

# 6.5

# Water in the Community

6.5.1 Water Management Educational Opportunities

**MRIIRS Weblink to SDG 6:** 

https://mriirs.edu.in/sdg06-clean-water-and-sanitation/



# Water Management Educational Opportunities for local Communities:

MRIIRS has established a center of excellence in April 2017 "Center for Advance Water Technology and Management" to outreach directly and demonstrate engagement initiatives to address the community's water management and water uses. The center is actively involved in achieving its vision "clean water for all and forever". The center had begun free "water literacy campaign" and conducting various inhouse and out campus activities for community education on water and hygiene, using Manav Rachna FM Radio, organizing meetings, workshop/ seminar/ paining competitions, campus visit etc.

As evidence in support to 6.5.1 details of the activities conducted for local communities to learn about good water management, radio talk recoded, brochure of Center for Advance Water Technology and Management, invite letters to Professor A. Mukherjee of MRIIRS to deliver talks on Water Management etc. are available. All the data are available in public domain through web site of MRIIRS.

- Radio Manav Rachna: Awareness on Water Conservation and Clean Water during Nov 2022: <u>https://www.youtube.com/watch?v=N1dMJLqLw\_I</u>
- Radio Manav Rachna records the bites of Mr. Promod Jain (Nodal Officer Atal Bhujal Yojna of Government of India for Water Conservation, Haryana) to promote the Water Conservation projects among the common people.



# Link to Radio talk:





Manav Rachna Radio Talks on Water Conservation



# Details of the activities conducted for local communities to learn about good water management:

Manav Rachna Centre for Advance Water Technology and Management (MRCAWTM) established in 2017 with one of its Mission Statement as 'Education and Outreach' for water management as stated below, is frequently organizing various outreach programs under its banner Water Literacy Campaign. The target groups are selected across the society from all ages and gender. Under this banner, various events like small group discussions, mass awareness programs, talk show, Manav Rachna/FM Radio events, lectures, talent hunt, delivering invited talk, field visits etc organized apart from organizing national and local conferences and webinars are specially done.

# **Mission Statement-1 of MRCAWTM: Education and outreach**

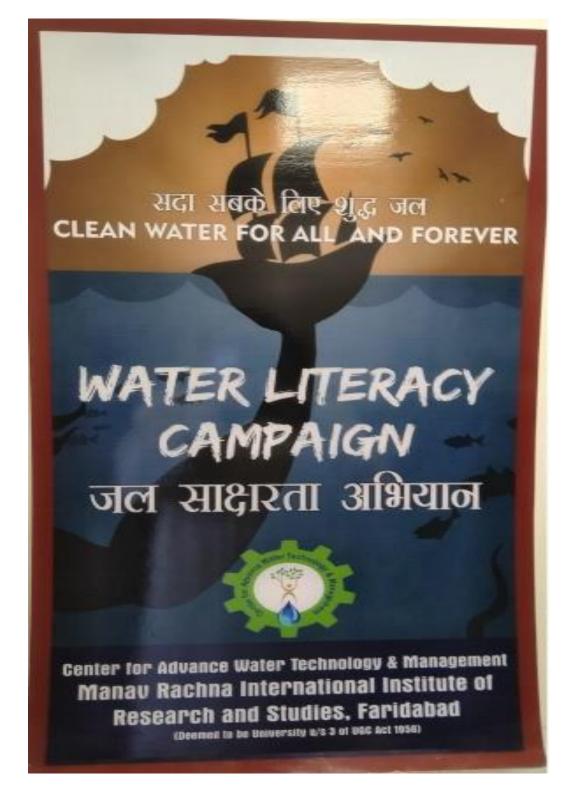
- i. Capacity building for stake holders for comprehensive and sustainable water resources management for nation building.
- ii. Formulation of interdisciplinary curriculum and course on water for various level and purposes.
- iii. Run conventional and web based short, medium and long courses.
- iv. Awareness creation through collaboration with Government, civil society and industries.
- v. Creating popular documents for social awareness.

# **Awareness Campaigns**

- Water Literacy Campaign with theme on 'Importance of Clean Water' was organized for the residents of adopted villages Mohna, Nariyala, Panhera Khurd, Maujpur and Heerapur during January 2022.
- Water Literacy Campaign through Raahgiri event with theme on 'Water Conservation' was organized in collaboration with Faridabad Administration and Faridabad Police: A stall on 'Water Literacy Campaign' arranged by Center for Advance Water Technology & Management under Jal Shakti Abhiyan attracted audience from diverse group. Dr. A Mukherjee, Professor from CAWTM, MRIIRS



propagated the concept of water conservation through standees and display materials and discussed the importance of clean drinking water. They also demonstrated the functioning of Automatic Ground Water Level Recorder. Pamphlets on various water issues were distributed on the occasion.







Water Literacy Campaign organized during January 2022



Water Literacy Campaign through Raahgiri event with theme on 'Water Conservation'

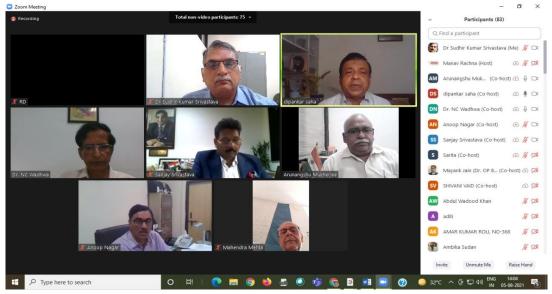


 World Water Day was celebrated during the month of March 2022 with the theme of "Smart Cities and Water Sector". MRIIRS also marked its presence in the National Seminar on 'Groundwater-Invisible Resources and Visible Impacts' organized on March 22, 2022.



National Seminar on 'Groundwater-Invisible Resources and Visible Impacts' organized on March 22, 2022

 A webinar on 'Water Treatment and Sanitation' was organized by MRIIRS during August 2021. Water research experts from all over India connected together through the webinar to discuss the recent innovations in the field of water treatment and sanitation for effective water re-usage.



Webinar on 'Water Treatment and Sanitation'



- World Environment Day was celebrated during the month of June with the theme of "Water Environment Safety Initiative"
- Workshop on "Technological Intervention and Management of Saline and Polluted Aquifer" during the month of June.
- Under Swachha Bharat Mission student sensitization programme was conducted in the campus of Govt Girls H S School Mohna village (Ballabhgarh, Haryana, India) and MRIIRS on "Water & Hygiene" during the month of August.
- A series of Student sensitization programmes were conducted during the month of January in the Govt Girls Higher Secondary School Diggal village (Jajjhar, Haryana, India) with the theme "Water & Hygiene".



Presence of CAWTM, MRIIRS at various outreach platforms



 Community literacy campaign on Water conservation was conducted by Manav Rachna CAWTM in Swamika Village at Palwal, Haryana India during July 2022 to educate people about the wise use of water for all purposes.



 A campaign on 'Water Reuse and Sanitation' was organized for the Government School Students of Village Buraka at Palwal, Haryana, India by CAWTM, Manav Rachna under Atal Bhujal Yojna of Government of India. At the end, students also took a pledge to spread awareness on wise water usage among the residents of their village.





 Manav Rachna CAWTM conducted a community talk to sensitize the residents of Khoh Village, Manesar, Haryana, India about the Water Conservation under Atal Bhujal Yojna of Government of India.



 Sensitization Programme on Efficient usage of Ground Water Resources and Water Sanitation Hygiene was conducted for the Government School Students of village of Panhera Khurd, Haryana, Faridabad under Wash Innovation Project of Manav Rachna CAWTM.





 A painting competition on the theme of Save Water was organized for the Government School students by MRIIRS under Atal Bhujal Yojna of Government of India.



 Dedicated to improve the quality of life through inclusive growth and development in education, Manav Rachna, under the aegis of Dr. O.P. Bhalla Foundation has adopted villages. Freshers of Manav Rachna International Institute of Research and Studies were divided into four clans (Air Falcon, Wild Cats, Water Sharks & Forest Rhinos) and visited four villages: Mohna, Heerapur, Panhera Khurd and Nariyala. The visit was aimed to instil life skills among students. Plantation was done in these villages in collaboration with Horticulture Wing of the University. Plantation sites included outer boundaries of village ponds as well as Government School.

A meeting of students was arranged with Village Sarpanch / Panchayat functionaries for a small interactive session in each village to apprise them regarding water conservation measures including rainwater harvesting and preventing runoff during rainy season. Students took part in sanitation drive and sensitized village people to ensure an open defecation free village. Merchandise like key chains, mugs, crayons



and sketch pens were distributed to the school students after various activities. SchoolStudentsparticipatedenthusiasticallyinalltheactivities.http://dropbhallafoundation.org/events/day-green-and-clean-of-college-diaries/



 Visit of MRIIRS- Water Sharks CLAN students in association with Department of Civil Engineering to the schools of adopted villages to spread awareness on water conservation and quality challenges: <u>https://manavrachna.edu.in/latest/mriirs-turns-nodal-centre-for-ict-based-short-</u> term-course-on-water-resource-management-2-2-2-2/





 Rural Water Level Protection Plan and Water Literacy:: <u>https://manavrachna.edu.in/latest/rural-level-water-protection-plan-and-water-literacy/</u>



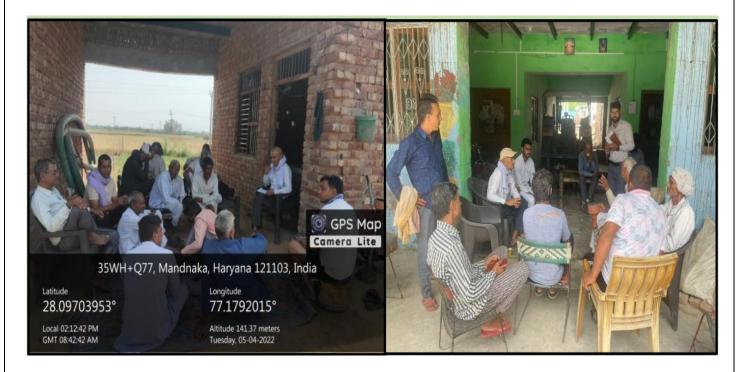
A series of programs under Rural Level Water Protection Plan & Water Literacy are being organized jointly by Central Ground Water Board (CGWB), Chandigarh and Manav Rachna Centre for Advance Water Technology & Management (CAWTM), MRIIRS, funded by Ministry of Jal Shakti, Government of India. Two final deliberations on water literacy and conservation were exercised in Khoh following the earlier programs organized at Mohna and KV 3 Faridabad.

A total of 50 students of Government Multipurpose High School, Khoh, Manesar of Gurugram district were addressed under the mentioned program. Students actively participated in the informative quiz competition based on water literacy and water resources of India.

Under the same scheme, another program was organized for the residents of Khoh Village. 35 residents assembled at Krishna Dharamshala, Khoh. There, the Water Management Plan prepared during investigation in village Khoh for Water Security and Rain Water Harvesting under project funded by Maruti Suzuki Foundation was discussed before implementing the recommendation of the study.



 Team of Manav Rachna CAWTM creating Awareness among the villagers about various agriculture schemes like PMKSY, MNREGA, RKVY operated by Government of Haryana, India to reduce wastage of water.



# **Press Coverage**





• **Team of Manav Rachna CAWTM** sensitizing the Gram Panchayats (Village leaders) and residents about the morphology, community interaction on Water Issues, agriculture practices for Efficient Water Usage, facilities and Water Practices to be followed for Clean Water, Conservation of Water and proper utilization under Atal Bhujal Yojna.











Distribution of Water Test Kits by Manav Rachna CAWTM in Village Gram panchayats to ensure Clean Water Usage





Water sample collection by Manav Rachna CAWTM in different Gram Panchayats for Water Testing



Testing of Surface and Ground Water Quality by Manav Rachna CAWTM in different Gram Panchayats



# गिरते जलस्तर को ऊंचा उठाने के लिए उठाए जाएं ठोस कदम

पलवल, 18 मई। उपायक्त कष्ण कमार की अध्यक्षता में कैंप कार्यालय में अटल भुजल योजना के संदर्भ में समीक्षा बैठक आयोजित की गई। उन्होंने योजना को सुचारू ढंग से क्रियान्वित करने बारे दिशा-निर्देश दिए। उपायुक्त ने उक्त कार्यों को पुरा करने के लिए टीम को निर्देश दिए कि जो भी डबल्य, एस.पी. बनाए जाने हैं, उसके लिए सभी मख्य विभागों की मदद ली जाए, ताकि भविष्य को ध्यान में रखते हुए पानी के गिरते हुए स्तर को रोका जा सके। इस संदर्भ में साप्ताहिक बैठक आयोजित की जाएगी। जिले के चार खंडों ऋमश: हथीन, पलवल, हसनपुर, होडल के गिरते भू-जल स्तर को ऊंचा उठाने के लिए टोस कदम उठाए जाएंगे।

# गांव नांगलजाट, अंधोप, गुदराना और बंचारी में किया जल सुरक्षा का निरीक्षण

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for them after fabral favor women it farm कृषण, जिल्हा व संधार विशेषल वाहित खान ने बताब कि जरल पुजल मेजव व विकास के साथ निराजर सब पंताबर आलेंगेव व प्रकार में लोगों ते फिलकर उनकी पाने का मही इमीगाल के लिए जनसन्त किंगा गया। लोगों को भागे अनुदान तरि पा सूच्य सिंथाई अपको के लिए प्रेरिट किया व लोगों को अध्यमक सल्वचेनी के की में बताय, तिमके लिए जरूर ही पान में केंद लगकर अधिक में अधिक लोगों को साथ दिस्तान जाएगा। इस पर चांच के लोगों ने काफी उनरत के साथ जीवरी की। एनदोओं फिकाझ पेक सिंह ने लोगों को वारीको से सुमन धियई के करे में बताब और खेचें को इसे अपनाने के लिए भी डेरिड किन्दा। लोगों को जालनक करते हुए अटल धतान से आहेल खान ने आहा कि इस तरह से लाखी लीटर धारी को बचाय in unm fte peffe um fu um



इसी बलि से जल का देहन होता रहा तो का दिन हा नहीं जब लोगों को जल संबट का सामन करन पहेंगा। पुरुषे के सच-सच सीत्वाओं ने भी फोल् वाची के लिए दिया ताड़ से जल का पुरुषयोग किया है, उन्हें को अपने जिम्मेदारी सन्दानी होनी।

कविष्ठ अधियोग गरेता ने काल्य कि विय तत्र से लोग प्रसल पक्ष को बहन कर जन को बच सकते है, जिन und at an set at surrest सोती है, हमें उन फास्तों की खेती पर जेर देना चाहिए। अलोक ने बताब कि

अहामा जा मकत्मा है। काटर सारवेडिटन रायका चांव के एकदित पासे को पीते य जेवह के करी को साफ करके खेते भ अञ्च करनी में प्रयोग किया जा सकता है। बांब के लोगों ने भी अपने गरी तको हुए वंच वे रिकार्न चेरवेल लवको की कंग रक्षी व फल्कार पहीर विधियई अपनने पर महापती जनहों। इस धीके पर कवित्र अभियंत्र निकाहा व नंबादार वागिर, मुबारक अल्पी आलंपेयेव व्यस्ति काफी लोग पीलुद छे।

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# 'हर खेत को पानी देना सिंचाई विभाग का लक्ष्य'



पनी का नहीं इलोगल के लिए जगभज करते हुए अधिकारी।

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err & son fern alless part 8. son di ari web diui w et 8. un é fen sten sien न्ही है। का देश संस्था है, जिने इस देशर फिर की का साहे-इसीएर से का पूर्ण में उड़ीका है। जो ही हरें काल होए। को य अन्य एसीटा सार की पूर्ण सक महापार जन्मी है। सनिव अपियंत परिव में बताय कि किस राज से रोग महार की दिनार प्रधानी की मान पाल की अप्रायमका की है। इमें उन प्रकारी की अपने का मीत

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Media Coverage of efforts of Manav Rachna CAWTM towards spreading Awareness among local communities for Clean Water and Sanitation

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# Areas of Action

- Geophysical Survey for Assessment of Aquifer potential and for Artificial Recharge
- Watershed Development Projects
- Groundwater modeling
- Remote Sensing and GIS data base management
- Constructed wetland using wastewater
- Water conservation and management
- Artificial Recharge using treated water / MAR Technology
- In-situ remediation for aquifer salinity and pollution
- Environmental Impact Assessment
- Earthquake Precursor Studies
- Sequestration Carbon Dioxide in Saline Aquifers
- Geo-Technical Assessment for Power Projects, rail-road, industrial, SEZ infrastructure.
- Water and Environment Audit, Environment Monitoring
- Training Modules on groundwater and environment for different target groups
- Imparting knowledge and capacity building of the stakeholders
- Ignite eco intelligence and make water educated society

# **Future Vision**

- Groundwater recharge through treated waste water
- Use of waste water through constructed wet land
- Application of GIS for optimization and location of RWH structures in a watershed
- Climate change, mitigation and adoptive programs
- Up-gradation of insitu purification technology for management of saline aquifers
- Socio economic impact of climate change and RWH
- Instigate the scientific community to implement state of the art technologies such as MAR,ASR, induced recharge, aquifer remediation, tube well regeneration etc
- Resolve global warming/ cooling and climate change through clean Development Mechanism, CAWTM inventory and its geological storage
- Study different aquifer system, seismicity and its application as earthquake precursors and for energy, oil and gas storage



# Contact Us:

# CAWTM, MANAV RACHNA INTERNATIONAL UNIVERSITY, FARIDABAD- 121001 INDIA

Dr D.K. Chadha Chair Professor - Water Recourses & Environment dkchadha.chairprof@mriu.edu.in

Dr Sarita Sachdeva Professor and Dean Research, FAS dean.reserch@mriu.edu.in

Dr Arunangshu Mukherjee Professor, FET arunangshu.fet@mriu.edu.in

# उन्नत जल प्रौधोगिकी एवं प्रबंधन केंद्र

# **Center for Advance Water Technology & Management**

**Manav Rachna International University** Sector-43, Delhi-Surajkund Road, Aravlli Hills, Faridabad - 121004 URL: www.mriu.edu.in, URL: info@mriu.edu.in













# About us

Centre for Advance Water Technology & Management (CAWTM) started bringing together a pool of professional from the field of Geology, Hydrogeology, Environment, Chemistry, Biotechnology and Civil Engineering to pursue research & consultancy and impart teaching & training programs in hydrology, water resources engineering, and water management. The centre aim to be a centre of excellence in addressing water challenges faced by community at local, regional and national level that have formidable scientific implications and significant practical relevance. It envisage providing a platform for the development, appropriate application of water technology; water quality analysis advancements; maximizing recycling of waste water, conservation of natural resources and management of environment through latest tools, technologies and strategies for sustainable development and outreach through knowledge transfer to our stakeholders.

# We offer Professional Services for

- Water Resources Development and Management
- Artificial Recharge / MAR Technology using different water
- Aquifer remediation and Rehabilitation studies
- R&D in Groundwater Hydrogeology
- Lake & Reservoir Revival and Restoration
- River morphology and river rejuvenation
- Water and Waste water Treatment and Management
- Constructed Wetland using wastewater
- Community Training, Capacity Building & Woman empowerment, Social Awareness on water

# **Our Objectives**

- Suggest solutions for mitigation of water and environment management problems
- Promoting professionalism in groundwater and environment issues.
- Undertake R&D studies in watershed management and artificial recharge (MAR)
- Protection and conservation of groundwater and Aquifer.
- Remote Sensing and GIS Study for groundwater and watershed
- Water harvesting and recharge structure.
- Restoration of Water body, Lakes and rivers
- Under take WaSH programmes in identified area.
- Bring publication, guidelines and reports for mass awareness, education and capacity building.
- Organize technical trainings, workshop, seminars and awareness comps etc. for various cross sections of the society on different aspects of groundwater and environment, regulatory guideline, artificial recharge and emerging technologies in water and environment protection

We expertise in comprehending aquifer system and utilizing them for various purpose

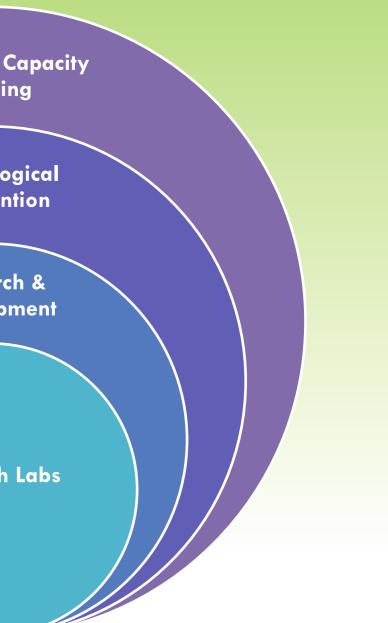
- Urban, Rural and Industrial planning for groundwater development and conservation
- Geophysical Survey and Groundwater Assessment Studies
- Adaptation against Climate Change for sustainability of water resource
- Geo sequestration of carbon dioxide to mitigate global warming
- Remediation for geogenic and anthropogenic contamination of groundwater
- Technological intervention for use of saline aguifer
- Watershed and Springshed management
- Locating sites for solid waste, industrial waste and hazardous waste disposal
- Water resources for new/existing infra-structure of industrial/SEZ/ Housing complex. Site selection and tube well/ bore well construction
- Study of Palaeochannels and its revival
- Urban hydrogeology and Karst hydrogeological studies

**Training & Capacity Building** 

> Technological Intervention

> **Research &** Development

**Research Labs** 









To.

# NATIONAL CONFERENCE

GROUND WATER MANAGEMENT IN MINING AND SOCIAL SECTORS 21ST SEPT, 2019 AT CMPDIL, RANCHI (JHARKHAND) INDIAN CHAPTER OF INTERNATIONAL ASSOCIATION OF HYDROGEOLOGISTS (INC-IAH) &SOCIETY OF GEO SCIENTISTS, JHARKHAND (SGSJ)



Dated: 19.9.2019

Prof A. Mukherjee Dept of Earth sciences & Environment Manav Rachna Interna onal Ins tute of Research Studies Faridabad

Sub: Request for Co-Chairman in the Technical Session-IV

Respected Sir,

This is for your kind informa on that Society of Geo Scien sts, Jharkhand (SGSJ)and Indian Chapter of Interna onal Associa on of Hydrogeologists (INC-IAH) are jointly organizing the Na onal Conference on **"Groundwater Management in Mining & Social Sectors"** at CMPDIL, Ranchi on 21st September, 2019 which will be a ended by a number of Mining and Social Sector Professionals and Ac vists. You are requested to par cipate in the above said programme

It is also requested to your kind self to **Co-Chair the Technical session-IV**, Theme- **Ground Water Sustainability** at 14.30 hrs on 21<sup>st</sup> September 2019 at Mayuri Auditorium, CMPDIL, Ranchi.

A note of con rma on from your side is highly appreciated.

Thanking You. Enclosure:- Progarmme

With sincere regards,

Anal Kumor Gule

(DR. ANAL K SINHA) Organising Secretary





Website: www.iahindia.org & www.sgsjharkhand.com.

Dr. Anal: 7762923277 & 7992346367, Dr. Sudhanshu: 9711063437, Mr. Goutam : 9835710152, Mr. Pankaj: 9470943424,

Contact No. :

Phone : 0172-5021961/5021962 Fax : 0172-2639500 Email : rdnwr-cgwb@nic.in

Central Ground Water Board, North Western Region, Bhujal Bhawan, Plot # 3-B, Sector 27-A, Madhya Marg, Chandigarh – 160 019

# No. 4(67)/NWR/S&I/2019-

Dated: 12.12.2019

Dr Arunangshu Mukherjee Prof& Head, ES&E and Center for Advance Water Technology & Management Manav Rachna International Institute of Research and Studies, Faridabad 121001 arunangshu.fet@mriu.edu.in

# Subject: Initiation for delivering special guest lecture during PIP

Dear Dr Mukherjee

To.

Central Ground Water Board, North Western Region, Chandigarh is organizing People Interaction Programme (PIP) in various parts of Haryana during Dec 2019 in association with Manav Rachna International Institute of Research and Studies. The main purpose of this programme is to interact with students and teachers and educating them for Sustainable Development & Management of Ground Water Resources and adopting the best practices towards conservation of water resources in individual capacity.

The target group would be students and teachers, villagers, PRI etc in 100-125 numbers. You are requested to accompany us and delivering special guest lecture during PIP in the following event as per the date mentioned below:

1. Mohna village, Ballabhgarh on 19.12.2019

- 2. KV-3, Faridabad, on 20.12.2019
- 3. Khoh village- Manesar, Gurugram, 21.12.2019

(Dinesh Tewa Scientist "D"





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No. 4(67)/NWR/S&I/2019-

### To, Dr Arunangshu Mukherjee

Prof& Head, ES&E and Center for Advance Water Technology & Management Manav Rachna International Institute of Research and Studies, Faridabad 121001 arunangshu.fet/@mriu.edu.in

# Sub.: Invitation for delivering guest lecture during three Days Training (Tier II) on "Aquifer Information System and Aquifer Management Plan" from 02.01.2020 to 04.01.2020 at MRIIRS, Faridabad -reg.

### Dear Prof Mukherjee

Central Ground Water Board, Ministry of Water Resources, River Development & Ganga Rejuvenation is implementing National Aquifer Mapping Programme in close coordination with States in the whole country to map aquifer information on 1:50,000 scale to generate aquifer maps and groundwater management plans. A key issue for effective implementation of the Aquifer mapping programme is availability of skilled manpower resource for all stages of the programme. In this regard, the Central Ground Water Board, North Western Region, Chandigarh under the aegis of National Ground Water Training & Research Institute, Raipur is conducting **THREE** days, State level Training on "Aquifer Information System and Aquifer Management Plan" from 2<sup>nd</sup> Jan, 2020 to 04<sup>th</sup> Jan 2020 (3 days) at Manav Rachna International Institute of Research & Studies, Faridabad.

The training programme is specially designed for State-level Groundwater Professionals and Sub-Professionals from State line departments, Institutes / academics and NGOs, Faculty Members/Research scholars/Students actively working in the field of water resources in the States of Haryana.

You are requested to delivering guest lecture during the event as per subject mentioned below: Supply side Management of Groundwater through Rainwater Harvesting and Artificial Recharge on 3<sup>rd</sup> Jan 2020 at 10 to 11.15 hrs

(Dinesh Tewari) Scientist "D



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MRIU		
Subject: Talk on Water conservation		
Madam.		
You are requested to please allow Dr.Arunashu	<mark>i Mukerjee</mark> , Professor Center	
for Advance Water Technology & Mgt. for deliv		
~ p <mark>114<sup>th</sup> Aug.2018.</mark> at 12.30 p.m.		150
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Thanking you,		
Yours Sincerely,		E. WS
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Arunangshu Mukherjee <arunmuk102@gmail.com>

# Training session on Rain Water Harvesting and Site Selection and Investigation for rain Water Harvesting.

3 messages

Ravindra Singh <exentrg7.cpwdacademy@gmail.com> To: arunmuk102@gmail.com

Wed, Jul 26, 2017 at 3:16 PM

Wed, Jul 26, 2017 at 3:32 PM

Dear Sir

Ravindra Singh <exentrg7.cpwdacademy@gmail.com> To: arunmuk102@gmail.com

Dear Sir

National CPWD Academy ,CPWD Ghaziabad is organizing a Training Programme for its Engineers on the subject "Training session on Rain Water Harvesting and Site Selection and Investigation for rain Water Harvesting." on 22-09-2017 at 14.00 hrs to 17.15 Hrs.

for which you have been selected to deliver lectures/ share your valuable experience in the field of water conservation.

Kindly spare your time for this schedule and sent a line for token of acceptance of your presence .

yours sincerely Er.Ravindra Singh Executive Engineer Trg-VII, National CPWD Academy, CPWD, Ghaziabad 9810045376

Arunangshu Mukherjee <arunmuk102@gmail.com> To: Ravindra Singh <exentrg7.cpwdacademy@gmail.com>

Wed, Jul 26, 2017 at 6:46 PM

Sir

Thanks for the oppertunity given. I accept the offer to deliver the lecture.

Regards Dr A Mukherjee

[Quoted text hidden]



https://mail.google.com/mail/u/0?ik=b6fff841d0&view=pt&search=all&permthid=thread-f%3A1573977966964521930&simpl=msg-f%3A157397796696... 1/1