

Academic Year 2022-23

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 is running regular free “water literacy campaigns” and conducting various inhouse and out campus activities for community education on water and hygiene, using Manav Rachna FM Radio, organizing meetings, workshop/ seminar/ painting 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 talks recorded, and other free educational programmes organized for local communities for good Water Management etc. have been provided. All the data are available in public domain through web site of MRIIRS.

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.

Water Management Education Programmes:

Programmes organized by MRCAWTM in collaboration with Radio Manav Rachna

- Radio Manav Rachna and MRCAWTM organized **Awareness Programme on Water Safety and Clean Water for the local community** during Nov 2022.
https://www.youtube.com/watch?v=N1dMJLqLw_I
- Radio Manav Rachna 107.8 FM created history in **Asia and India Book of Records** with **150 hours Non-stop Live Radio Program from June 29 to July 5, 2023** on **UN's Sustainability Development Goals**
(<https://indiabookofrecords.in/a-marathon-radio-broadcast/>,

<https://www.asiabookofrecords.com/longest-non-stop-live-radio-show-on-sustainability/>).



Following **expert talks addressing SDG 6 to educate local community on Water Management** were delivered during this **non-stop live radio program** organized at MRIIRS. The details of these talks are as follows:

- i. Ways of Water Conservation and its Need –
Resource Person: Dr. Arunangshu Mukherjee, Director MRCAWTM
- ii. Hygiene, Sanitation and Waste Management
Resource Person: Mr. Ashish Jian, Founder and Director, Indian Pollution Control Association, Faridabad
- iii. Child Hygiene and Sanitation
Resource Person: Ms. Varsha Daftuer, PRT Hindi, Manav Rachna Internationa School, Sec-14, Faridabad
- iv. Concious Water Usage
Resource Person: Ms. Sneha Rai, Deputy Director MRCAWTM

ASIA BOOK OF RECORDS

India Book of Records
Celebrating India - Super ordinary people

radio MANAV RACHNA 107.8
Feel good. Feel live.

MANAV RACHNA
vidyaparishad

JOURNEY OF THE LONGEST NON-STOP LIVE RADIO PROGRAM
RADIO MANAV RACHNA 107.8 FM
FOR
ASIA AND INDIA BOOK OF RECORDS
ON
UN'S SUSTAINABLE DEVELOPMENT GOALS
29TH JUNE - 5TH JULY 2023
EXPERT : MR. ASHISH JAIN
Founder & Director
Indian Pollution Control Association, Faridabad
TOPIC : HYGIENE, SANITATION AND WASTE
MANAGEMENT
RJ : PRIYANKA

RADIO MANAV RACHNA 107.8 MAKING ASIA & INDIA BOOK OF RECORDS ON UN-SDGs | MR. AASHISH JAIN

- 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: <https://mriirs.edu.in/SDG/6.5.1BHOOJAL%20Talk.mp3>



MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEACH AND STUDIES, FARIDABAD



Manav Rachna Radio Talks on Water Conservation

✚ Water Management Education Programmes organized by MRCAWTM in association with different departments of MRIIRS and its ISR arm Dr. O P Bhalla Foundation

• Pledge on Water Conservation:

To spread awareness amongst the students and faculty members about Water Conservation (Sustainable Development Goal- SDG6) and motivate all towards commitment to the cause and also to inculcate Water Conservation practices in our day-to-day life, a pledge taking ceremony on Water Conservation was organised on August 23, 2023.

The session was aimed to raise awareness about Water Conservation. During the session, following pledge was taken by the students and faculty members:

"I pledge to conserve water every day, Use it wisely, not waste it away. I will save every drop I can, Every day of the week, Here is my plan! I promise to:

- ✚ Turn off water while brushing teeth.
- ✚ Take a shorter shower. Five minutes is great!
- ✚ Manage a leak / Tell an adult if I see a leak.
- ✚ Remind friends and family to save water.
- ✚ Throw trash in trash bins instead of flushing down toilet.





 **GPS Map Camera**

Faridabad, Haryana, India

Block-A, F72M+CFW, Suraj Kund Badkhal Rd, Gadakhor Basti Village, Rocky Area, Faridabad, Haryana 121003, India


Lat 28.450985°

Long 77.283878°

23/08/23 02:12 PM GMT +05:30

 **Google**



 **GPS Map Camera**

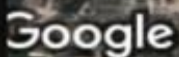
Faridabad, Haryana, India

F72M+7F2, Manav Rachna Campus Rd, Gadakhor Basti Village, Sector 43, Faridabad, Haryana 121003, India

Lat 28.45061°

Long 77.283798°

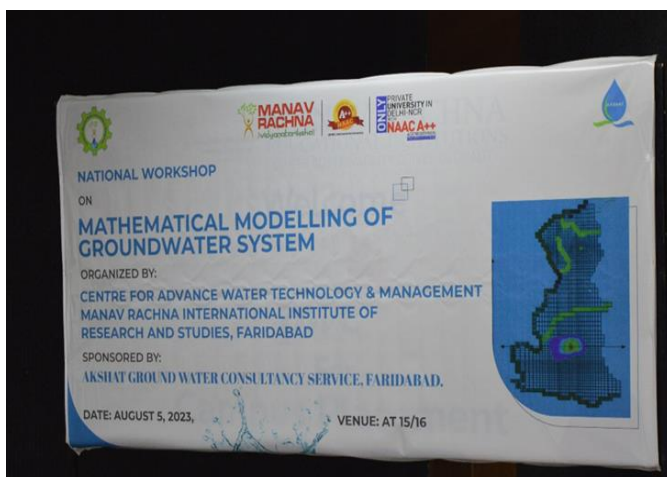
23/08/23 01:10 PM GMT +05:30

 **Google**

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEACH AND STUDIES, FARIDABAD

- A **workshop** on '**Mathematical Modelling**' on **Groundwater System** was organized by MRIIRS on 5th August, 2023. Water research experts from all over India including Scientists, Academicians, Professionals and Researchers from CGWB, IIT Delhi, Delhi University, IWMI, Civil Engineering Dept. MRIIRS, various consulting organisations like Akshat Ground Water Consultancy Service, Faridabad, NWIC, New Delhi, Floodkon, Noida etc. connected together through the workshop to discuss the recent innovations in the field of Groundwater System. **During the workshop a two hour long session was conducted for the local community on the Water conservation and Conscious Water Usage.**

https://www.linkedin.com/posts/manav-rachna-educational-institutions_mathematical-modelling-of-groundwater-systems-activity-7095680654138310657-IZcM?utm_source=share&utm_medium=member_ios



MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES, FARIDABAD

- A one-day **International Water Summit** on the theme of **Water Security in India - Challenges & Prospects** was organized was organized by MRIIRS on 24th February 2023. Water research experts from all over India connected together through the summit to discuss the water security issues in India and of the world and to spread awareness about the importance of sustainable water management in present days scenario.
<https://www.facebook.com/watch/?v=1220104528647375>



International Water Summit 2023

The Center for Advanced Water Technology & Management (CAWTM) and the Central Ground Water Board (CGWB), Ministry of Jal Shakti, Govt. of India, co-hosted a dynamic one-day International Water Summit on Water Security in India: Challenges & Prospects. Gurugram University joined as the University Partner, emphasizing crucial aspects of Green, Grey, and Blue-water.



- An open forum discussion in the form of **HARYANA WATER CONCLAVE 2023** was organized on 26-27 April 2023 at Panchkula under the aegis of Haryana Water Resources Authority (HWRA). Experts from various parts of India discussed issues like restoring water in river, reservoir and canals, effective strategies for ponds rejuvenation, protection of surface water quality, Impact of untreated grey water on environment, etc. In this Conclave, Manav Rachna was the major knowledge partner with Haryana Government. The open discussions with the audience, encouraging their ideas on water conservation were held.

<https://www.primuspartners.in/events/water-conclave-haryana>

[https://manavrachna.edu.in/wp-](https://manavrachna.edu.in/wp-content/uploads/2023/08/Campus_Buzz_Final%20Edition_compressed.pdf)

[content/uploads/2023/08/Campus_Buzz_Final%20Edition_compressed.pdf](https://manavrachna.edu.in/wp-content/uploads/2023/08/Campus_Buzz_Final%20Edition_compressed.pdf)

A Dynamic Water Conclave in Partnership with Haryana Government to Empower Water Sustainability

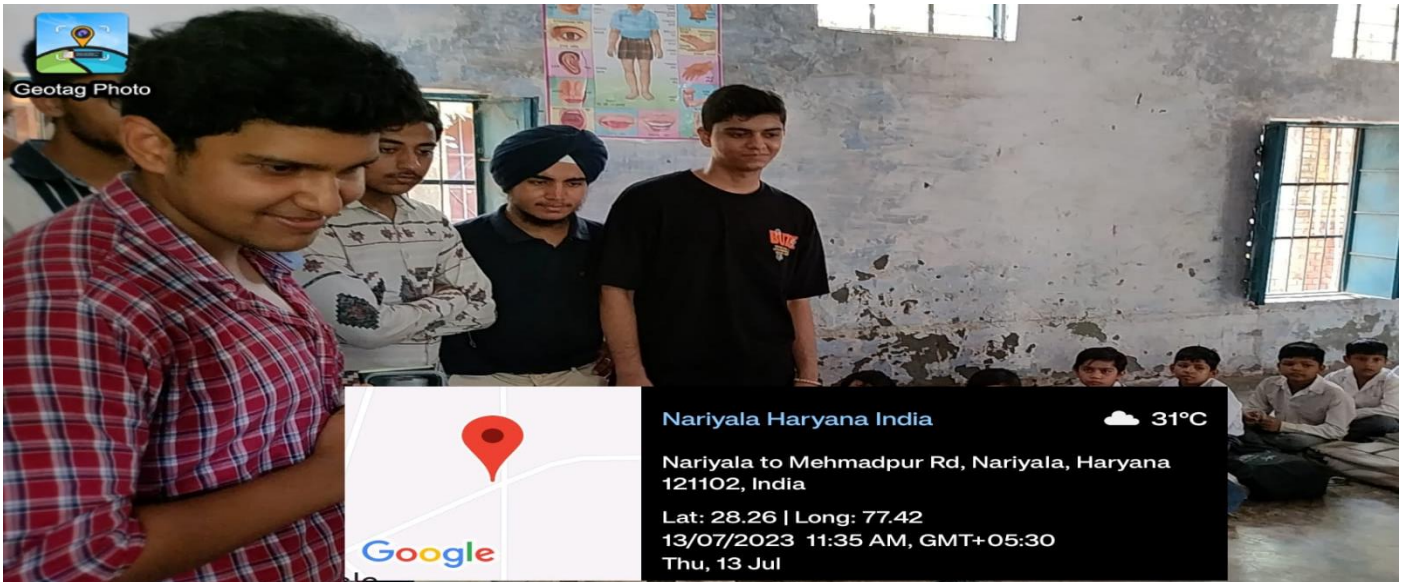
Manav Rachna Institute of Research and Studies (MRIIRS) took a significant stride in sustainability and groundwater initiatives, earning the prestigious role of Knowledge Partner for the Water Conclave. Held in Panchkula on 26-27 April as part of Amrit Jal Kranti, the event was graced by Hon'ble CM of Haryana, Sh. Manohar Lal Khattar Ji, who inaugurated it and engaged in an open discussion with the audience, encouraging their ideas on water conservation.





- **Water** Literacy Campaign with theme on 'Importance of Water and ways of water Conservation' was organized for the school students of adopted villages Mohna, Nariyala, Panhera Khurd, Maujpur and Heerapur during the month of July 2023. The MRIIRS student volunteers led the awareness campaign on Importance of Water and ways of water Conservation.





- **Water Literacy Campaign through Raahgiri event in the adopted villages with theme on 'Water Conservation'** was organized by Center for Advance Water Technology & Management during the month of March 2023. Student volunteers of Center for Advance Water Technology & Management demonstrated the importance of Water conservation through videos, and banners. 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.

<https://manavrachna.edu.in/latest/mriirs-turns-nodal-centre-for-ict-based-short-term-course-on-water-resource-management-2-2-2-2/>



Water Literacy Campaign with theme on 'Water Conservation'
MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES, FARIDABAD

- Under Swachha Bharat Mission series of **sensitization programmes on Water & Hygiene** was conducted in the campus of Govt Higher Secondary School at Nariyala village (**Haryana, India**) during the month of July 2023.



- **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.



- 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** during the month of October 2022.



- 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. School Students participated enthusiastically in all the activities. <http://dropbhallafoundation.org/events/day-green-and-clean-of-college-diaries/>



- **Team of Manav Rachna CAWTM** creating Awareness among th



various **agriculture schemes like PMKSY, MNREGA, RKVY** operated by **Government of Haryana, India** to reduce wastage of water.

- **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.





Team of Manav Rachna CAWTM sensitizing the Gram Panchayats and residents about the morphology, community interaction on Water Issues





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

Press Coverage

दिल्ली/हरियाणा नई दिल्ली, गुरुवार, 2 जून 2022 2

मिकाड़ा के तहत हर खेत को दिया जाएगा पानी-एस.डी.ओ. मिकाड़ा

जिला कार्यान्वयन भागीदारी टीम ने डी.पी.एम.यू. के विशेषज्ञ के साथ मिलकर विभिन्न ग्राम पंचायतों में लोगों को किया जागरूक

जेर न्यूज़/लौहा अरुण खबर, 1 जून। सिंचाई विभाग पलवल की अटल भूजल योजना के तहत जिला कार्यान्वयन भागीदारी टीम ने डी.पी.एम.यू. के विशेषज्ञ के साथ मिलकर ग्राम पंचायत बाबूपुर, लड़माको, रणसिका व जलालपुर में लोगों से मिलकर उनको पानी का सही इस्तेमाल करने के लिए जागरूक किया, जिससे तब से लोगों ने काफी उत्साह के साथ भागीदारी की।

एस.डी.ओ. निरंजन ने लोगों को पलवल जिले के बारे में बताया कि जल संचयन के बारे में लोगों को जागरूक करने के लिए भी अटल भूजल योजना के तहत जिला कार्यान्वयन भागीदारी टीम ने डी.पी.एम.यू. के विशेषज्ञ के साथ मिलकर ग्राम पंचायत बाबूपुर, लड़माको, रणसिका व जलालपुर में लोगों से मिलकर उनको पानी का सही इस्तेमाल करने के लिए जागरूक किया, जिससे तब से लोगों ने काफी उत्साह के साथ भागीदारी की।

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पानी का सही इस्तेमाल करने को किया जागरूक

पलवल, 1 जून (ब्यूरो)। सिंचाई विभाग के साथ-साथ महिलाओं ने भी पॉपुलर कार्यों के लिए जिस तरह से जल का दुरुपयोग किया है। उन्हें भी अपनी जिम्मेदारी समझनी होगी कि जब तक लोग जल बचाने के लिए दैनिक व्यवहार में बदलाव नहीं करते तब तक पानी के व्यर्थ उपयोग को नहीं रोका जा सकता।

जल को हर एक बूंद का उपयोग सही तरीके से होना चाहिए, ताकि हम आगे वाली पीढ़ियों के लिए जल भंडार को सुरक्षित रख सकें, क्योंकि जल के ऊपर जितना अधिकार हमारा है उतना ही अनादी पीढ़ियों का भी है। जल के बिना जीवन संभव नहीं है। जल ऐसा संसाधन नहीं है जिसे हम दोबारा पैदा कर सकते हैं। इसलिए जो जल भूगर्भ में उपस्थित है उसको ही से जल का दोहन होता रहा तो वह दिन दूर नहीं जब लोगों को जल संकट का कनिष्ठ अभिप्राय नरेश ने बताया कि लोग जल को बचाने के लिए जागरूक होना चाहिए।

जल संचयन के लिए जागरूकता बढ़ाने के लिए जिला कार्यान्वयन भागीदारी टीम ने डी.पी.एम.यू. के विशेषज्ञ के साथ मिलकर ग्राम पंचायत बाबूपुर, लड़माको, रणसिका व जलालपुर में लोगों से मिलकर उनको पानी का सही इस्तेमाल करने के लिए जागरूक किया, जिससे तब से लोगों ने काफी उत्साह के साथ भागीदारी की।

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

देश के एक बड़े शहरों में मुख्य संसाधनों की कमी को दूर करने के लिए जल सुरक्षा को जल सुरक्षा योजना



देश, राजस्थान, पलवल

राजस्थान विधान परिषद के अध्यक्ष राजेश कुमार शर्मा ने बताया कि अलग-अलग राज्यों में अलग-अलग योजनाओं में पृ-कार्यक्रमों का कार्यान्वयन किया जा रहा है और यह राज्य में पृ-कार्यक्रमों के अन्तर्गत के लिए आवश्यक समन्वय के लिए भी आवश्यक है।

इस कार्यक्रम के तहत राजस्थान विधान परिषद और राजस्थान विधान परिषद के राज्य सभा विधायकों के अलावा विधान और राज्य सभा के सदस्यों को सूचनाएं दी जाएंगी और राज्य सभा के सदस्यों को सूचनाएं दी जाएंगी और राज्य सभा के सदस्यों को सूचनाएं दी जाएंगी और राज्य सभा के सदस्यों को सूचनाएं दी जाएंगी

राजस्थान विधान परिषद के अध्यक्ष राजेश कुमार शर्मा ने बताया कि अलग-अलग राज्यों में अलग-अलग योजनाओं में पृ-कार्यक्रमों का कार्यान्वयन किया जा रहा है और यह राज्य में पृ-कार्यक्रमों के अन्तर्गत के लिए आवश्यक समन्वय के लिए भी आवश्यक है।

आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए किया प्रेरित

देश, राजस्थान, बन्नी

राजस्थान विधान परिषद के अध्यक्ष राजेश कुमार शर्मा ने बताया कि अलग-अलग राज्यों में अलग-अलग योजनाओं में पृ-कार्यक्रमों का कार्यान्वयन किया जा रहा है और यह राज्य में पृ-कार्यक्रमों के अन्तर्गत के लिए आवश्यक समन्वय के लिए भी आवश्यक है।



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पानी का सही इस्तेमाल करने को किया जागरूक

राजस्थान विधान परिषद के अध्यक्ष राजेश कुमार शर्मा ने बताया कि अलग-अलग राज्यों में अलग-अलग योजनाओं में पृ-कार्यक्रमों का कार्यान्वयन किया जा रहा है और यह राज्य में पृ-कार्यक्रमों के अन्तर्गत के लिए आवश्यक समन्वय के लिए भी आवश्यक है।

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गिरते जलस्तर को ऊंचा उठाने के लिए उठाए जाएं ठोस कदम

पलवल, 18 मई। उपायुक्त कृष्ण कुमार की अध्यक्षता में कैम्प कार्यालय में अटल भूजल 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 पूरा करने के लिए टीम को निर्देश दिए कि जो भी डबल्यू.एस.पी. बनाए जाने हैं, उसके लिए सभी मुख्य 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 क्रमशः हथीन, पलवल, हसनपुर, होडल के गिरते भू-जल स्तर को ऊंचा उठाने के लिए ठोस कदम उठाए जाएंगे।

'हर खेत को पानी देना सिंचाई विभाग का लक्ष्य'



राजस्थान विधान परिषद के अध्यक्ष राजेश कुमार शर्मा ने बताया कि अलग-अलग राज्यों में अलग-अलग योजनाओं में पृ-कार्यक्रमों का कार्यान्वयन किया जा रहा है और यह राज्य में पृ-कार्यक्रमों के अन्तर्गत के लिए आवश्यक समन्वय के लिए भी आवश्यक है।

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आजादी के अमृत महोत्सव पर हर घर जल बचाओ हर घर पेड़ लगाओ की पहल की

हरियाणा (शांकीम कोटला) देश को आजादी के 75 वर्ष पूर्ण होने के उत्सव में बृहद पैमाने पर मनाए जा रहे अमृत महोत्सव अटल भूजल योजना डीपीएमयू पलवल ने जल संरक्षण को लेकर दृष्टांतों प्रस्तुत की है। इस पहल में जुड़कर जिले के चार खण्डों को एक एक ग्राम पंचायत में कार्यक्रम किये गये हर घर पेड़ लगाओ व हर घर जल बचाओ एक अभियान चलाया गया जिसमें पाँच हजार पेड़ वन विभाग से लेकर गाँव आली मेव, कुकरावाटी, खाईका व नाला सभा में वितरित किये गये कार्यक्रम में बच्चों ने काश्मीर अलहा से प्राण लिया वे देश भक्तों गीतों पर अपनी पारस्परिक दो व पाव के युवाओं के साथ पोषणयन भी किया गया। जलवायु परिवर्तन के दौर में जल संरक्षण समय को मांग है इसी के दृष्टिगत एम.ई. श्री प्रमोद जैन अटल भूजल योजना (नोडल अधिकारी) हरियाणा के



आदेशानुसार जल संरक्षण को आजादी के अमृत महोत्सव में एक खास अभियान के रूप में शामिल किया है ताकि अटल भूजल योजना के तहत समुदाय को जागरूक किया जा सके व अधिक से अधिक जल बचाने के लिये समुदाय के साथ पर्याप्त किए जा सकें इसके तहत गाँवों में पोखरों को अमृत सरोवर के रूप में विकसित कर जल संरक्षण को परिकल्पना को साकार किया जा

रहा है व जिले के प्रत्येक खंड के एक एक गाँव में अटल भूजल योजना को तरफ से समुदाय के साथ मिलकर आजादी का अमृत महोत्सव मनाया गया। अमृत सरोवरों में सालभर जल को उपलब्धता बनी रहे, इसके इंतेजाम भी किए जा रहे हैं दृष्टे मुख्तः कहां जल संचयन कर भरा जाएगा, अमृत सरोवर के तट पर नीम, पीपल, कटहल, जामुन, बरगद, सहजन,

बारिल खान चुकीईया ने बच्चों को सोल्ड टैकर सम्पादित किया और जल संरक्षण के प्रति समझना इस मोके पर आली मेव गाँव के सरपंच शकरलाल, परधानयव, मुबारक आली मेव, रफिक, राहुल, सुहास व मोहन सहित अन्य मौजूद रहे। पाकड़ और महुआ आदि के पेड़े लगाए जा रहे हैं। अमृत सरोवर में गाँव को नालियों का पानी न जाए, वह सुनिश्चित किया जाएगा। बारिल के जल का संरक्षण कर भूमिगत जल का रिचार्ज बढ़ाने में भी मदद मिलेगी। सरोवरों के तटबंध पर वाकॉरिंग पंच बन रहे हैं। बैटने के लिए बेंच को भी स्थापना की जा रही है, सुबह-शाम सैर करने वाले ग्रामीण इसका प्रयोग कर सकेंगे और बच्चों को खेलकूद के लिए बहिष्ता स्थान भी मिलेगा। जल ए आजादी पर प्रामोको को अमृत सरोवरों के संरक्षण का संकल्प भी दिलाया गया।

अटल भूजल योजना के तहत जिले के सभी स्कूलों में चलाया जा रहा है जल जागरूकता अभियान

पलवल, 07 फिलव, मन्वजय टाईम्स/प्रधान सभा। पिछले विभाग द्वारा विनिश्चित की जा रही अटल भूजल योजना के तहत बुधवार को जिला पलवल के गाँव अंगणवाडी, बिन्दुवी व खाम्बी युजवागी में डीपीएमयू, वे वॉरिंग खान के दिना- निदेशानुसार जल संरक्षण पर जन जागरूकता अभियान चलाया गया। जिसमें समता बर्हिष्क य अन्य सभी यक्षम युवाओं के अनुयायियों ने ग्रामीणों को जल के महत्व को समझाया। उन्होंने स्कूल के सभी महानुभावों, अध्यापकों और स्कूलों बच्चों को जल की महत्त्वता के बारे में विनिगपूर्यक ज्ञानावकाश दी।



उन्होंने कहा कि हमारे जीवन में जल का बहुत महत्व है। जल के बिना जीवन की कल्पना नहीं की जा सकती। इसलिए हमें जल की हर एक बूँद का महत्व समझना होगा। तभी हम जल का

संरक्षण कर पायेंगे। जल बचाओ यह नकदीक है, जिसके माध्यम से बर्हिष्क के लिए विभिन्न प्रभावी तरीकों का प्रयोग करके पवित्र योग्य सुरक्षित पानी को संरक्षित किया जाता है। जीवन की यथा हेतु पानी की मांग को पूरा करने के लिए शुद्ध जल के प्रबंधन को यथाई संसाधन के रूप में विकसित करने के लिए विभिन्न रणनीतियों और गतिविधियों को आवश्यकता है। इस विभाग आवादी बचने संसाधन के लिए विशेष रूप से लोगों को विनिर्माण और

कृषि विभागी हेतु करने की कल्पना की आवश्यकताओं के दृष्टिकोण पानी का कम होना एवं बहुत गंभीर विषय है। यह उद्योग के प्रयोग को भी कम करना है, क्योंकि जल प्रदूषण को कूल करने की क्षमता का लगभग 15 प्रतिशत की आवश्यकता होती है। इसीलिए हम सबको मिलकर जल को एक साक बूँद को बचाना होगा। इस अवसर पर सभी ने जल संरक्षण की महत्त्वता जलवाँ और साथ ही उर्ध्वसमीति को जल बचाने के प्रति शपथ दिलाई गई।

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

Press Release

Water Security in India - Challenges & Prospects

The Issues and Policy Implications in India



**Sh. Shashi Shekhar,
IAS**

*Former Secretary,
Ministry of Jal Shakti,
Member Drafting
Committee NWP*



Dr. Amarjit Singh, IAS,

*Former Secretary, Ministry
of Jal Shakti & Chairman
Real Estate Regulatory
Authority, Gujarat*



**Ms. Keshni Anand
Arora, IAS**

*Chairperson, Haryana
Water Resource
Authority*



**Sh. Devender Singh,
IAS**

*Advisor to Hon'ble CM,
Govt. of Haryana*

A one-day international Water Summit on **Water Security in India - Challenges & Prospects** was organized by the Center for Advanced Water Technology (CAWT) of Manav Rachna International Institute of Research and Studies (MIIRS) Faridabad and co-organized by the Central Ground Water Board (CGWB), Ministry of Jal Shakti, Govt. of India and University Partner - Gurugram University on 24th February 2023 from 10:00 hrs IST to 17:00 hrs IST on the hybrid mode in the institute in a physical way and online on zoom meeting platform. The event was supported by Floodkon Consultant LLP, Noida; JBA Risk Management; Spray Engg Devices Ltd, Mohali. The Knowledge Partners supporting the summit were - HWRA, ICID, BARC, NIH.



Water is a significant issue for India's socioeconomic growth. The country with 18% of the world's population is endowed with 4% of the global freshwater resources. With the exponential population rise, the per capita water availability is declining fast. Increasing surface and groundwater extraction poses a severe challenge to its sustainable use. In addition, expanding pollution of rivers and groundwater, both from geogenic and anthropogenic sources, is restricting resource use. The climate change factor creates further complexity by imposing uncertainty on water resource availability in space and time domains. Food security in India is strongly linked with water resources. Besides rising urbanization, lifestyle changes and rapid industrialization are increasing groundwater demand. The utilization of water resources in India is about 1,140 BCM, while the demand in 2050 will shoot up to 1,180 BCM. Considering groundwater, India is the largest extractor in the world, withdrawing about 240 BCM annually. More than 90% of this resource



is used for irrigation. Taming groundwater extraction for irrigation is a significant challenge considering the colossal over-exploitation that is taking place in about 1/5th geographical area of the country. We must strive to enhance water use efficiency in all sectors of society: Irrigation, domestic, and industries. The policymakers, farmers, industrialists, academicians and researchers, government agencies, and all other stakeholders must come on a platform with a determined effort toward conjunctive water use in India.

Eminent personalities in the field of water resources management from India and abroad enlightened the audience with engaging discussions and presentations across four technical sessions. The speakers like Sh. AB Pandya, Secretary General, International Commission on Irrigation and Drainage (ICID); Sh. Vivek Verma,

Managing Director, Spray Engineering Devices Ltd.; Prof. Alan Fryar, Department of Earth & Environmental Sciences, University of Kentucky, USA; Dr. R.P. Pandey, Scientist-G, National Institute of Hydrology (NIH), Roorkee; Dr. U K Sinha, Head, Isotope Hydrology Section, Bhabha Atomic Research Centre (BARC); Prof. David Polya, Dean of Internationalizations Manchester University, UK; Dr. Alok Sikka, Country Head-India, International Water Management Institute (IWMI), New Delhi; Dr. A K Keshari, Prof. Civil Engg, Indian Institute of Technology Delhi (IITD); Sh. Biswadeep Ghose, CEO, Water for People - India Trust; Prof. PP Majumdar, Chairman, Interdisciplinary Centre for Water Research, Indian Institute of Science (IISc) Bangalore; Dr. Sumit Sinha, Senior Analyst, JBA Risk Management, UK; Prof. Shashank Shekhar, Geology Department, University of Delhi were present and delivered their enlightening knowledge and experiences from their years of research and practice.

The inaugural session was adorned with Smt. Keshni Anand Arora, IAS, Chairperson, Haryana Water Resource Authority; Sh. Shashi Shekhar, IAS, Former Secretary, Ministry of Jal Shakti, Member Drafting Committee NWP; Dr. NC Wadhwa, IAS, Director General MREI, Dr. Dinesh Kumar, Vice Chancellor Gurugram University. Dr. Dipankar Saha, Chair-Prof, CAWT, MRIIRS, was the convenor and moderator of the summit and enthusiastically organized the seminar with a hardworking team.

The seminar focused on broad themes such as the widening gap between water demand and supply, regulatory measures on the efficiency of the water sector, water and food security - the linkage and the challenges ahead and the rising contamination of water- the way out.

Given the urgency to address and brainstorm the global vital and widely acknowledged challenge in water resources, the seminar brought together top experts from the related fields – academicians, agronomists, water specialists, policymakers, civil societies and others on a single platform. As intended, the seminar greatly enriched the common understanding of Water Security



issues in India and the world. The water trade was given a particular focus in the context of rice and wheat. It answered some of the most pertinent questions related to sustainable water management and its aligned issues creating an interlinked web to step forward in a wise and judicial approach to reduce the escalating water crisis. Essential aspects of Green, Grey and Blue-water was focused on during the summit. The seminar dwelled on various issues related to over withdrawal of groundwater resources, grey water uses, the prospects of 3R's reduce, recycle, and reuse, crop water management, virtual water and other pertinent topics with a special focus on the Indian scenario. The limelight was showcased on the impact on water productivity, transboundary water movement, environment and socioeconomic

impact on various granularity, and the policy implication. Detailed statistics on groundwater exploration, an increasing trend in the cultivation of water-guzzling crops in the northern plains of India. The concepts of ecological flow and its importance, inter and inter/intra-basin transfer of water, were discussed during the webinar. There was discussion on the necessity for water harvesting, especially rooftop water harvesting (RTRWH) structures and managed aquifer recharge (MAR).

Lastly, in the concluding session, Dr. Amit Bhalla, Vice-President of MREI, Dr. Amarjit Singh, IAS, Former Secretary, Ministry of Jal Shakti & the Chairman of Real Estate Regulatory Authority, Gujarat and Sh. Devender Singh, IAS, Advisor to Hon'ble Chief Minister Haryana, discussed the importance of various facets of water management, especially in dark and shadow groundwater zones like Haryana. They emphasised how involving various community-level stakeholders can bring up visionary government policies and advocate for better water resource management through regulatory authorities. A poster competition on various aspects of water was also organized where participating student groups were given away medals and certificates.

**Manav Rachna
International Institute of
Research and Studies**
NAAC A++Grade, Deemed-to be- University



BROCHURE

Manav Rachna Centre for Advance Water Technology & Management (MRCAWTM)



July 2023



ABOUT THE CENTRE

Manav Rachna Centre for Advance Water Technology & Management (**MRCAWTM**) was established in 2017 to pursue teaching, research, consultancy and impart training programmes in hydrogeology, water resources engineering and management, water quality and collateral environment and ecology issues. The Centre forms a pool of professionals and researchers from the field of hydrology, hydrogeology, hydrochemistry, eco-hydrology and environment management. Besides, the Center has also developed a skill set on community centric water resource development, socio-hydrology and watershed based sustainable management. The Center aims to address real challenges faced by the stakeholders and also provides a platform for science and technology-based solutions through non-invasive investigation, water quality analysis, recycling of waste water, surface and ground water flow and resource analysis, satellite databased interpretation, local and regional scale hydro-statigraphic analysis, mathematical modeling of water resources and GIS based applications.

MRCAWTM is having five field units, one each at Barmer, Ballabgarh, Khol-Rewari, Palwal and Panchkula where two to ten field specialists are working. MRCAWTM in its short period of journey, has been able to achieve significant milestones in the form of projects obtained, executed, and completed. So far 16 projects have been successfully completed between June 2018 and June 2023 of worth ~Rs2.63 Cr. Further, 07 more projects of Rs 12.34 Cr are in progress as on 1st July 2023. MRCAWTM is working for its vision of **clean water for all forever**. The major area of work is divided into 1. R&D Studies, 2. Technical Interventions, 3. Training and Capacity Building, 4. Outreach programs, 5. Product and Innovation. The Center has also established linkage with various Governmental, academic, and non-Governmental agencies through MoUs.



**Aqua Excellence Awardee
2017**

Vision: “Clean water for all forever” (सदा सबके लिए शुद्ध जल)

MRCAWTM has been able to achieve Accreditation of CGWA, GOI on 1st Oct 2021 for next 5 yrs. MRCAWTM has grabbed the Aqua Foundation Excellence Award, 2017 under the category of Institutional Excellence in Resource Management. The faculties of Center have published high impact research papers in National and International Scientific Journals and written Books and Book chapters of reputed publishers.



MOUs OF CENTER

Active MOUs of MR Center for Advance Water Technology and Management, MRIIRS				
SN o	Name of Organization	Date of MOU	Activates Taken up under MOU	Valid for
1	Central Ground Water Board, MoJS, GOI	26.06.2020	Faculty exchange- CGWB Scientists were invited as External Examiners, MRIIRS Civil Eng, students visited CGWB Campus. MRCAWTM experts attended group discussion at CGWB, Joint Water Summit 2023 on 24 th Feb23.	2 Years further Extended
2	Geovale Services Kolkata	18.08.2021	Geovale used our expertise on Rockworks for their project, MRCAWTM experts invited to attend one day workshop at Kolkata on 18 th Jan23	4 Years
3	EMTRC New Delhi	21.09.2021	MRCAWTM expert assisted EMTRC in fly ash project.	3 Years
4	CAIRNS-Vedanta Oil & Gas Pvt Ltd Gurugram	11.06.2021	Joint monitoring of aquifers of Barmer area through half yearly hydrocensus of about 1000 water wells.	3 Years
5	IWRD, Govt of Haryana	11.08.2021	MRCAWTM is District Implementation Partner of IWRD in participatory ground water management in Gram Panchayat level in three districts of Haryana	4 Years
6	WCS Bhubaneswar	03.03.2022	MRCAWTM conducted 7 consultancy projects of Fe ore mines for WCS during last one year	5 Years
7	SGSD, Gurugram	01.07.2022	SGSD experts carried out civil construction of ASR systems established under MRCAWTM owned DST Project.	1 Year
8	Ministry of Jal Shakti, WR&RD	12.04.2023	Establishing a Program Support Unit for Namami Gange Under National Water Mission	3 Years



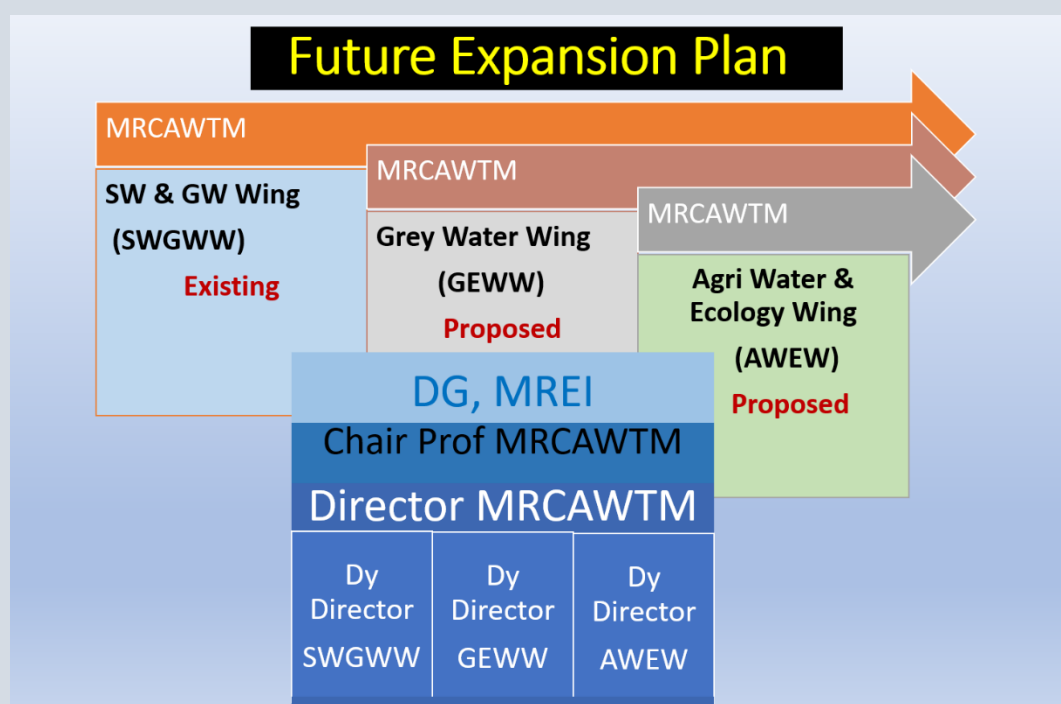
MRCAWTM is accredited under CGWA to prepare reports in the functional areas of
1. Groundwater Impact Assessment 2. Hydrogeological reports of Mining Projects

ON GOING PROJECTS OF MRCAWTM

As on 01st July 2023

Sn.	Ongoing Projects of MRCAWTM, MRIIRS	Funding Agency	From Date & Period	Objective
1	Co-solving Water logging and Groundwater depletion issue in parts of Faridabad Smart City	WTI, DST, GOI	21 .05. 21 36 months	DST Project on solution to flash flood and groundwater (GW) depletion
2	Hydro Geological Survey for Aquifer Monitoring in Barmer Area, Rajasthan,	Cairn Oil & Gas Vedanta Ltd	02.07.21 36 months	Industrial project on impact study on GW use
3	Haryana Atal Bhujal Yojna- Cluster 06 (Faridabad-Rewari Districts)	IWRD Haryana	11.8.2021 48 months	Haryana Govt Project on improving sustainability of GW through participatory approach at Gram panchayat level in Haryana
4	Haryana Atal Bhujal Yojna- Cluster 07 (Palwal District)	IWRD Haryana	11.8.2021 48 months	Haryana Govt Project on assured household water supply in rural Haryana
5	Haryana Jal Jeevan Mission – State Implementation Support Agency (SISA)	PHED Haryana	27.09.2021 24 months	Haryana Govt project on auditing energy consumption for GW abstraction
6	Haryana Jal Jeevan Mission – Energy Audit State Implementation Support Agency	PHED Haryana	01.11.2022 12 months	Impact assessment of mining on GW for NOC under CGWA accreditation.
7	Groundwater condition study in core and buffer zone of proposed Iron ore mine around Villages, Eklama, District Kabirdham, CG	WCS Bhubaneswar	01.07.2023 04 months	

WAY FORWARD



Completed projects under MRCAWTM, as on 30th June 2023

No	Project Name and Status	Funding Agency	Date of Comp.	Objective
1	Technical guidance in construction of Rainwater Harvesting Structures in Faridabad City	M/s Navjoti Foundation, Gurugram	29.03.2023	Rainwater conservation
2	Impact assessment of mining of Iron ore on GW in and around Raikela Sundargarh Odisha.	M/s WCS Bhubaneswar, Odissa	08.10.2022 04 months	Impact assessment of Mining on GW
3	Impact assessment of mining of Iron ore on GW in and around Dholta Pahar, Sundergarh, Odissa	M/s WCS Bhubaneswar, Odissa	04.4.2022 08 months	Impact assessment of Mining on GW
4	Impact assessment of mining of Iron ore on GW in and around Netrabandh Pahar, Sundergarh,	M/s WCS Bhubaneswar, Odissa	04.4.2022 04 months	Impact assessment of Mining on GW
5	Study for Rainwater harvesting around Iron ore mine of Dholta Pahar, Sundergarh, Odissa	M/s WCS Bhubaneswar, Odissa	04.4.2022 04 months	Study for Rainwater harvesting in Mining area
6	Study for Rainwater harvesting around Iron ore mine of Netrabandh Pahar, Sundergarh, Odissa	M/s WCS Bhubaneswar, Odissa	04.4.2022 04 months	Study for Rainwater harvesting in Mining area
7	Biodiversity study around Iron ore mine of Dholta Pahar, Sundergarh, Odissa	M/s WCS Bhubaneswar, Odissa	04.4.2022 04 months	Study for Biodiversity in Mining area
8	Biodiversity study around Iron ore mine of Netrabandh Pahar Sundergarh, Odissa	M/s WCS Bhubaneswar, Odissa	04.4.2022 04 months	Study for Biodiversity in Mining area
9	Impact assessment of underground mining of Manganese on GW in and around Miragpur, MP.	M/s D P Rai, Balaghat MP	April 2022 3 months	Impact assessment of Mining on GW
10	Impact assessment of underground mining of Manganese on GW in and around Pandarwani, MP.	M/s D P Rai, Balaghat MP	April 2022 3 months	Impact assessment of Mining on GW
11	Hydro Geological Survey for Aquifer Monitoring in Barmer Area, Rajasthan (2018-21).	Cairns O&G Vedanta Ltd	June 2021 36 months	Industrial project on impact study on GW use
12	Communicating Science through Model Water and Eco-Health Clinic for quality of life.	NCSTC, DST, GOI	May 2020 15 months	Water literacy through hands on experiments for students
13	USAID URBAN WASH Innovation Lab,	USAID-NIUA	Dec 2019 30 months	Awareness on water and sanitation
14	Detailed investigations in Khoh Village for Rainwater Harvesting,	MSF, Gurgaon	April, 2019 3months	Sustainable solutions of groundwater use
15	ISP system for treating saline Groundwater- Techno-Commercial, abandoned due to Change in policy of State of Haryana on saline water use	Maharani Innovative Paints Pvt Ltd. Prithla	Sept 2020 12 months	Use of saline water through eco-friendly technology
16	Reconnaissance survey for Water prospect in 10 adopted villages of Maruti-Suzuki Foundation	MSF, Gurgaon	Dec 2018	Sustainable solutions of groundwater use



DST FUNDED PROJECT-FARIDABAD

Co- solving Water Logging and Ground Water Depletion Issue in parts of Faridabad Smart City using Underground Taming of Flood Water for Aquifer Storage and Recovery: WTC-DST GOI Supported Project No-DST/TMD/EWO/WTT/2K19/EFWH/237(G)&(C) PI: Dr Arunangshu Mukherjee, Director, MRCAWTM and Co-PI: Dr Nidhi Didwania, BT, MRIIRS

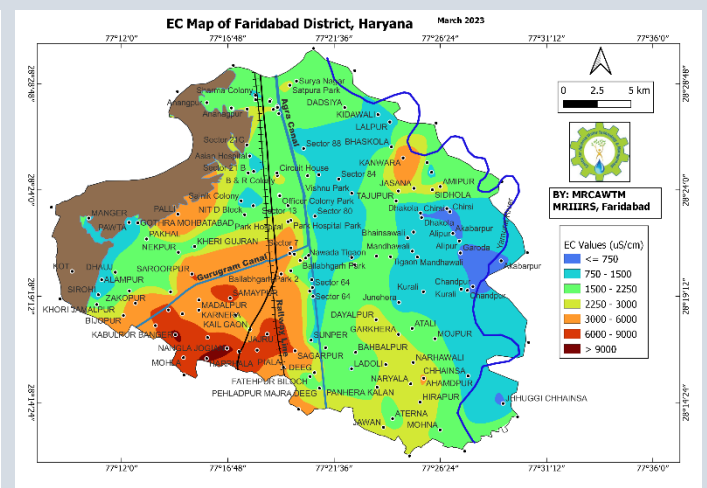
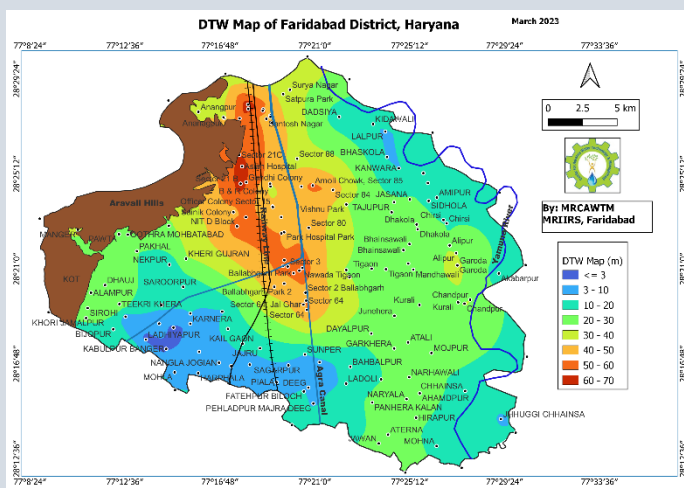
Steps followed for site selection and construction of ASRS at FSC area

Site selection

1. Joint inspection for finalization of possible locations for construction of ASRS
2. Detailed field investigations on hydrogeology for identification of sites on agreed locations for construction of ASRS
3. Identification and hiring of agencies for Surface geophysical and DGPS study
4. Surface geophysical study and DGPS survey to pin point the site within identified locations.
5. Hydraulic investigations on identified and pinpointed site for catchment delineation
6. Finalization of site for construction of ASRS

Construction of ASRS at FSC area

7. Based on results of detailed hydraulic studies calculated the runoff generation and silt load and dimension of de-siltation, coagulation and filtration chambers for each site.
8. Preparation of working drawing and BOQ for tendering
9. Construction of ASRS involving various steps
 - a. Selection of Rig as per the geology of the area for drilling
 - b. Drilling of pilot hole on pinpointed site to decipher the aquifer geometry and nature-character of aquifer at selected site and preparation of litho-log
 - c. Borehole logging to finalize the well assembly in accordance to the litho-log
 - d. Lining of assembly and construction of gravel pack tube well
 - e. Slug test to determine the intake capacity of constructed tube well
 - f. Mechanical digging of pits for construction of de-siltation, coagulation and filtration chamber.
 - g. Construction of de-siltation, coagulation and filtration chambers as per calculated dimensions given in the working drawing.
 - h. Filling of filter material in the filtration chamber constructed around tube well
 - i. Roof casting of ASRS
 - j. Hanging of Ferric chlorite dope through specially provided hanger in the coagulation chamber
10. Installation of Automatic water level recorder with telemetry at ASRS site
11. Testing of functioning of ASRS during monsoon and finalization of structure.
12. Feedback collection and monitoring of impact and radius influence of the constructed system. Popularization of the concept implemented through various media. Maintenance of constructed ASRS



ATAL BHUJAL YOJANA HARYANA

(Sanction no- ABY/2122/26w/952-956 -Cluster06 and Sanction no -ABY/2122/27w/957-961 -Cluster07)

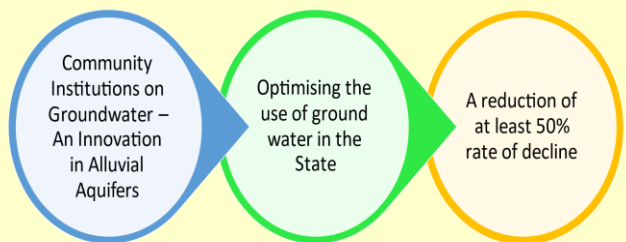


Under World Bank Assisted, Central Sector Scheme of GOI- Atal Bhujal Yojana is being implemented in 14 districts of Haryana by IWRD, Govt of Haryana. MRCAWTM has been engaged as District Implementation Partner for three districts- Faridabad, Rewari and Palwal for an initial duration of 48 months through two projects. The project is about participatory groundwater management utilizing funds through convergence mode. MRCAWTM has to develop Gram Panchayat wise Water Security Plans for 296 GPs of 7 administrative blocks involving Gram Sabha in the planning. The Village Water and Sanitation Committee has to be engaged for data collection for Supply side and Demand Side Management works. The project is approaching to fulfil following objectives:

KEY DELIVERABLES



MAJOR OUTCOMES



DESERT HYDROGEOLOGICAL STUDIES-BARMER



Hydrogeological studies in Barmer district covering 5900Km2 for last 5 years is summarised below

1. Depth of wells drilled ranges from 120 to 165m (Chowkhla 270 m)
2. Water level ranges from 82 to 108 mbgl,
3. Zone tapped largely from 90 to 163mbgl, at Chowkhla 234-268mbgl
4. Length of slotted casing used 24 to 34 m but one 45m
5. Dia of casing/ slotted pipe used 254mm, bore hole dia 508mm
6. Depth of lowering of pump 90 to 117m by and large
7. Pump HP 20 to 30
8. Lignite zone found in two locations at Sheo 60 to 64m and at Siyag 136m
9. The Jagadia sandstone aquifer at Siyag having water level 72m bgl



Study of Thar Desert hydrogeology of Barmer District by MRCAWTM MRIIRS



TEAM MRCAWTM

Founder Chair Professor

Late Dr D K Chadha, Former Chairman CGWB
(13th April 2017- 30th Dec 2020)

Working Team

Overarching leadership

Dr N C Wadhwa, DG, MREI

ED & Dean Research

Dr Sarita Sachdeva, Professor, Biotechnology

Chair Professor

Dr Dipankar Saha, Former Member CGWB

Director

Dr Arunangshu Mukherjee,

Prof & Head, ES&E & Former Scientist, CGWB

Dy Director

Ms Sneha Rai, Assistant Prof, ES&E, SET, MRIIRS

Associates:

Prof Nidhi Didwania, Director, MRCMPP

Prof Brijesh Kumar, Dean Academics and

Dr H S Saini, Former Director GSI

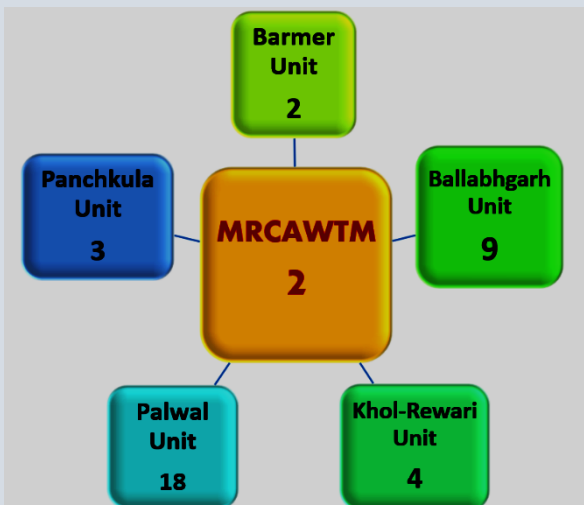
Research Associates:

Dr S Ali Khan, Sh Sandeep Punia & Mrs Priya Pahil

Field Research Team

Barmer-(2) Ballabgarh (9) Khol-Rewari (4)

Palwal (18) and Panchkula (3) TOTAL=39 person



Manav Rachna Center for Advance Water Technology and Management (MRCAWTM),
Manav Rachna International Institute of Research and Studies (MRIIRS),

AT25- Sector-43, Surajkund Road, Faridabad 121004, Haryana, India

Dr Arunangshu Mukherjee, director.cawtm@mrii.edu.in, www.mrcawtm.in

CAWTM/3/08-2023