From President’s Desk

It is my proud privilege and honour to present the 2nd issue of e-Newsletter of INC-IAH. The working committee is extremely grateful for the appreciations received from various dignitaries from India as well as IAH head quarters for the inaugural issue of the e-Newsletter.

The launching of our official website (www.iahindia.org) in a humble way is also an important benchmark of the Indian chapter. The first National Workshop on Groundwater Governance and Regulation to be held on 23rd August 2014 will be one of the most important committed activities envisaged for the Indian National Committee of IAH. It will create a platform for interaction amongst different stakeholders like Government organizations, Research Institutes, Industries, NGOs, Voluntary organizations, individuals etc on various issues of ground water management, especially regulation. It is also a pleasure to announce “Smt Savitri Chadha Memorial Awards” for encouraging the members of INC-IAH to contribute to the scientific knowledge. I am thankful to Dr D.K.Chadha, Secretary INC-IAH for sponsoring these awards.

The contents of this issue e-Newsletter have been designed especially for our esteemed readers. Hope the e-Newsletter, which started its journey with the previous issue, would achieve the envisaged goals and mission to enhance the understanding of the ground water science, particularly the Indian Ground Water Regime.

Sushil Gupta, President, INC-IAH

Secretary’s Column

It's a matter of pride for me to inform that the first e-newsletter was well received by the members and appreciated. With the constant support and hardwork from the members nominated for preparing of the e-newsletter, I feel confident and assured that we bring the e-newsletter in a further improved fashion. The contents of April issue of e-Newsletter includes Regular column i.e Indian Hydrogeology, Recent Research in Hydrogeology, Awards, Photo competition etc.

Keeping in view importance of ground water , first National Workshop on “Groundwater Governance and Regulation” by INC-IAH has been proposed on 23rd August 2014 at New Delhi. I request you to go through the details in this issue and participate in the programme.

It is a matter of great pleasure to inform that on World Water Day, 22nd March 2014, INC-IAH launched its website (www.iahindia.org). I welcome all your suggestions to improve the web contents. The details of awards instituted by INC-IAH i.e Smt Savitri Chadha Memorial INC-IAH awards are also included in this issue. Further I am very happy that we could achieve to improve the membership number of IAH for 2014 in India.

I once again take the opportunity to appeal all the professionals working in the field of groundwater and related subjects to join IAH and contribute to this e-newsletter making it a well meaningful and research oriented news letter in Hydrogeology to achieve the common goal of creating groundwater conscious society.
Treasurer’s Report

Dear Members,

I am happy to inform that during 2014 the membership has grown to 78. As on 30th April 2014, the status of membership of IAH in India for the year 2014 is as under:-

- Number of members who have paid through INC-IAH-62 Nos
- Number of members who have paid through IAH, HQ-7 Nos
- Number of special category sponsored members continuing from 2013, exempted from membership fee in 2014 also -5 Nos
- Number of Life members-2 Nos
- Number of Honorary members exempted from membership fee-2Nos.
- Total-78 Nos

Dr Sudhanshu Shekhar,
Treasurer, INC-IAH

GROUNDWATER OF INDIA:
Sagar Island-Sundarban Delta, WB

The Sagar (or Ganga Sagar) is the largest Island in Sundarban deltaic archipelago consisting of 102 low lying islands, spread over an area of 9,630 sq km in India and 16,370 sq km in Bangladesh of which 48 are inhabited. This disaster prone tract in the mouth of river Hooghly is having acute crisis of fresh water. The development of groundwater in the island by concerted scientific studies is warranted for sustainable water supply. The Island represents low, marshy alluvial plains which is continuously undergoing the process of erosion and accretion. The farmers first erected embankments to make the place habitable by blocking ingress of saline water. After 1980 with gradual development of accessibility, the population had a steep rise in the Island. The present Population of Sagar Island (2011) is 206890. The Island is characterized by beach, mudflat, coastal dunes, sand flats, estuaries, creeks, inlets and mangrove swamps. The Sagar Island is bounded by Muriganga river in east, Hugli in west and Bay of Bengal to the south. The Island is protected by earthen embankments from inundation during high tides and saline water inrush from the distributaries as also directly from Sea as in Sagar during cyclones. Most of the areas near sea remain below mean sea level. Average tidal variation in the area is 4 m. The area enjoys humid tropical climate. The climate is mainly influenced by the North–West and South–West monsoons. The average annual rainfall in the area ranges from 1750 – 1800 mm with 100 – 110 rainy days. Temperature ranges from 40°C to 10°C and maximum humidity is about 85%. A perusal of the disaster statistics in the past and present depicts that during 1831-1960 the Sundarban has faced 314 moderate and 100 severe cyclone landfalls while during 1999-2009, 13 moderate to severe cyclones have rocked the Island. In this regard besides sustainable management of water supply, preparedness for supply of safe drinking water during such calamities is also a big issue.

The Sagar Island is underlain by the Recent alluvium consist of clay, silt and sand deposited by the river Hugli. Thick deposition of alluvium to the tune of over several hundreds of meters took place in the Gangetic delta which increases towards the mouth of the river in the South. The hydrogeology and disposition of aquifers both fresh and saline in this coastal tract have been fairly unraveled after the deep explorations of CGWB. Ground water in the area occurs under confined condition. Piezometric level varies from 3.10 to 5.78 meter below ground level (mbgl). Deep tube wells are tapping fresh water bearing zones within the depth range of 245 to 325 mbgl, yield upto 24 lps with a drawdown of 12m. Transmissivity vary from 397-506m²/day. Fresh water are overlain by saline aquifers and they are very much thin slender aquifers.

Main source of domestic and drinking water supply in the Islands is ground water. As fresh ground water occurs at great depth (beyond 200m), so it is only exploited through State government tube wells. The water supply is mainly managed through 730 normal hand pump and 8 deep water pumps (Mark-II type or cylindrical well) besides, there are 6 deep tube wells, fitted with submersible pump. Fresh water is not exploited for irrigation in Sagar Island. Demand of water for drinking is increasing day by day with natural rise in population. Particularly in Sagar Island, the demand is increasing because the gradual rise in arrival of tourist for pilgrimage all around the year which used to happen once in a year during Makar Sankranti holy dip at Ganga Sagar. A recent study in the Island revealed that the thin laminar fresh water bearing aquifers may not be competent to supply sustainably during massive pumping by submersible pumps, while the submersible pumps are running, the hand pumps in the vicinity cannot draw water. During the survey in 2012-13 it was found that nearly 80 such hand pump fitted tube wells are defunct due to lowering of piezometric surface on account of over pumping. Now in the entire Island such old hand pumps are being converted to Mark-II or cylindrical type to negotiate the decline in pressure surface. The economy of the Island is agrarian. To support the irrigation already 1790 tanks are available in Sagar Island which is irrigating 1990 Hectares of land. Besides, large scale rainwater harvesting practices in landscape along with rooftop may be practiced in the Island. Many ponds may also be demarcated utilizing pressure filter/ slow sand filter for drinking water supply so that the pumping can be reduced significantly. If no action in this regard is adopted right now, the Island may witness salinity ingress in the deep confined aquifers which will be difficult to eradicate.

Subsurface disposition of fresh and Saline aquifer in the coast
NATIONAL PROJECT ON AQUIFER MANAGEMENT (NAQUIM)

Central ground Water Board has initiated “National Project on Aquifer Management” (NAQUIM) under the scheme on ‘Ground Water Management and Regulation during XII plan (2012-17). The objective of the project is Delineation of Aquifer disposition in 3-D along with their characterization on 1:50,000 scale in 8.89 lakh sq.km. in the Over-Exploited, Critical and Semi-critical categories of Assessment units as well as water quality and other problem/vulnerable areas. The other objectives are formulation of Aquifer Management Plan for facilitating sustainable management of ground water resources at regional and local level through participatory management approach with involvement of community and stakeholders.

The main activities of the project is Compilation and Integration of existing data from Central, State Agencies, Academic Institutions and Civil Society Organizations; Establishing the data gaps; Scientific data generation through hydro-geological hydro-meteorological geophysical investigations; geochemical studies; Integration of all the data in GIS platform; generation of various thematic layers, Preparation of Aquifer maps on 1:50,000 scale in GIS platform by depicting aquifer geometry in 2D/3D and Preparation of Aquifer Management Plan.

FRACKING: THE DEBATE ON HYDRAULIC FRACTURING FOR GAS

An International one-day Conference is organized on 19th May 2014 at Mermaid Centre, London on the above subject, a subject of international importance which is being discussed in several nations. Here are a few pros and cons as seen by the British press:

In Favor:
1) It will undoubtedly make a few people very rich when the presumed fall in wholesale price leads to more profit. The idea that consumers would significantly benefit from this is a distant dream.
2) It may significantly reduce our reliance on foreign imports (but only temporarily).
3) It may help bridge the gap to a more sustainable future, and buy us time to develop better alternatives.

Against:
1) Potential to pollute groundwater with process chemicals and released hydrocarbons.
2) Causes ground instability (tremors, etc).
3) Deflects attention away from the urgent need to invest in developing renewable.
4) Ties the UK to unsustainable polluting fossil fuels further into the future increasing greenhouse gas emissions, compared with alternatives.
5) Further undermines attempts to encourage the rest of the world to clean up its act.
6) Will cause widespread unrest in the population presumably leading to further draconian laws to protect the industry at the expense of the people, thereby adding to loss of democracy, ownership, and other rights of the individual or society.
7) Will further alienate the government from its people due to more need for idiotic lies such as describing shale gas as “Green energy” (David Cameron, Prime Minister’s Questions, 15/01/14)
8) Blots on the landscape. Some people admire wind turbines, some don’t. Nobody can admire fracking rigs.
9) Bribing communities to accept fracking will still cost us, either through taxation or energy bills.

Outside UK, within the four rising economies comprising the BRIC grouping, only the Russian Federation and Brazil are self-sufficient in energy production. China is investigating any and all possible energy sources, including shale gas produced by hydraulic fracturing, or “fracking. India also seems poised to go down a similar path, as the cost of its energy imports is proving a significant drag on the otherwise explosive growth of the nation’s economy. India, the world’s fourth largest oil importer, ships in 80 per cent of its oil requirements. The growth of fracking industry world over is likely to boost India’s export of the lentil called Guar, from which ‘guar gum’ is produced. This gum is required as a thickening agent for the liquid injected into the strata for fracking. Indian farmers are currently producing 85% of world’s supply of Guar.

(Compilation of Dr Shrikant Limaye, Pune)

GREEN LAND ICE STORES LIQUID WATER YEAR-ROUND

Researchers at the University of Utah have discovered a new aquifer in the Greenland Ice Sheet that holds liquid water all year long in the otherwise perpetually frozen winter landscape. The aquifer is extensive, covering 27,000 square miles. The reservoir is known as a “perennial firm aquifer” because water persists within the firn – layers of snow and ice that don’t melt for at least
one season. Researchers believe it figures significantly in understanding the contribution of snow melt and ice melt to rising sea levels. The study was published online Sunday, Dec. 22, in the Journal Nature Geoscience. "Of the current sea level rise, the Greenland Ice Sheet is the largest contributor – and it is melting at record levels," says Rick Forster, lead author and professor of geography at the University of Utah. "So understanding the aquifer's capacity to store water from year to year is important because it fills a major gap in the overall equation of melt water runoff and sea levels."

Study show when four core samples taken then, two came to the surface with liquid water pouring off the drill while the air temperatures were minus 4 degrees Fahrenheit. The water was found at about 33 feet below the surface at the first hole and at 82 feet in the second hole. "This discovery was a surprise," Forster says. "Although water discharge from streams in winter had been previously reported, and snow temperature data implied small amounts of water, no one had yet reported observing water in the firm that had persisted through the winter." It is similar to a groundwater aquifer on land that can be used for drinking water. "Here instead of the water being stored in the airspace between subsurface rock particles, the water is stored in the air space between the ice particles, like the juice in a snow cone," Forster adds. "The surprising fact is the juice in this snow cone never freezes, even during the dark Greenland winter. Large amounts of snow fall on the surface late in the summer and quickly insulates the water from the subfreezing air temperatures above, allowing the water to persist all year long." (Source: U News Centre, University of Utah)

**POTABLE WATER QUALITY TO BE IMPROVED IN INDIA WITH INNOVATIVE TREATMENT SYSTEM**

Regions of India will soon receive cost- and energy-efficient drinking water with an innovative European water treatment technology stemmed from US $3.0 million Europe/India collaborative research project. Called ECO-India, the three-year project is co-funded by the European Commission's Seventh Framework Programme (FP7) and the Indian Department of Science and Technology (DST). It will run until August 2015 and is focused on developing innovative and sustainable approaches for producing potable water at a community level. The first rural community deployment is set for West Bengal, India. Coordinated by the Tyndall National Institute in Cork, Ireland, the US $2.3 million FP7 consortium represents a world-class interdisciplinary research team from three research institutes -- Tyndall-UC, Danmarks Tekniske Universitet (DTU), Helmholtz-Zentrum für Umweltforschung GmbH (UFZ) -- and four SMEs (Trustwater, Adelphi, Dryden Aqua, and AGM).

The FP7 consortium will develop energy-efficient systems for advanced filtration and disinfection of drinking water supplies from surface-water ponds and groundwater tube wells, which suffer from arsenic contamination using Dryden Aqua and Trust water technology. In addition, UFZ will lead the development of field-deployable arsenic sensors for screening tube-wells, while an online system developed by AGM will enable remote monitoring of water quality. Tyndall-UC will focus on the development of novel capacitive modules for the removal of ions from brackish surface water and heavy-metal ions (especially arsenic) from groundwater as well as development of novel sensors for monitoring dissolved oxygen. The overall system will be solar-powered with mains/battery backup. DTU will also lead a feasibility study for assessing energy harvesting via biogas from wastewater. The EU team partners with co-ordinated by Professor Asis Mazumdar from Jadavpur University. The overall aim of ECO-India is to design and develop innovative cost-effective solutions for community-based water- and wastewater-treatment systems. These systems will be deployed at pilot sites in arsenic-affected water-stressed regions in India. (Source: www.waterworld.com)

**ROLE OF m-SAND IN PROTECTING AQUIFER**

m-sand is manufactured sand, obtained from crushing of hard rock and boulders etc. using the state-of-the-art international technology. The natural river sand is the cheapest resources of sand. However, the excessive mining of river bed to meet the increasing demand for sand in construction industry has lead to the ecological imbalance in different states. Now the sand available in the riverbed is very coarse and contains very high percentage of silt and clay which reduce the strength of the concrete and holds dampness. Acute shortage and high price for river sand has led to adulteration with salty sea sand which has raised serious concern among builders. For this reason alternative is looked for the natural sand because sand mining permanently damages the aquifer, affects natural recharge to ground water and also causes ecological imbalances.

Now, the BIS (Bureau of Indian Standards) stipulates that the concrete can be made only with naturally accessed materials, making it impossible for the construction sector to rely on alternatives to sand like m-sand (manufactured sand). Copper slag, powdered glass and recycled construction waste among others which are increasingly being used in many EU Nations, Singapore and the US. Seeking to strike a balance between growing needs of construction industry and environmental concerns to preserve river beds amid excessive sand mining, the government may opt for changing specifications of the BIS to ensure substitutes of sand can be used by builders across the country.

m-sand’s high strength, uniform shape, proper gradation of fines, smooth surface texture and consistency in production parameter provide greater durability and higher strength to concrete by overcoming the deficiencies like segregation, bleeding, honeycomb, voids and capillary. In a vast country like India to meet the need of construction industry we have to look for alternatives like m-sand and other locally available material like other nations which have already started using m-sand.
National Geoscience Award 2012 for Ground Water Exploration

The National Geoscience Awards 2012 presentation ceremony was held on 25th February, 2014 at Vigyan Bhawan, New Delhi. Shri Dinsha Patel, Hon’ble Minister of Mines conferred the awards on twenty seven geoscientists. The GSI team comprising S/Shri Kottapalli Venkata Satyanarayana, B. Balakrishna, M.Pradeep Kumar, Manyam Srinivasa Kumar and Dr. Dinesh Gupta got the coveted award in the field of Groundwater Exploration. The team carried out extensive investigations in Cauvery basin and worked out the salt water-fresh water interface which is of immense importance in groundwater management of coastal areas.

Outstanding Book Award

Dr. Madan Kumar Jha, Professor at the Agricultural & Food Engineering Department, Indian Institute of Technology Kharagpur and Associate Editor, Hydrogeology Journal, has been awarded “Outstanding Book Award” in January 2014 for his book entitled “Hydrologic Time Series Analysis: Theory and Practice” published by Springer by the Indian Society of Agricultural Engineers (ISAE), New Delhi.

SAND MINING FROM RIVER BED (Photo: The Hindu)

AWARDS/HONOURS

The Lee Kuan Yew Water Prize 2014

SINGAPORE, Feb. 18, 2014 -- The Lee Kuan Yew Water Prize 2014 was recently awarded to The Orange County Water District (OCWD) in the state of California for its exceptional work in groundwater management and water reclamation using advanced water reuse technologies, as well as for its achievements in public policy and community outreach. The highlight of the Singapore International Water Week (SIWW), The Lee Kuan Yew Water Prize is an international water award recognizing outstanding contributions toward solving global water problems by either applying innovative technologies or implementing policies and programs that benefit humanity.

AWARDS/HONOURS

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FORTHCOMING SEMINARS/CONFERENCES

23rd August 2014, New Delhi, India: National Workshop on Ground water Governance & Regulation, by INC-IAH, India International Centre, New Delhi. Web: http://www.iahindia.org, E-mail- shekhar1023@yahoo.com


14-20 Sep 2014 Gwangju, KOREA.  
22nd International Committee on Irrigation and Drainage (ICID) Congress.  
Web: http://www.icid2014.org

15-19 Sep 2014 Marrakech, MOROCCO.  
Groundwater: Challenges and Strategies.  
IAH 41st Congress.  
Web: http://www.iah2014.org/

21-26 Sep 2014 Lisbon, PORTUGAL.  
2014 IWA World Water Congress & Exhibition.  
Web: http://www.iwa2014lisbon.org/

10-13 Dec 2014 - Visakhapatnam, INDIA.  
Groundwater Resources Assessment and Management in Arid and Semi Arid Regions with Special Reference to Management of Coastal Aquifer system. IGWC-2014.  
Email: vinodaraao2004@yahoo.com or karvirmrajan@gmail.com

INC-IAH NEWS

Release of Inaugural e-Newsletter:  
INC-IAH released its inaugural quarterly e-Newsletter on 29th Jan 2014 which marked the beginning of communication system to keep the members updated on the National and International scenario on different activities of hydrogeology and allied subjects. This e-Newsletter will have permanent columns like- Recent Researches in Hydrogeology, photography competition, International Participation of INC-IAH members, Awards/honour etc. The e-Newsletter received appreciation from the national members and IAH, HQ.

Launching of Website of INC-IAH  
INC-IAH has launched its official web site www.iahindia.org on the occasion of World Water Day at New Delhi on 22nd March, 2014. The professionally designed web site will be the main source of information about the activities of Indian national chapter. The INC-IAH website was launched by the Dr. R.C.Jain, Member, CGWB. The occasion was attended by Executives and members of INC-IAH Dr. D.K. Chadha, Shri Arun Kumar, Shri Subrata Kumar, Shri Manoj Srivastava, Dr S.Shekhkar, Dr A.Mukherjee, Dr Shilpi Saxena and Shri M.K.Garg. The efforts and contribution made by Dr. Shilpi Saxena, Shri S.K. Sinha, Dr A. Mukherjee, Dr. S.Shekhkar, & others were highly appreciated in timely launching of the website on World Water Day. The website is the beginning to project the importance of groundwater in the economy of India and of the latest research/publication. Dr. D.K. Chadha congratulated all members of INC-IAH for the successful completion of this task.

Third Meeting of Indian National Committee-IAH  
Third meeting of members of Executive committee of INC-IAH was held on 26.02.2014 at New Delhi, India. Shri Sushil Gupta, President welcomed the members, Dr D.K Chadha, Secretary also complimented the team and brought forward the status of the various activities discussed earlier to be taken up by INC-IAH in near future. The committee agreed to institute two annual awards, for outstanding works in Indian Hydrogeology. Dr. D.K. Chadha has announced for sponsoring these award in the name of Smt Savitri Chadha. The Committee has also decided to organize a National Conference on “Ground Water Governance and Regulation” at New Delhi. Dr R.C Jain, Dr Dipankar Saha, Sri S.K. Sinha, Dr Sudhanshu Shekhar, Dr Shilpi Saxena and Dr. A. Mukherjee were also present during the third meeting of Executive Committee. The meeting ended with vote of thanks to the chair.

ANNOUNCEMENTS

National Workshop on “Ground Water Governance and Regulation”  
The first National Workshop on “Ground Water Governance and Regulation” is proposed to be organized on 23rd August, 2014 at
Indian International Centre, New Delhi. The objective of this workshop is to create a platform for interaction amongst different stakeholders like Government organizations, Research Institutes, industries, NGOs, Voluntary organizations, Individuals, to share their views and experiences on these two important subjects.

Theme
The theme of the workshop is “Ground Water Governance and Regulation”.

The Sub themes are:-
- Ground Water Challenges in India
- Ground Water Governance
- Ground Water Regulation

Important dates of Paper submission
Submission of Abstracts- 15th July 2014
Intimation of acceptance of abstracts-30th July, 2014
Submission of Full paper-10th August 2014

The abstract should not exceed 350 words. The full paper should include Title, Authors affiliation, abstract, 5 key words and text in MS Word. The full paper (optional) is to be kept within 10 pages (including tables and figures) in single line spacing with 12 point, Arial Font. The full paper accepted after peer review will be published separately. The submission of paper is only through e-mail - shekhar1023@yahoo.com

Annual General Body Meeting of INC-IAH
The Annual General body meeting of Indian National Committee of IAH will be held on 23rd August 2014 at 18.00 hrs at Indian International Centre, New Delhi

“Smt Savitri Chadha Memorial INC-IAH Award” for 2014
Smt Savitri Chadha Memorial INC-IAH Award was instituted by Indian National Committee of IAH in 2014 for INC-IAH members. The award is sponsored by Dr D.K.Chadha, Secretary, INC-IAH. The objective of the award is to honor Groundwater scientists for their outstanding contribution in Indian Hydrogeology. The awards will be given during the National Workshop on “Ground Water Governance and Regulation”. There are two categories of awards (see notification for details):-

1. Groundwater Excellence Award
2. Young Scientist Award (≤40 years)

1. Smt Savitri Chadha Memorial INC-IAH Award for Groundwater Excellence.
This award carries a cash prize of Rs 25000/-, plaque and a certificate. The criteria for the award are:-
- Nominees should be a member of INC-IAH for 2014, as on 30th June 2014.
- Essential Qualification and experience: Post-graduate degree in Science/Engineering/Social Science with more than 15 years of experience in the field of Groundwater, as on 01.01.2014. The experience in field of Hydrogeology/ Ground Water is excluding the Ph.D work. Should have to produce documental evidence in support of Educational Qualification and experience.
- The nomination may be made by self or through a member of INC-IAH.
- The nomination may be sent on the prescribed format only by post/e-mail so as to reach positively by 15th July 2014. Late entry shall be summarily rejected.

2. Smt Savitri Chadha Memorial INC-IAH Award for Young Scientist
This award carries a cash prize of Rs 15000/-, plaque and a certificate. The criteria for the award are:-
- Nominee should be a member of INC-IAH for 2014, as on 30th June 2014.
- The nominee must be 40 years or below in age as on 01.01.2014, as per the certificate of Matriculation.
- Essential Qualification and experience: Anyone having Post-graduate degree in Science/Engineering/Social Science with more than 5 year experience in the field of Hydrogeology/ Ground Water, as on 01.01.2014. The experience in field of Groundwater is excluding the Ph.D work. Should have to produce documental evidence in support of work, experience and age.
- The nomination may be made by self or though a member of INC-IAH.
- The nomination may be sent on the prescribed format only by post/e-mail so as to reach positively by 15th July 2014. Late entry shall be summarily rejected.

New Membership Drive for IAH
IAH Membership runs for a Calendar Year 2014 (January-December). The fee structure of IAH-INC for the Year 2014 is

1. Member- Rs. 3250/-, 2-On-line Member - Rs. 2400/-, 3- Student Member-Rs. 2650/-, 4. On-line Student Member-Rs. 1800/-
5. Retired Member- Rs. 1800/-, 6. Corporate Members- Rs. 16500/-

New membership of IAH/Renewal of membership for 2014 can be obtained by following method:-
- The membership Fee amount can be deposited in any of ICICI Bank in the name of "INC OF IAH" A/C No. 006901009233 (ICICI Account, Sector-21C, Faridabad-121001, Haryana) The fee receipt along with details of member (Name, Designation, category of membership, Organization, Address, e-mail, telephone No-) may also be sent as attachment file to The Treasurer, INC-IAH through e-mail to shekhar1023@yahoo.com
- Those who want to send by DD/Cheque (with CTC-2010 multiplicy Cheque) it should be in favour of "INC of IAH" payable at Faridabad. It should be sent with details to the address of The Treasurer, INC-IAH, 405, Surbhi Apartment, GH-3, Sector-21C/Part-III, Faridabad-121001, and (Haryana). Those who want to be a member for the first time may apply through online to IAH website www.iah.org/join-us directly. However the details of payment should be sent to the Treasurer, INC-IAH.
Terms and conditions

1. The subject for the INC-IAH photography competition for next issue of e-Newsletter is "Ground Water Contamination and Pollution".
2. The theme is open to individual interpretation, but must include Ground water as a central theme and photo be taken in your local area in India within last two years.
3. The competition is open to Indian residents only.
4. Entrants can submit up to two photos electronically, in colour or black and white. Submissions may be made electronically as a JPEG, TIFF, PNG, or GIF file. Electronic files must be at least 300 dpi (or 1500 x 1500 pixels). Maximum size is 15 Mb and it is recommended that the image size be no smaller than 5 megapixels. Montages or blending of multiple photographs is not allowed. A brief one to two-sentence caption in English is essential.
5. The competition closes at midnight on 30th June, 2014. Entries should be emailed to shekhar1023@yahoo.com.

The other terms and conditions are as follows:
- Entrants must not be professional photographers and, for the purposes of this competition, a professional photographer will be considered to be someone who makes more than half their annual income from the sale of their photographs.
- All entries will be judged by a panel of judges. The judges will select the best entry in their opinion. Three selected photograph will be published in the next issue of e-newsletter. The best photograph will be rewarded with the cash prize of Rs 1000.
- Each entry should be marked with name, address and where the photo was taken.
- All entries must be the original work of the entrant and must not infringe the rights of any other party. The entrants must be the sole owner of copyright in all photographs entered and must have obtained permission of any people featured in the entries or their parents/guardians if children under 16 are featured. Further, entrants must not have breached any laws when taking their photographs.
- Prior to submission, entrants must not have offered any of their entries for sale, been paid for any publication of any of their entries or won or been a runner up in any other photographic competition with any of their entries.
- Entrants will retain copyright in the photographs that they submit. By entering the competition all entrants grant to the INC-IAH the right to publish and exhibit their photographs the INC-IAH’s website, e-Newsletter.
- By entering, entrants will be deemed to have agreed to be bound by these rules and the INC-IAH reserves the right to exclude any entry from the competition at any time and in its absolute discretion if the Society has reason to believe that an entrant has breached these rules.
- INC-IAH reserves the right to cancel this competition or alter any of the rules at any stage, if deemed necessary in its opinion, and if circumstances arise outside of its control.
- These rules are governed by the laws of India. This competition is administered by the INC-IAH.

RESULTS OF THE FIRST INC-IAH PHOTO COMPETITION
(Theme: Occurrence and Movement of Ground Water)

Winner

M. Thirumurugan
Department of Geology
Anna University, Chennai-25

"Still water runs deep, Shallow waters run dry frequently"

Location: Karur, Tamil Nadu, India.
RESULTS OF THE FIRST INC-IAH PHOTO COMPETITION
(Theme: Occurrence and Movement of Ground Water)

Other Photographs, which were selected for publication are:

- Ms Shilpi Gupta, CGWB, Faridabad
- Mr Suman Kumar, Delhi University, Delhi
- Mr Rajaveni, Anna University, Chennai
- Mr Dhanamadhavan S, Anna University, Chennai
- Mr D. Chakraborty, CGWB, Raipur

Occurrence and movement of groundwater in deeper aquifers in hard rock terrain.
- By P K Naik, CGWB, Raipur
What our readers say on the 1st Issue of e-News Letter

1. This is excellent. Let's hope it is the first of a very long series. Please pass my congratulations on to all involved. Best wishes,
Ken Howard
President of the International Association of Hydrogeologists (IAH) and Professor of Hydrogeology
University of Toronto Scarborough (UTSC)
1265 Military Trail, Toronto, ON
M1C 1A4, CANADA
www.iah.org, www.utsc.utoronto.ca/~gwater/

Dear Colleagues of the INC
Namaste, Sat Sri Akal & Khuda Hafiz!
I have read with pleasure the 1st e-Newsletter issues by the INC. I thought I would write in to congratulate you for your efforts - the newsletter reads well and I am sure it will attract many readers. If it is posted in print form in Groundwater Offices and in Colleges, it will attract even more attention!!
Well done and I hope to see more of these e-letters in due course.
The timing is good, as the Executive is to meet next week and by cc of this email I am passing it to the Members of the Exec. We will read it with interest and discuss ways to continue to support the INC. Meanwhile if you have any proposals to hold national meetings, short courses, or any other activities of the Association in India, please send in such proposals ASAP so they discussed at the Exec meeting.
I see from the IAH website for National Chapters (http://iah.org/groups/national-chapters/#1) that the INC does not have a dedicated web site, where this news letter should be posted. Please let us know if you need help in hosting the INC web site - with the new facilities that we now have, this should be possible and I will ask our web manager to let you know what we can offer.
With all good wishes
Shammy Puri, Secretary General, IAH

Dear Prabir Kumar Naik,
Congratulations on this IAH newsletter which is most informative. It looks like much good groundwater support work is happening in your region.
All the best,
Wendy
Wendy Timms, PhD, MIAH, MAusIMM, MIEAust
Director Postgraduate Studies (Coursework), School of Mining Engineering
FACULTY OF ENGINEERING
THE UNIVERSITY OF NEW SOUTH WALES
SYDNEY NSW 2052 AUSTRALIA

4. Dear IAH colleagues in India
Thank you for the copy of your Newsletter, which I read with interest. It is good to hear about the activities of the Indian NC.
Best wishes,
Bruce Misstear

5. Thanks Dr. Prabir Naik.
You have an excellent and apppellative Newsletter.
All the success for the work concerning groundwater professionals and hydrogeological knowledge.
My regards.
Antonio Chambel
IAH Vice-President

6. Dear Colleague,
Thank you, this is good work. I see that the Indian chapter is really active.
Best wishes – Nico Goldscheider

What our readers say on INC-IAH website

1. Dear INC and Colleagues
Congratulations on an excellent web site!
I look forward to visiting it regularly to catch up on the news from India.
Best wishes to all
Shammy
Shammy Puri, Secretary General, IAH

2. Dear Sir/Madam,
I take this opportunity to congratulate the team for hosting IAH-INDIA website. I had a look at the website and it is really nice. I convey my best wishes for continuation of such successful endeavors in future. With best regards.
Shashank
Dr. Shashank Shekhar
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