

Academic Year 2022-23

6.5

Water in the Community

6.5.2 Promoting Conscious Water Usage

MRIIRS Weblink to SDG 6:

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

Promoting Conscious Water Usage on Campus and in the Wider Community

To promote the conscious water use MRIIRS established MRCAWTM in April 2017 with the vision 'clean water for all forever'. MRCAWTM organized Eco consult meet and other orientation programmes inhouse, and for wider community several sessions on water literacy in campus and for civil society using Manav Rachna FM Radio, organizing meetings, workshop/ seminar/ painting competitions, campus visit etc. Booklets and portable water analysis kits were distributed to promote conscious uses of water. MRIIRS offers courses in the curriculum covering the aspects of sustainable water management. The MRCAWTM promotes the conscious water use through its various activities as appended.

As evidence in support to 6.5.2 **details of activities conducted including distribution of water analysis kits** to promote conscious water usage on campus and in the wider community along with the photographs, awareness through posters on Water Conservation, Annual Brochure of Manav Rachna Centre for Advanced Water Technology and Management (CAWTM), booklet as compiled and distributed on 'Eco and Water Facts' are available. All the data are available in public domain through web site of MRIIRS.

- ✓ **Annual Brochure of Manav Rachna Centre for Advanced Water Technology and Management (CAWTM): Click to view**

- ✓ **Booklet on 'Eco and Water Facts' compiled by Manav Rachna Centre for Advance Water Technology and Management : Click to view**

Details of the activities conducted for Conscious Water Usage on Campus and in the Wider Community 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 awareness programs on Campus and for wider community under its banner 'Water Literacy Campaign'. 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.

MRCAWTM, a Centre of Excellence is catering to the research and development in all spheres of water resources, assessment, monitoring, development and management and related societal and environmental issues. The Centre is to incubate and disseminate best practices to conserve water and reuse waste water.

A. Accreditation and Awards to MRCAWTM for its remarkable efforts on Water Management Awareness and Research

- MRCAWTM got accredited by Central Ground Water Authority (CGWA), Government of India on 1st Oct 2021 **for next 5yrs.**

<https://mriirs.edu.in/latest/cawtm-mriirs-accredited-to-investigate-prepare-reports-to-obtain-no-objection-certificate-from-cgwa-goi/>

B. Awareness Programmes to promote conscious water usage on campus and in the wider community

✚ *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 International School, Sec-14, Faridabad

iv. Concious Water Usage

Resource Person: Ms. Sneha Rai, Deputy Director MRCAWTM

www.youtube.com/watch

Amazon.in AliExpress

YouTube

Search



ASIA BOOK OF RECORDS

India Book of Records

radio MANAV RACHNA 107.8

MANAV RACHNA [vidyayogabharatishah]

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>



✚ *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.

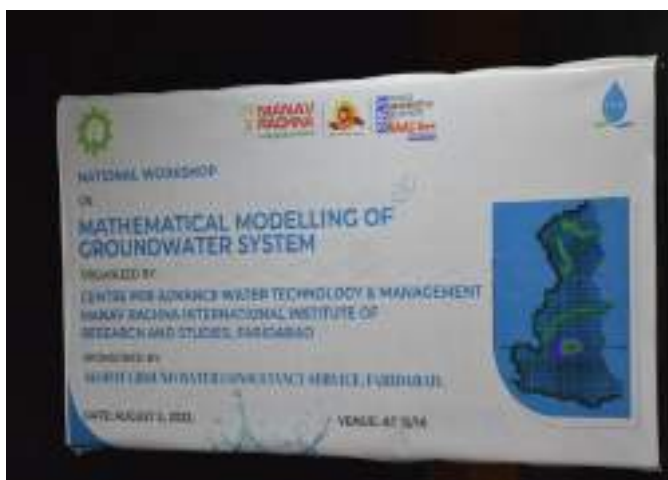


MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEACH AND STUDIES, FARIDABAD



- 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



- 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)



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.





- **One week workshop on Water and Life 1.0:**

MRIIRS organized a comprehensive **one week workshop on Water and Life 1.0** from July 24 to July 28, 2023. The workshop aimed to enlighten participants about the significance of water conservation, promote awareness about clean water and sanitation practices, and introduce the concept of a Water Audit for better water management.





- **Spreading Awareness on Water Conservation through Banners/Posters:**

Regular Awareness on Water Conservation is spread through posters, hosting rallies across the campus, sensitizing students, employees, workers, gardeners in the University Campus.



- **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

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



देरा दरिया, पलवल
सिंचाई विभाग के जल सुरक्षा योजना के अंतर्गत गांव नांगलजाट, अंधोप, गुदराना और बंचारी में जल सुरक्षा का निरीक्षण किया गया। जल सुरक्षा योजना के अंतर्गत गांव नांगलजाट, अंधोप, गुदराना और बंचारी में जल सुरक्षा का निरीक्षण किया गया। जल सुरक्षा योजना के अंतर्गत गांव नांगलजाट, अंधोप, गुदराना और बंचारी में जल सुरक्षा का निरीक्षण किया गया।

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गिरते जलस्तर को ऊंचा उठाने के लिए उठाए जाएं ठोस कदम

पलवल, 18 मई। उपायुक्त कृष्ण कुमार की अध्यक्षता में कैप 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।

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

देरा दरिया, हथीन



सिंचाई विभाग पलवल में गांव आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया। जल सुरक्षा योजना के अंतर्गत गांव आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया। जल सुरक्षा योजना के अंतर्गत गांव आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया।

लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया। जल सुरक्षा योजना के अंतर्गत गांव आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया।

'हर खेत को पानी देना सिंचाई विभाग का लक्ष्य'



लोगों को जल सुरक्षा योजना के अंतर्गत गांव आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया। जल सुरक्षा योजना के अंतर्गत गांव आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया।

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पानी का सही इस्तेमाल करने को किया जागरूक

सिंचाई विभाग पलवल में गांव आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया। जल सुरक्षा योजना के अंतर्गत गांव आलीमेव व पावसर में लोगों को सूक्ष्म सिंचाई अपनाने के लिए प्रेरित किया गया।

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**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 | | | | |
|------------------------------------------------------------------------------|-------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Sl. No. | Name of Organization | Date of MOU | Activities 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 Seminar 2022 on 24 th Feb 21. | 2 Years Further Extended |
| 2 | Geovale Services Kolkata | 18.08.2021 | Geovale used our expertise on Rockavels for their project. MRCAWTM experts invited to attend one day workshop at Kolkata on 18 th Jan 22. | 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 3000 water wells. | 3 Years |
| 5 | IWRD, Govt of Haryana | 11.06.2021 | 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 | 3 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/EWFH/237(G)&(C) PI: Dr Arunangshu Mukherjee, Director, MRCAWTM and Co-PI: Dr Nidhi Didwania, BT, MRIIRS

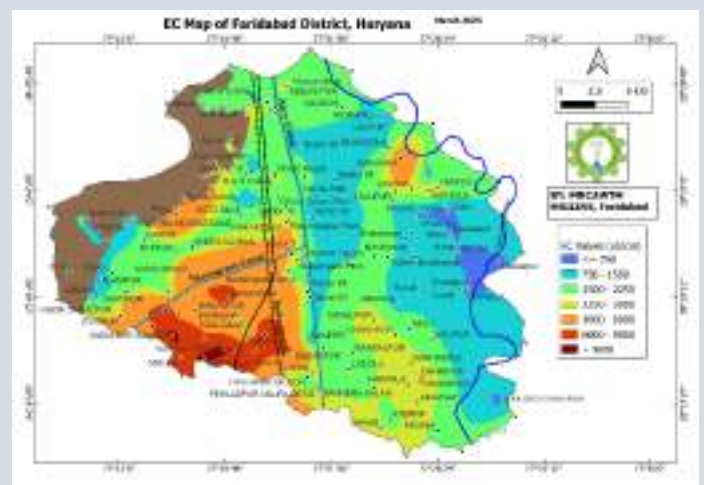
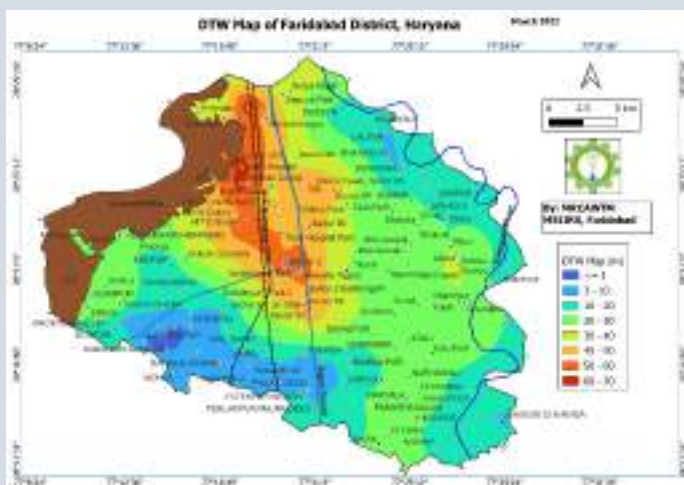
Steps followed for site selection and construction of ASRS at FSC area

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

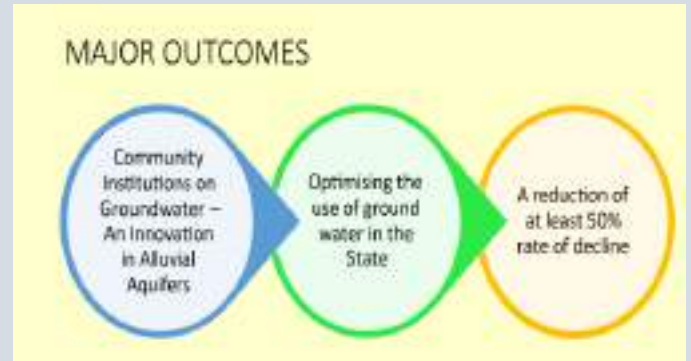


ATAL BHUJAL YOJANA HARYANA

(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:



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



TEAM MRCAWTM

Founder Chair Professor

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

Working Team

Overarching leadership

ED & Dean Research

Chair Professor

Director

Dy Director

Associates:

Research Associates:

Field Research Team

Dr N C Wadhwa, DG, MREI

Dr Sarita Sachdeva, Professor, Biotechnology

Dr Dipankar Saha, Former Member CGWB

Dr Arunangshu Mukherjee,

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

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

Prof Nidhi Didwania, Director, MRCMPP

Prof Brijesh Kumar, Dean Academics and

Dr H S Saini, Former Director GSI

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

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

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



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CAWTM/3/08-2023

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.