

Report of National Webinar on
'Water Quality Assessment of Indian Rivers'

This is hereby reported that a National Webinar on '**Water Quality Assessment of Indian Rivers**' was organized by Shyam Lal College, University of Delhi under the aegis of DBT Star College Scheme, Waste Management Committee (SAP) and IQAC on **24th February 2022** using Zoom as an online platform (**Annexure 1**). Taking into account the importance of Indian rivers in our lives, government at various levels is trying their best to spread awareness amongst people for cleaning the rivers and controlling the pollution. Many projects are also being run by them. Statistics showed that many crores have been spent in various efforts to clean up the rivers. In this context, University of Delhi has also organized a nationwide campaign titled 'Nadi ko Jano' for crowd sourcing of real time data on rivers. With this aim, **Dr. Sakshi Sharma**, who is a Senior Research Associate at Central Water Commission under the Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti, was the keynote speaker of the day. She talked about the growing concerns of water pollution. She also showed water quality assessment techniques and quality sites where the analyses are carried out by her department. A large number of students and faculty members attended the webinar with great enthusiasm as the techniques and data she presented was directly related to the experiments that they carry out under the academic syllabi in college chemistry laboratories. The feedback forms reflected that a majority of participants found the webinar to be very useful and informative and were highly satisfied with the ideas and concepts so presented (**Annexure 2**). **Prof. Ravi Prakash Teckchandani**, who is currently acting as Dean Recruitment & Promotion and Nodal Officer University of Delhi of Nadi ko Jano Campaign, was also invited as the Special Guest. For this overwhelming success, we are very thankful to **Prof. Rabi Narayan Kar** (Principal, SLC) and **Dr. Ashu Gupta** (Convener, Overall Coordinator DBT, Department of Chemistry) for their support and guidance throughout the organization of this event. Glimpses of the event and attendance of those submitted the feedback forms is attached herewith as **Annexure 3** and **4**, respectively.

Annexure 1



SLC (University of Delhi)

SHYAM LAL COLLEGE

*under the aegis of DBT Star College Scheme,
Waste Management Committee (SAP) and IQAC*

Organizes

National Webinar

on

Water Quality Assessment of Indian Rivers

(in association with campaign run by DU "NADI ko JANO")

on 24th Feb 2022 at 04:00 PM using ZOOM



Special Guest

**Prof. Ravi Prakash
Teckchandani**

**Dean Recruitment &
Promotion
Nodal Officer, DU
Nadi ko Jano Campaign**



Keynote Speaker

Dr. Sakshi Sharma

**Senior Research Associate
Central Water Commission
Ministry of Jal Shakti**

ORGANIZING MEMBERS

Dr. Ashu Gupta
Overall Coordinator DBT,
Department of Chemistry

Dr. Prabhat Sharma
Nodal Officer, SLC
Nadi ko Jano Campaign

Prof. Kusha Tiwari
Coordinator IQAC

Prof. Rabi Narayan Kar
Principal, SLC

Dr. Radhika Gupta
Teacher Coordinator
Department of Chemistry

**Aviral, Vansh,
Anshum**
Student Coordinators

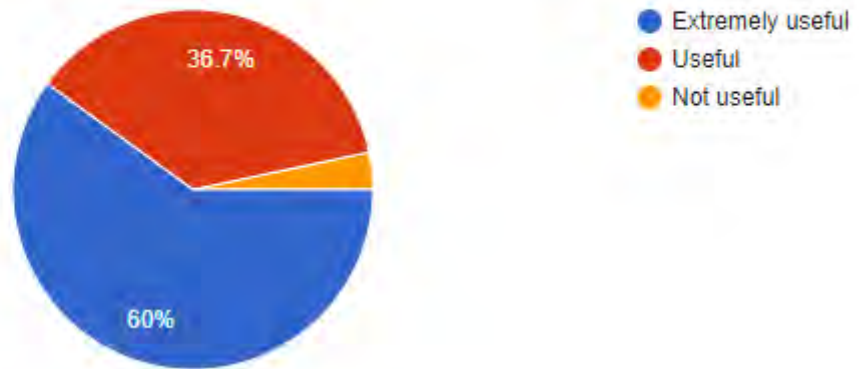


**E-certificates will
be given!**

Annexure 2

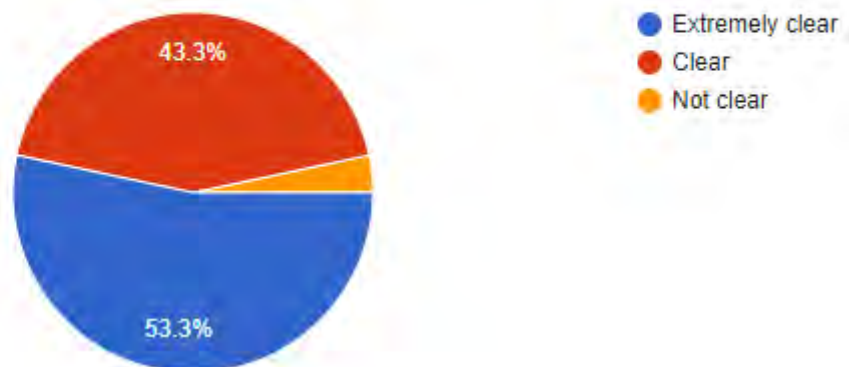
How useful did you find the webinar?

30 responses



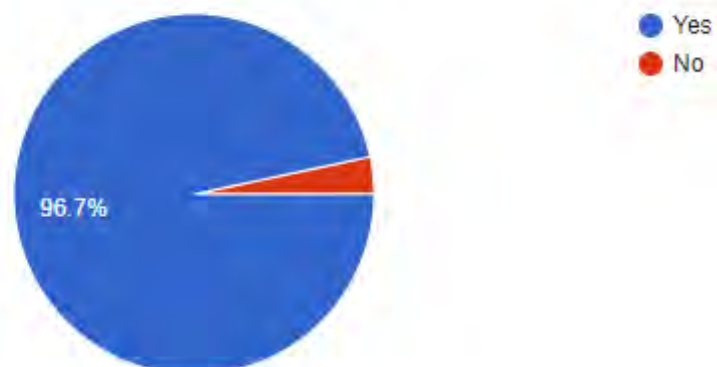
How clear were the ideas and concepts we presented?

30 responses



Would you like to attend such seminars in the near future?

30 responses



Annexure 3

Zoom Meeting You are viewing Dr. Sakshi's screen View Options

Recording...

Water Quality Assessment of Indian Rivers

Dr. Sakshi Sharma
Central Water Commission, New Delhi

Participants: Dr. ashu Gupta, Radhika Gupta, Shyam Lal College, Dr. Sakshi, Prachi Singh

Zoom Meeting Recording...

Indian River System

- Himalayan rivers
- Deccan rivers
- Coastal rivers
- Rivers of inland drainage basin

Himalayan rivers - Ganga-Indus and Brahmaputra-Meghna river system

Deccan rivers - West flowing river - Narmada & Tapi; East flowing river - Brahmaputra, Mahanadi, Godavari, Krishna, Cauvery, Pennar

Coastal rivers - Non-perennial river

Inland drainage basin - Centered in Western Rajasthan

Participants (39): Dr. ashu Gupta, Radhika Gupta, Shyam Lal College, Prachi Singh, Aniruddh pratap, Radhika Gupta, Shyam Lal College (Host), Dr. Sakshi (Co-host), Anshum Kumar (Co-host), Aviral Singh (Co-host), Aviral Singh (Co-host), Dr. ashu Gupta (Co-host), 2108 Mohd Mohsin, 212027 Nitika bsc. phy. sci. with..., 9228, Abhay Singh

Zoom Meeting You are viewing Dr. Sakshi's screen View Options

Recording...

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Details of Water Quality Parameters analyzed in CWC

Level I - 378 labs	Level II - 18 labs	Level III - 5 labs
1. Temperature	1. Temperature	Trace & Toxic metals (9 nos.)
2. Colour	2. Electrical Conductivity	1. Arsenic
3. Odour	3. Total Dissolved Solids	2. Cadmium
4. pH	4. pH	3. Chromium
5. Dissolved Oxygen	5. Dissolved Oxygen (DO)	4. Copper
6. Specific Conductivity/ total dissolved solids	6. Biochemical Oxygen Demand	5. Lead
	7. Chemical Oxygen Demand	6. Iron
Total: 05 Nos.	8. Turbidity	7. Mercury
	9. Ammonia	8. Nickel
	10. Sulphur	9. Zinc
	11. Calcium	Pesticides (7 nos.)
	12. Magnesium	1. Alpha, Beta or Gamma BHC
	13. Potassium	2. D.D and P.P. DDD
	14. Iron	3. Aldrin, Dieldrin
	15. Carbonate	4. Alpha and Beta Endosulfan
	16. Bicarbonate	5. Carbof(Carbamate)
	17. Fluoride	6. Malathion, 2-4 D, Methyl Parathion
	18. Chloride	7. Atricholox, Chlorpyrifos
	19. Sulphate	Total: 25+18+4 Nos.
	20. Nitrate	
	21. Nitrite	
	22. Silica	
	23. Phosphate	
	24. Total Coliform	
	25. F. Coliform	
Total: 28 Nos.		

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Dr. ashu Gupta

Dr. ashu Gupta

Radhika Gupta

Radhika Gupta

Shyam Lal College

Shyam Lal College

Dr. Sakshi

Prachi Singh

Prachi Singh

Zoom Meeting Recording...

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180 17025

Use based classification of surface waters in India according to CPCB

Designated Best use	Class	Criteria
Drinking water source without conventional treatment but after Disinfection	A	1. Total Coliforms Organism MPN/100ml shall be 50 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 4mg/l or more 4. Biochemical Oxygen Demand 5 days 20°C 2mg/l or less
Outdoor bathing (Organized)	B	1. Total Coliforms Organism MPN/100ml shall be 500 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 5mg/l or more 4. Biochemical Oxygen Demand 5 days 20°C 3mg/l or less
Drinking Water source after conventional treatment and disinfection	C	1. Total Coliforms Organism MPN/100ml shall be 5000 or less 2. pH between 6 to 9 3. Dissolved Oxygen 4mg/l or more 4. Biochemical Oxygen Demand 5 days 20°C 3mg/l or less
Propagation of Wild life and Fisheries	D	1. pH between 6.5 to 8.5 2. Dissolved Oxygen 4mg/l or more 3. Free Ammonia (as N) 1.2 mg/l or less
Irrigation, Industrial cooling, Controlled waste Disposal	E	1. pH between 6.0 to 8.5 2. Electrical Conductivity at 25°C micro mhos/cm Max 2250 3. Sodium absorption Ratio Max. 26 4. Boron Max. 2mg/l

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Dr. ashu Gupta

Dr. ashu Gupta

Radhika Gupta

Radhika Gupta

Shyam Lal College

Shyam Lal College

Dr. Sakshi

Prachi Singh

Prachi Singh

Zoom Meeting

Recording...

Water Quality Monitoring of Rivers: The Nationwide Lockdown

HOW LOCKDOWN HAS BEEN A GIFT FOR GANGA

Lockdown due to COVID-19: How your water bodies are changing

India's coronavirus lockdown reveals fresh air, cleaner rivers

- The coronavirus pandemic, and India's subsequent lockdown, offer several lessons in river hydrology, ecological flow, pollution and the role of the community.
- The increased snow melt combined with lack of industrial production, lower irrigation and commercial use has breathed fresh life into the otherwise polluted rivers as reported in various news reports
- With people staying indoors and industries shut during the lockdown period, it is crucial to assess if the water quality in the Indian Rivers has indeed seen a significant improvement.
- During this lockdown period, CWC has monitored Water Quality (WQ) of rivers at WQ sites of CWC across India. The report analyses the impact of lockdown on water quality of Indian Rivers.

Water Quality Monitoring of Rivers
The Nationwide Lockdown
2020-2021-22 (Final)

Central Water Commission
BOD & Dissolved Oxygen

Participants: Dr. ashu Gupta, Radhika Gupta, Shyam Lal College, Dr. Sakshi, Prachi Singh

Zoom Meeting

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Recording...

BIO-CHEMICAL OXYGEN DEMAND (BOD)

TOTAL COLIFORM

Water Quality Sites

Water Quality Sampling Sites

- CPCB limit for Designated Best Use with respect to BOD for Class A is 2 mg/L and for Class B & Class C is 3 mg/L.
- Out of 25, for 12 samples, BOD was found to be beyond the limits for Class A, B & C.
- Out of remaining 13 samples, 5 samples were within limits for Class A also.
- CPCB limit for Designated Best Use with respect to Total Coliform for Class C is 2000 MPN/100 mL.
- Only 4 samples were found meeting this criterion.

Participants: Dr. ashu Gupta, Radhika Gupta, Shyam Lal College, Dr. Sakshi, NEERJA KHANEJA

Chat

queries here

Also, kindly fill the attendance cum feedback forms. Certificates will be given to only those who fill this form. <https://forms.gle/Xkn2JsW2AluFc5w9>

Aviral Singh to Everyone

Water sources always contain dissolved metals. Most of researchers used electrical conductivity for measuring it. But the results are always different from that measured gravimetrically. So, which one is authentic and more reliable?

To: Everyone

Zoom Meeting

Recording...

View

Dr. ashu Gupta	Radhika Gupta	Shyam Lal College	Dr. Sakshi	Anshum Kumar
NEERJA KHANEJA	Ajay Pratap Singh	Dr. REETA SHAR...	Dr. Deepmala Pa...	Lakshya Rana
NEERJA KHANEJA	Ajay Pratap Singh	Dr. REETA SHARMA Chemis...	Dr. Deepmala Pareek	Lakshya Rana
Vishakha Meena	Dr. OMPAL SIN...	Ayushi jain	Prachi	Aman Malik
Vishakha Meena	Dr. OMPAL SINGH YADAV	Ayushi jain	Prachi	Aman Malik
Dr. Rinki chauth...	Komal	vishal dogra	Alana sharma	Yukti jogishwar
Dr. Rinki chauthary	Komal	vishal dogra	Alana sharma	Yukti jogishwar
Aditya Gairola	Saksham B...	AS From Aviral Singh to Everyone	Sonu	212610 Bhim Si...
Aditya Gairola	Saksham Bansal	Can we check Eutrophication potential beforehand in a water source, to prevent it in future?	Sonu	212610 Bhim Singh

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Zoom Meeting

Recording...

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Dr. ashu Gupta	Radhika Gupta	Shyam Lal College	Dr. Sakshi	Anshum Kumar
Aman Malik	Yukti jogishwar	Sonu	Alana sharma	Saksham Bansal
Dr. Rinki chauthary	212610 Bhim Singh	Lakshya Rana	NEERJA KHANEJA	Ajay Pratap Singh
Dr. Rinki chauthary	212610 Bhim Singh	Lakshya Rana	NEERJA KHANEJA	Ajay Pratap Singh
Dr. REETA SHAR...	Dr. Deepmala Pa...	Vishakha Meena	Dr. OMPAL SIN...	Ayushi jain
Dr. REETA SHARMA Chemis...	Dr. Deepmala Pareek	Vishakha Meena	Dr. OMPAL SINGH YADAV	Ayushi jain
Prachi	Komal	vishal dogra	Aditya Gairola	Aniruddh pratap
Prachi	Komal	vishal dogra	Aditya Gairola	Aniruddh pratap

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26°C 17:15 24-02-2022

Annexure 4

Timestamp	Designation	Name	College
2022/02/24 4:21:17 PM GMT+5:30	Student	Bhupendra Singh Bisht	Shyam Lal College
2022/02/24 4:21:18 PM GMT+5:30	Student	Robin Singh	Shyاملal College
2022/02/24 4:21:27 PM GMT+5:30	Student	Himanshi	Shyam lal college
2022/02/24 4:21:34 PM GMT+5:30	Faculty	Ajay Pratap Singh	Shyam Lal College
2022/02/24 4:21:38 PM GMT+5:30	Student	Sonu	Shyاملal college
2022/02/24 4:22:21 PM GMT+5:30	Student	Aditya Gairola	Shyam Lal college
2022/02/24 4:22:56 PM GMT+5:30	Student	Mohd Mohsin	Shyam lal college
2022/02/24 4:24:41 PM GMT+5:30	Student	Vishakha meena	Shyaam lal college
2022/02/24 4:26:07 PM GMT+5:30	Faculty	Yukti	Shyاملal college
2022/02/24 4:26:54 PM GMT+5:30	Student	Vishal dogra	Shyاملal college
2022/02/24 4:28:33 PM GMT+5:30	Student	Alana Sharma	Shyam lal college
2022/02/24 4:33:43 PM GMT+5:30	Student	Ayushi jain	Shyam lal college
2022/02/24 4:39:12 PM GMT+5:30	Student	Muskan Gupta	Shyam lal college
2022/02/24 4:43:45 PM GMT+5:30	Student	PRIYANSHU	Shyam lal college
2022/02/24 4:43:55 PM GMT+5:30	Student	Harsh jha	Shyam Lal college
2022/02/24 4:44:15 PM GMT+5:30	Student	Nitika	Shyam lal college
2022/02/24 4:47:29 PM GMT+5:30	Faculty	Neerja Khaneja	Shyاملal college
2022/02/24 4:48:01 PM GMT+5:30	Student	Sonu	Shyاملal
2022/02/24 4:49:07 PM GMT+5:30	Student	Aniruddh pratap singh	Shyam lal college
2022/02/24 4:51:30 PM GMT+5:30	Student	Abhay singh	Shyam lal college
2022/02/24 4:52:09 PM GMT+5:30	Student	Sudeep	Shyam lal college
2022/02/24 4:52:52 PM GMT+5:30	Faculty	Dr. Reeta Sharma	Shyam Lal College
2022/02/24 4:57:09 PM GMT+5:30	Student	Ayushi jain	Shyam lal college
2022/02/24 4:58:07 PM GMT+5:30	Student	Aakash Saxena	Shyam Lal College (M)
2022/02/24 4:58:12 PM GMT+5:30	Student	Anandita	Shyam lal college (M)
2022/02/24 5:00:36 PM GMT+5:30	Student	Vishakha meena	Shyam lal college
2022/02/24 5:02:02 PM GMT+5:30	Student	Vishakha meena	Shyam lal college
2022/02/24 5:04:24 PM GMT+5:30	Student	Aviral Singh	Shyam Lal College
2022/02/24 5:13:15 PM GMT+5:30	Student	Aman Malik	Shyam lal college
2022/02/24 6:12:06 PM GMT+5:30	Student	Riya Prajapati	Shyam lal college