

URBAN LIVEABILITY FORUM

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"MY RESOURCE. MY RESPONSIBILITY"

A knowledge series from the experts on effective management of resources to enhance urban Liveability during and post pandemic.

CRISIS OF AVAILABILITY OF WATER

by, Col. Shashikant Dalvi (retd.),
Rainwater Harvesting Expert & Water warrior,
Founder - Parjanya

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A knowledge article on effective management of Water resource to enhance Self Sustainability in Urban Societies.



Ref. pic .1

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Crisis of Availability of Water

by, Col. Shashikant Dalvi (retd.),
*Rainwater Harvesting Expert & Water warrior,
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We all are aware that on our Planet Earth, only 1% of fresh water is available for use by all beings. Despite our Planet being Aquous Planet 97% of available water is in Ocean. Since start of Industrial Revolution around 250 years ago, our demand on water is increasing steadily.

The three basic water users are :

- Agriculture 70%,
- Industry 22% &
- Domestic consumers 8%

Industrial revolution started rapid urbanisation. This in turn flagged off a rapid rise in Demand as compared to availability.

We must remember that quantity of water on this planet is constant.

1. Desilting of natural Water Resources. As per Central Water Commission, complete Desilting of very few dams have been carried out, this has resulted in reducing dam reservoir capacity by around 30%. This reduces availability of water.
2. Unequal Water Distribution - due to rising population, there is always mismatch between demand and supply of water to citizens.
3. Loss in old Water supply pipes - In India around 30 to 40% of water is lost in such leaking pipes. This further reduces availability of water.
4. Non implementation of Rain Water Harvesting Systems - Despite guidelines only around 30% RWH systems are implemented, this prevents Recharging of rapidly depleting ground water table.
5. Lack of Water Conservation awareness & acceptance - Citizens are not much concerned about conserving water supplied. This results in wastage of water.
6. Depleting tree cover - This is reducing Natural Ground Water Recharge. Lesser the tree cover lesser is percolation of rain water to recharge ground water table.



Ref. pic .2

Every place on this Planet has fixed Natural Water Assets. They are,

1. Annual average rainfall--- this is fixed for a place. This is Primarily source water.
2. Water bodies-- Rivers, Streams, etc are part of Surface water.
3. Groundwater-- I refer this as Recurring Deposit by Mother Nature. Unfortunately due to unsustainable over extraction of this resource, without Recharging, this is also reducing availability of water.

Our present approach towards Water is, USE and DISCARD. With rising water demand the Availability of Water is reducing, as per report, India's water demand will double by 2030. Unless our approach towards this precious natural resource is not changed we will increasingly face water crisis.

We need to take following measures to improve our Water Availability,

1. Recharge every drop of Rain Water falling on the Catchment area of all type of buildings, to raise depleting ground water table. This will increase water availability.
2. Recycle and Reuse every drop of water supplied, especially Grey Water. Around 50% of daily Water supplied to a person gets converted in to Grey Water. Once Recycled this water can be Re-used for flushing, gardening etc. This will also increase Availability of Water

3. Judiciously use every drop of water supplied. Here Conservation plays major role. Collect left over water from homes, offices, hotels etc. and use it for gardening, cleaning the floors etc.

4. Aggressive tree plantation drive, to initiate natural percolation of rain water, which will help raise ground water availability. Our approach towards water should be, 'RECHARGE, RECYCLE, REUSE, CONSERVE AND DISCHARGE'. This way we will be able to reduce dependency on water supply by around 50%. Thus we will be able to increase our Water Availability.

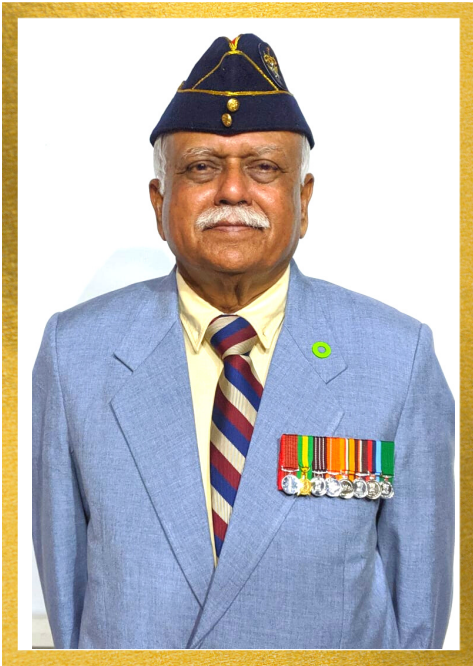
These practices are doable and economical. As per NITI AAYOG around 600 million Indians are currently facing server water crisis.

Similar efforts need to be put in practice by other two water users - Agriculture and Industry sector too.



Ref. pic .3

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Col. S.G. Dalvi served in the Indian Army from 1969 to 2002, Post retirement, he implemented Pune city's first roof-top **rain water harvesting** project in 2003 in his housing society. This resulted in a 'Tanker Water' free society, which saved costs AND improved the water table in Viman Nagar area.

Buoyed by this success, he started spreading awareness on water conservation, through his organization, **PARJANYA**.

He has successfully helped more than **600** different organizations like Housing Societies, Schools, Colleges, Hospitals & Industry to improve the falling ground-water table in their locations and to overcome water shortages.

He has spread awareness through seminars, lectures and workshops in schools, colleges, community centres, and corporate events. He has also participated in more than 200 awareness campaigns on this topic, through Print, Radio & TV media.

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