



IWWA MC  
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# DROPLET

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[www.iwwamumbai.info](http://www.iwwamumbai.info)

## MUMBAI CENTER

- **Er. Maniessa Palande**  
- Chairperson
- **Er. Pramod Dalvi**  
- Hon. Secretary

## EDITOR

- **Er. Dilip Sonwane**
- **Dr. Ulhas Naik**

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## *from Chairperson Desk*

Hello members,

It is indeed a great pleasure in presenting you the -July-2021 Droplet issue. As such it is an opportunity to appraise you Mumbai Centre progress, forthcoming events and invite suggestion from you all.

We recently organised events on Rain Water Harvesting and Solid Waste Managements, both critical need of the hour. We received very good response with more than 150 participants and showering queries, providing applause to presenters, and exhibited curiosity for knowledge gain. We are organising the presenter wise and event wise videos on our YouTube channel.

The Mumbai center management committee have put their best efforts and enthusiasm for organising events and proposing new ideas for IWWA widespread. Our special attention is on our next generations and for those reasons we have kept our youth forum very vibrant. We are planning for few site and field visits for students. We are exploring on-line streaming of such visits during the pandemic period. We have initiated tie-ups with many institutes for grooming the students and making IWWA professional knowledge resource and guidance available to them for their project works, carrier planning.

We have initiated few new events to cover the topics connected to our life and our city needs, few are listed.

- Flora & Fauna in and around Mumbai
- Contract Management to enrich knowledge of our associates who actually execute the projects though the contracts.
- Strom water Management – The critical need for every town and city to avoid property and human losses in storms.
- Innovations in water and waste-water sectors – an opportunity for our vendors to showcase and present their innovative ideas and products.
- Sewage System Management – Most essential for hygiene of atmosphere and avoid epidemics with efficient management.

We have already initiated MOUs with few NGOs working in water, waste-water sector, to make IWWA platform available for them and to associate for few joint programmes for benefitting grass root level.

We all wish for spreading IWWA & appeal everyone to come forward with exploring associations with various spheres of our society. We are re-activating IWWA Mumbai Knowledge centre, details shall soon be rolled.

We also appeal those working in Industry and SEZs sectors as well as water resource/ irrigation sector for close associations of IWWA for knowledge gain, mutual technical knowledge enrichments and eventually serving our society.

**- Er. Maniessa Palande**



## *Editor Brief*

The infrastructure planners need alternate sources to address the increasing demand of fresh resources. This includes natural materials, water and energy required for various human activities. Apart from addressing the resource requirements for human consumption, the disposal of waste generated from used material gives challenges. The well thought planning process is required to explore the opportunities in dealing with waste disposal and management. Reuse by definition is the use of resources after extracting it from disposable material. The disposable material could be waste water, sewage or solid waste going to landfill. The extraction of resources from waste may require complex processing or simple segregation. The sustainable planning for habitats, industrial, institutional, commercial developments contemplates the use and better

management of available resources. The concept of 3R (Recycle, Reuse, Reduce) gives the way forward on various actions required to manage the ever-increasing resource needs and environmentally friendly disposals.

In line with resource sustainability, the Indian Water Works Association, Mumbai center had webinars covering wise management aspects for waste water, solid waste and rain water harvesting. The June – July 21 publication of "Droplet" covers Expert talk on water quality, hybrid treatment process, webinar events and poster competition results.

We shall update you on research news and shall share important research content.

**- Er. Dilip Sonwane**

# Stalwart's Advise

Dr. Pawan Labhassetwar

Chief Scientist and Head, Water Technology & Management Division, CSIR-NEERI, Nagpur.

## Water and Health: Improving Connect



While COVID-19 pandemic spread negativity around, it brought out old idiom in prominence "Health is Wealth". Although water is not directly responsible for spread of current COVID-19 pandemic, presence of virus in wastewater is well established. Wastewater can be tested for RNA from SARS-CoV-2, the virus causes COVID-19. COVID-19 virus can be shed in the

feces of infected individuals, and RNA of the virus can be determined in wastewater. However, there is no confirmation yet that anyone is infected COVID-19 due to exposure to wastewater. Water professionals should not feel complacent and be ready for donning the hat of Public Health Engineer (Professional) from which we are drifting away. Water professionals are at crossroads and need to be reminded their crucial role for preventing water borne diseases which often have substantial disease burden.

Safe and easily accessible water is prerequisite for improved public health. Among various factors, improved water supply and

sanitation can contribute to country's economic growth and poverty alleviation. As per World Health Organization, about 829 000 people globally lose their lives each year from diarrhea due to unsafe drinking-water, sanitation, and hand hygiene. It's ironical that we rely on international agencies to provide disease burden estimates for India despite having associations such as IWWA.

Following can be the way forward in improving connect between water and health and water professionals can contribute significantly:

1. Emphasis on water quality

.....cont'd on Page 4



## Dr. Pradip Kalbar, Indian Institute of Technology Mumbai Hybrid Treatment Systems for sustainable wastewater treatment and recycling in India



There is a huge gap in the domestic sewage generation and numerous WWT technologies are available which can be mainly classified as Mechanized Treatment Systems (MTSs) or Natural Treatment Systems (NTSs). MTSs (e.g. ASP, SBR, Moving Bed Bioreactor, Membrane Bioreactor) are more commonly used for centralized treatment in cities as securing land for WWT is a great challenge and NTSs (e.g. Constructed Wetlands, Waste Stabilization Ponds, Duckweed Ponds) are more commonly used in rural areas. Both the categories of

treatment systems have advantages and disadvantages and are suitable for different settings. Considering the gap in India's treatment and progressive regulations (refer recent NGT order), there is a need for installing new Sewage Treatment Plants (STPs) and augmentation of the old STPs to meet new regulations. In either case, the challenge for Indian cities will be to achieve the cost-effective treatment. The capital expenditures usually can be arranged from several funding modes; however, the other constraints such as Operation and Maintenance (O&M) costs and land requirements limit the use of all variety of technologies available for WWT.

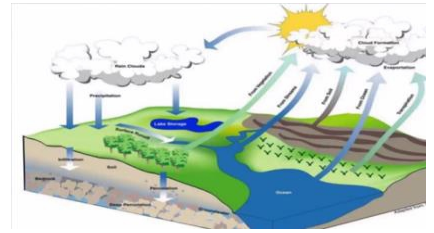
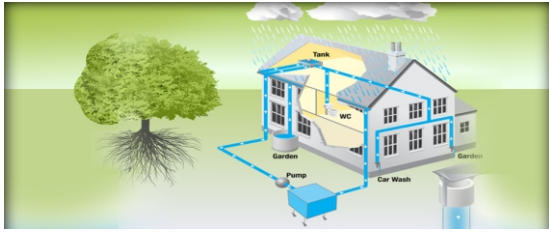
To overcome these challenges, there is a need for a paradigm shift in WWT and recycling. Based on extensive

research work and field studies "Hybrid Treatment System" approach is the recommended for India. Hybrid treatment system (HTS) means using mechanized treatment technologies (such as ASP) for BOD removal upto 30 mg/L and for any further BOD removal NTSS such CWs should be used.

This is feasible in Indian cities as the STPs are typically located at the outskirts of the city, and if planned from initially an incremental land requirement can be allocated for any BOD removal lower than 30 mg/L using CWs. In rural, peri-urban or urban areas, first attempts should be made to use CWs (or any other NTSs) directly after primary treatment, and if this is not possible due to the availability of land, then only HTS approach should be adopted. ■■■



# Webinar on **CATCH THE RAINS** 14 May 2021

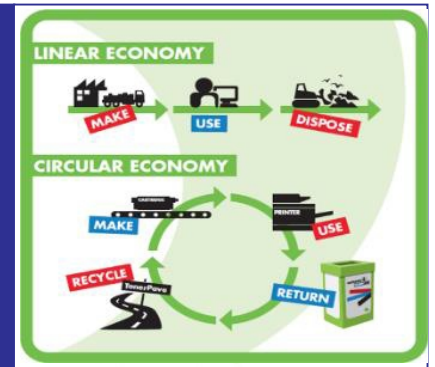


The life cycle of water management has important component of precipitation and rain water falling on the ground. Rain water is the primary source of water for irrigation, industrial and urban water needs. The Indian Water Works Association, Mumbai center has arranged a Webinar on "Catch the Rains". About 140 students, engineers, professionals participated. Dr P K Jain,

Regional Director, CGWB spoke on the occasion as Guest of Honor. Mr Jayant Patil, Expert Consultant in NRW and Watershed Management spoke on Necessity of water conservation for sustainability. Er. Suprabha Marathe, D y . M C , M C G M covered "Government initiatives in Rain Water Harvesting and its assessment". Er Uthas Paranjape, Trustee,

Jalwardhini Pratisthan illustrated on "Emerging technologies in Rain Water Harvesting and water conservation". Mr Rohit Shende, Scientist CGWB illustrated on regulations of ground water use. Mr. Nirav Saraiya, MD, Vivaan Water & Enviro Solutions Pvt. Ltd. shared case studies on Rain water harvesting.

## World Environment Day Celebration : Webinar on **WASTE TO WEALTH** 5TH JUNE 2021



The rapid urbanization is leading to generation of large quantity of waste. Managing the solid & liquid waste in terms of quantity and quality is a burning issue today. However, this waste also provides opportunities in terms of value creation and better environment.

The Indian Water Works Association, Mumbai Center has organized a webinar on this burning issue. This Webinar was focused on case studies of

handling the waste for resource recovery leading to better environment. The Best Practices in small towns and metro cities for sustainable waste management have been shared by various speakers. Ms Neenu Somraj, IFS has delivered a Guest talk on forest, mangroves and wildlife conservation. Shri Dhawal Shah, Director, Ecosystem Resource Management shared a case study on

Decentralized WWTP on PPP Mode .

Shri Surinder Suman, Partner Ekatvam Services presented on plastic waste collection, tracking, benefits to housing societies. Dr. Smita Patil & Er. K B Wadhawane discussed on Poster competition and declared the five winners of Poster competition.

The webinar had good presence of over 120 participants. At the beginning of the similar, a brief presentation was made to remember noted Environmentalist Late Shri Sunderlal Bahuguna.

## FORTHCOMING WEBINARS

### FLORA & FAUNA IN AND AROUND MUMBAI

Convener : Er Dilip Sonwane  
Mob : 9867169768

### STORM WATER MANAGEMENT

Convener : Er Kishore Wadhawane  
Mob : 9167494189

### CONTRACT MANAGEMENT

Convener : Er Prashant Mahagaonkar  
Mob : 9892575688

### INNOVATIONS IN WATER AND WASTE WATERS

Convener : Mr Mohan Matsye  
Mob : 9322681220

### LEAK DETECTION MANAGEMENT

Convener : Er Sunil Vaidya  
Mob : 9820928506

### SEWAGE SYSTEM MANAGEMENT

Convener : Er Dilip Sonwane  
Mob : 9867169768

\* Suggestions are welcome



# POSTER COMPETITION WINNERS

## World Environment Day - 5th June 2021



1st prize

Ms Khushali Ekbote



2nd prize

Ms Neha Shigvan



3rd prize

Khishamuddin Syed



Consolation Prizes -

- Prajyot Savalkar
- Monika Ghodke

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Stalwart's Advice .....cont'd from Page 2

monitoring particularly of the parameters of health significance.

2. Identification of safe source by thorough water quality monitoring and protecting the water source prior to initiating water supply scheme.
3. Design, construction, commissioning, operation, maintenance and monitoring of conventional and pollutant specific water treatment plants.
4. Improved water quality monitoring throughout water supply chain and establishing possible linkages with specific diseases.

5. Close coordination with chemists and microbiologists in implementing preventive/curative measures based on water quality data to minimize diseases burden.
6. Estimate disease burden due to water, sanitation and hygiene for India.
7. Adopt water safety plan approach in identifying hazards affecting water quality from catchment to consumers.
8. Awareness building about importance of water and health among professionals particularly engineers.

