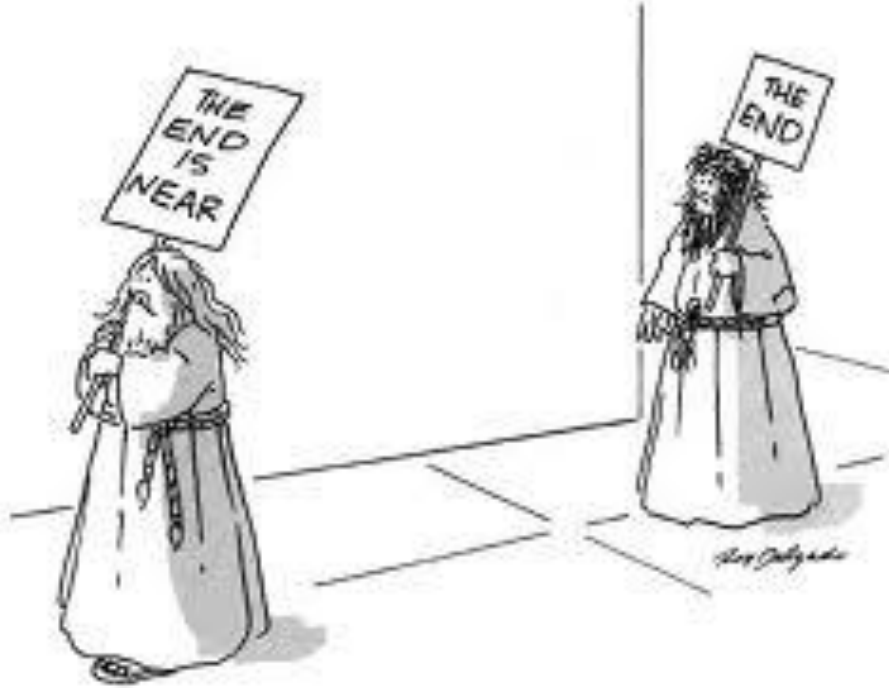
OR

Setting up an institution such as National Bureau of Water Use Efficiency

OR

Ensuring each state has a comprehensive water law with some common basic principles





Thank you

