



IETSC NEWSLETTER

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From the Chairman's Desk

Dear Fellow fraternity,

Hyderabad's lakes were created for drinking water and irrigation purposes. Over the years, due to the expansion of the city, their original purpose was forgotten but they continued to

stay relevant for flood regulation. So, why didn't this prevent the city from flooding?

The man-made Hussainsagar Lake was Hyderabad's main drinking water source till the early part of the last century. But even as the city, established by Muhammed Quli Qutb Shah of the Qutb Shahi dynasty in 1591, expanded beyond the fortified walls of the Golconda, the heart-shape lake built across a tributary of the river Musi was only one of the several hundreds of lakes that dotted the region. In less than a century, the city has expanded from 55 sq.km to 625 sq.km under the Greater Hyderabad Municipal Corporation (GHMC). The jurisdiction of the Hyderabad Metropolitan Development Authority (HMDA) spreads over 7,257 sq.km covering parts of a few neighboring districts as well, and had 2,800 lakes as per a 2017 estimate.

The water bodies were created for drinking water and irrigation purposes at a time when water management was considered crucial in this otherwise arid region for centuries. This network of man-made water bodies, interconnected by several natural waterways, ultimately led to the River Musi in most cases. Along with these small lakes, in the aftermath of the 1908 floods in Hyderabad, the Nizam government commissioned two big reservoirs, Osman Sagar and Himayat Sagar, on the periphery of the city to regulate the water flow from Musi and its tributary Esa. But the rivers have since vanished. Discharge of sewage and industrial effluents, encroachments by government and private individuals, and decades of neglect had everyone thinking the river would never flow again. Most of the former waterways are open sewers now. But, on October 13, 2020 the river was in spate once again after a record downpour. Low-lying localities and colonies that were built on the lake beds and nullahs were submerged in no time. Many days later, hundreds of these colonies were still under water.

Over the years, owing to the expansion of the city, the lakes were not in demand for their primary purposes of irrigation and drinking water. But they continued to be relevant for flood regulation. Despite this, in the last few decades, several colonies, as well as large real estate ventures, have come up in the full-tank levels-the buffer area-of lakes, large water bodies that existed for centuries have shrunk in size,

encroachments have eaten into natural waterways, and storm water drains get easily clogged.

As per the GHMC data, parts of the Nadeem Colony abutting Shah Hatim Talab had water rise to 12 feet after the downpour on October 13. Devi Nagar and Chudi Bazaar colonies in Goshamahal saw the water rise to 10 feet. Similar were the scenes in several other colonies like Hafiz Baba Nagar, Al Jubail Colony, Ghazi-e-millat colony, Chandrayangutta, Ghouse Nagar, Moin Bagh, Edi Bazaar, Talab Katta and Riyasat Nagar in the old city area. All these localities witnessed water rise to 4 feet. Close to two dozen colonies around LB Nagar too faced a similar fate. As many as 33 lives have been lost to heavy rains and floods in the city, with the GHMC estimating that at least 37,409 families have been affected. The Municipal Administration minister pegged the city's losses at Rs 670 crore.

While summarizing the present situation, I would say, it is nothing less than a colossal disaster in some areas leading to unprecedented loss of life and washed away of the hard earned savings of the inhabitants which will be a worst memory in the history of Hyderabad. I feel it is important for not only the Government but also all the stakeholders particularly the engineers who should rise to the emerging challenge and work so as to prevent this sort of disaster in future and bring back the unbridled joy in the face of the suffered humanity. Let it be an urgent mission.

With regards,


Dr G Rameshwar Rao, FIE
Chairman



From Hon. Secretary's Desk

Dear Friends,

GIS Day provides an international forum for users of geographic information systems (GIS) technology to demonstrate real-world applications that are making a difference in

our society. GIS Day is a fun day to showcase how GIS is used, discover and explore the benefits of GIS, and inspire the community by celebrating GIS. The first formal GIS Day took place in 1999. Esri president and co-founder Jack Dangermond credits Ralph Nader with

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The Institution of Engineers (India)
TELANGANA STATE CENTRE

100 years of Relentless journey towards Engineering Advancement for Nation Building

being the person who inspired the creation of GIS Day. Jack Dangermond with a new generation of geographers at one of the first GIS Day events in 1999. Nader considered GIS Day a good initiative for people to learn about geography, and the uses of GIS, and wanted GIS Day to be a grassroots effort that was open to everyone.

GIS Day is not just an event, it's a global movement. GIS day brings universities, government agencies, schools, non-profits, and GIS professionals together to build knowledge of GIS in their communities, and create understanding about the world we live in. GIS Day happens because of a passion for geospatial thinking. Through the event a seed is planted that grows GIS understanding in the community, and around the world. Each of us has the power to inspire and change the world through GIS. Join the movement on GIS Day. The Telangana State Centre will be organizing GIS day on 18th November, 2020. I take this opportunity to appeal to you all to kindly participate in event and carry forward the noble thought of GIS.



(Er T Anjaiah, FIE)
Hon. Secretary

Birthday Celebrations of Mahatma Gandhi & Lal Bahadur Shastri



October 2, 2020: IEI, Telangana State Centre organized Birthday Celebrations of Mahatma Gandhi & Lal Bahadur Shastri. **Dr G Rameshwar Rao**, FIE, Chairman, IEI, TSC Garlanded the Portraits of Mahatma Gandhi & Lal Bahadur Shastri. **Er T Anjaiah**, FIE, Hon. Secretary, IEI, TSC; **Prof. G Radhakrishna**, FIE, Jt. Hon. Secretary, IEI, TSC, **Dr P L Panda**, FIE, Member, IEI and Staff of IEI, TSC TSCC also participated and paid Tributes.

Er Atluri Venkateswara Rao Thirteenth Endowment Lecture on "PARIDIGM SHIFT"

September 28, 2020: IEI, Telangana State Centre organized Er Atluri Venkateswara Rao Thirteenth Endowment Lecture on "PARIDIGM SHIFT" through ZOOM Meetings delivered by **Shri KRISH S RADHAKRISHNA**, CEO, Krish Personal Development. During his address about importance of personality development, he said that sense as responsibility is very much essential. Life is a beautiful journey, In that state of mind is very importance. He also explained communication internal and communication external and how to impact our way of talking/speaking our self and others. He explained difference between physiology and psychology. Psychological fitness effects your quality of life, physical fitness is good for health. He also said about focus what you are doing in day to day life. He appealed to all, do yoga and physical fitness activities daily for your better future and good health.



Dr G Rameshwar Rao, FIE, Chairman, IEI, TSC welcomed the gathering and Presided over the function. **Prof. C Ramanujacharyulu**, FIE, Member, IEI, TSCC briefed about Chief Guest and Speaker, **Er T Anjaiah**, FIE, Hon. Secretary, IEI, TSC proposed vote of thanks. Family members of Er Atluri Venkateswara Rao, IEITSC Committee Members and Corporate Members etc., participated.

WORLD HABITAT DAY Theme: "Housing for All: A Better Urban Future"

October 5, 2020: The Institution of Engineers (India), Telangana State Centre has organized World Habitat Day 2020 with the theme "Housing for All: A Better Urban Future". **Er Kanna Suresh Kumar**, FIE, OSD (Housing), GHMC and Former Chief Engineer, GHMC, Hyderabad graced the function as Chief Guest and addressed the gathering.



In his address, the Chief Guest elaborately explained that 2 BHK dignity Housing taken up by GHMC and also that the Greater Hyderabad Municipal Corporation spread over an area of 625 sq.km s per ULB notified in 2007. GHMC divided into 6 zones and 30 circles. They find 1476 slums, in that notified slums are 1179 and 297 slums are not notified. In slums 4.06 lakhs of householders and 19.51 lakhs population are living. He further said that the housing demand in GHMC was 4, 57,436 as per SKS survey. The Telangana Government set a target to construct 1.00 lakh 2 BHK dwelling units for phase 1 and each dwelling unit to have 2 bed rooms, Hall, Kitchen and 2 bath –cum-toilets with a plinth area of 560 sq.ft (including common area) and carpet

area of 430 sq.ft. The GHMC adopted two pronged strategy to achieve the target of 1 lakh houses. One is the development of in-situ slums (40 locations) and the other is development of housing projects in vacant lands (71 locations). Works at 22 locations are completed and remaining 89 locations are in brisk progress in Hyderabad, Ranga Reddy, Medchal & Sangha Reddy Districts.

Dr G Rameshwar Rao, FIE, Chairman, IEI, TSC welcomed the gathering and presided over the function. **Prof. G Radhakrishna, FIE**, Joint Hon. Secretary, IEI, TSC introduced the Chief Guest of the event to the elite participants and **Er T Anjaih, FIE**, Hon. Secretary, IEI, TSC proposed Vote of Thanks.

Er R L Raju Sixth Endowment Lecture on "Effective Resolution on Construction Disputes"

October 10, 2020: IEI, Telangana State Centre organized **Er R L Raju** Sixth Endowment Lecture on **"Effective Resolution on Construction Disputes"** **Dr SRIDHAR MOTHE**, FIE, Head-Contracts and Claims Building Division, NCC Ltd, Hyderabad. During his address he stated that in India construction industry contributes to about 11% of GDP sector wise.

After the agriculture sector which has 16% contribution to GDP, construction is rated second interms of employment generation in the country. With significant contribution to national economy, construction sector provides direct and indirect employment to around 3.5 crores population in India. In our country construction has accounted for around 40% of development investment in last 50 years. After economic reforms in 1990 post liberalization, there has been spurt in construction activity with all round development in Infrastructure across various sectors.

He also said that where are projects to be implemented in major way for development of roads, highways, ports, airports, expressways, metro rail projects, industrial and dedicated freight corridors, rail networks, housing and urban infrastructure development in the next five years. With this the plan outlay in construction is estimated Rs. 8 Lakh crores per anum. There are plans to develop 100 smart cities in country which will give boost to economic activity and construction sector. After recovery from the Covid-19 Pandemic, within next three years the value of construction industry is expected to touch US\$ 730 billion by 2022 with massive investments in infrastructure growth. Construction sector is undergoing various challenges and facing problems with respect to project implementation schedules. Many of the projects are getting delayed in completion schedules resulting in time and cost overruns. Because of this there are disputes pending in construction industry in arbitration tribunals and courts. Asperasurveyit is estimated that presently disputed amounts by way of unresolved claims in construction sector amount to Rs.1,00,000 crores (One Lakh Crores). This is alarming and deterrent to growth of the industry.

He further said that the Govt. has initiated numerous measures for encouraging alternative dispute resolution (ADR) methods by way of amendments to the



Arbitration and Conciliation act in 2019. Also formation of Arbitration Council of India (ACI) for accrediting the Arbitral Institutes for promotion of institutional arbitration is on anvil. To compete globally and to attract more foreign investments, it is imperative to make India a global hub for administering international arbitrations. Fair contract administration practices and speedy, costeffective dispute resolution approaches are need of the hour for harmonious growth.

Dr G Rameshwar Rao, FIE, Chairman, IEI, TSC welcomed the gathering and Presided over the function. **Er V Jambul Reddy, FIE**, Member, IEI, TSCC briefed about the Chief Guest and Speaker, **Er T Anjaiah, FIE**, Hon. Secretary, IEI, TSC proposed vote of thanks.

WORLD STUDENTS DAY-2020



October 15, 2020: IEI, Telangana State Centre and Engineering Staff College of India jointly organized **WORLD STUDENTS DAY-2020** Theme: **"FOSTERING INNOVATION & STARTUP CULTURE WITHIN SCHOOL & COLLEGE CAMPUSES"**. **Shri JAYESH RANJAN, IAS**, Principal Secretary to Government of Telangana (I&C Dept, ITE Dept) & Vice Chancellor I/C, JNTUH graced the function as Chief Guest. The Chief Guest greeted to all participants and congratulated the organizers conduct this webinar. The topic is very relevant to present situation and apt to the world student day. The Chief Guest also said the instructions issued by the Government in new education policy drives towards innovation in higher education. That every college should encourage and motivate their students to look at innovations. The Chief Guest shared a data set, i.e when visited every college,



it had one E-Cell block as per university guidelines and it works for encouraging students towards innovation, but no one using it and didn't have proper infrastructure. AICTE given approval for E-Cell for colleges earlier but it was only a formality, now every college definitely should submit their innovative students list otherwise AICTE will take the action against that college. Further, the Chief Guest said that the Telangana Government introduced TASK and TSIC for giving skill development activities in students and encouraging innovate students to entrepreneurship side. Also introduced J-Hub for envisioned to provide a unique platform for the graduate engineers, faculty, research scholars and alumni to pursue innovation, Applied Research and tech-entrepreneurship. The Chief Guest suggested all institutions and organizations to train the faculties of selected colleges.

Prof P B Sharma, Vice Chancellor, Amity University, Gurugram & Past President, AIU graced the function as Guest of Honor. Prof Sharma said that the education is not just learning to know, but today engineering technology & science more about learning to do. Because learning is very important and creates enterprises mine and help for start-ups and it leads towards Country economics prosperity. Professor also requested all colleges to provide quality education as well as research and create innovation culture. The culture of innovation is also important to create leadership quality. Further Professor explained about research & innovation excellence of Amity University, Haryana.

Dr Y Sreenivas Rao, FIE, Outstanding Scientist & Project Director, DRDO, Hyderabad graced the occasion. Dr Rao said that the innovation is culture and as well as a challenge. Also elaborately explained DRDO developed innovative technologies in the time of covid-19 crises

such as inventing ventilators, PPE Suits, UV Disinfection Tower, Contactless Sanitizer Dispenser and etc.

Er Narendra Singh, FIE, President, IEI graced the occasion and explained the importance of the world student's day. Also said that the theme chosen is very relevant in the present situation and explained role played by IEI and ESCI to encourage and innovate students to provide skill developmental programmes from the earlier. Further Er Narendar Singh said that the first President of IEI **Dr Ragendranath Mookerjee**, who was entrepreneur cum engineer and IEI proved powerful effective organization to promote engineers are the fittest community towards accept the start-up challenging.

Dr S N Rao, FIE, Chairman, Governing Council, ESCI & Past Vice President, IEI graced the function. Dr Rao said that this webinar was well organized with in the connection with the world student's day and it is very appropriate to look in to the welfare of the students and said that the present Government policies are really encouraging the young entrepreneurs to enter into real Nation Building & Economic Development of our Country. **Dr G Rameshwar Rao**, FIE, Chairman, IEI, TSC welcomed the gathering. **Er T Anjaiah**, FIE, Hon. Secretary, IEI, TSC proposed vote of thanks.

Web Conference on "UNPRECEDENTED FLOODS IN GHMC AREA"

October 16, 2020: IEI, Telangana State Centre organized Web Conference on "Unprecedented floods in GHMC area". **Dr G Rameshwar Rao**, FIE, Chairman, IEI, TSC presided over the web Conference. **Dr M V S S Giridhar**, Professor and Head Centre for Water Resources & Coordinator-Rainwater Harvesting Project, JNTU, Hyderabad acted as Moderator for the Web Conference. Total 78 participants participated and interacted with the panellists about the theme. 32 Eminent speakers explained various suggestions with their vast experience in their field.



The summary from all the experts and panellists attended the web conference and moderated by **Dr M V S S Giridhar**. For Sustainable Storm Water Management (SWMM) the following broad areas need to strengthen in any city for smooth management of flood water due to heavy rainfall. (1) Prediction (2) Engineering Services (3) Civic Sense. **Shri B Vinod Kumar**, Vice Chairman, Telangana State Planning Board explained the need and responsibilities of Civic sense to handle the inundation situation due to floods. Further, explained the need of storm water and sewage water pipe lines separately.

Shri V Prakash Rao, Chairman, Telangana State Water Resources Development Corporation, Govt. of Telangana suggested the: (1) to request the Government of Telangana to appoint Senior Officers in GHMC to implement the Supreme Court Judgment. (2) To protect the tanks

basins. (3) To inject bore wells at the foreshore of Tanks so that to increase the Ground Water levels. (4) To protect the tanks free from Pollution. **Er. Sana Maruthi**, FIE, Former Commissioner and Ex-Officio Secretary, I & CAD Department explained for considering the geography while managing the floods in the any city. He also suggested that many experts to be involved to find out the cause. **Er A Prabhakar Rao**, FIE, explained the need of injection bore wells in the private and public areas in the city.

Dr. (Mrs) K Nagaratna, Scientist, IMD explained the importance of prediction of rainfall before hand to address floods. **Ms. Anuradha Reddy** explained the need of creating awareness among the society for handling the floods. **Sri.M.Jagadeshwar**, IAS (Retd) explained the need of community involvement and participation for controlling the floods. Further, suggested to identify the houses with in FTL of tanks. **Er. P Kondal Rao**, Chief Engineer (Retd), PH explained the need of rainwater harvesting in place and importance of pervious payment and lake restoration. **Dr. R Ramesh Reddy**, FIE. Former Professor, Dept. of Civil Engineering, University College of Engineering, Hyderabad suggested to have holistic approach rather piece meal approach. **Er. P. Satyanarayana**, Chief Engineer (Retd), GHMC suggested to divide the huge storm flow into small flows and can be handled easily. **Er. Veda Kumar**, Forum for Better for Hyderabad elaborated the need of master plan linkage with new and old. **Er. Pochender** explained the need of storm water pipe line design with considering runoff coefficient as one. Further suggested to have layout level storm water management plan and cellar level floor plan and pumping system. **Er. MB Prveen Kumar**, FIE Director (Technical) Retd), HMWS&SB enumerated the importance of short, medium and long term plans.

Delhi Vasanth suggested looking ingenious technology for flood management. Further explained the need of correct weather forecasting and proper urban planning. **Er. M. Satyanarayana** suggested having recharge bore wells extensively in the city both in private and public places. JNT University is doing recharge bore well technology since 2010 and Centre for water resources is ready to share the technology for the development of the city. **Er. A. Prabhakar**, FIE, Director (Technical), Retd, HMWS&SB elaborated the need of oval shape storm eater pipelines. **Er. Vijay Kumar** explained the role of citizen responsibility for managing floods and need of awareness aeration. **Er. Dhansingh** emphasized that this aspect need to consider as top priority.



WORLD FOOD DAY-2020



October 16, 2020: IEI, Telangana State Centre organized **WORLD FOOD DAY-2020** Theme: **“Grow, Nourish, Sustain. Together”**. **Dr KHADAR VALI**, Independent Scientist Food and Health as Chief Guest and graced the function. The Chief Guest said that there is a need for conserving culture. Economic progress depends on consuming culture. Also suggested learning the principles from the past how previous civilization flourished sustainable. There is a need to shift our focus from consuming culture to conserving culture. He felt that all farmers should depend on natural rains. Further Chief Guest mentioned millets can grow with less water and also good for health. 5 millets cure almost all diseases.

Dr D RAGHUNATHA RAO, Consultant, Former Sr. Dy. Director, ICMR-National Institution of Nutrition, Hyderabad was Special Guest spoke about World Food day. **Dr T V HYMAVATHI**, Professor & University Head (Food & Nutrition) PJS AU was the Guest-of-Honour also spoke on the subject.

Dr G Rameshwar Rao, FIE, Chairman, IEI, TSC welcomed the gathering and Presided over the function. **Er M Shyam Prasad Reddy**, FIE, Chairman Water Management Forum, SRC briefed about Chief Guest, **Dr Khader Vali**. **Er Shankar Prasad**, MIE, Member, IEI, TSCC briefed **Prof. G Radhakrishna**, FIE. Jt. Hon. Secretary, IEI, TSC briefed about Speakers. **Er T Anjaiah**, FIE, Hon. Secretary, IEI, TSC proposed vote of thanks.



Dr N V R L N Rao Third Endowment Lecture

October 26, 2020: IEI, Telangana State Centre organized Dr N V R L N Rao Third Endowment Lecture on "Challenges in Underground Construction for Metro through Congested Urban Area". Prof. S R GANDHI, Director, Sardar Vallabhai National Institute of Technology, Surat as Chief Guest and Speaker graced the function. The Chief Guest said that Construction of Metro Rail Stations are required underground in congested areas in many cities which are adjacent to very old important heritage structures or directly below a congested road. To safeguard the stability of the structure and the heavy traffic on the road, the work requires a very careful planning and



execution creating minimum hindrance to the traffic. Also the structure close to the excavation needs to be monitored by placing certain instruments which will give a warning in the event of any excessive settlement of cracks, etc. This lecture will describe the challenges in such construction and method of monitoring as adopted for some of the buildings.

Dr G Rameshwar Rao, FIE, Chairman, IEI, TSC welcomed the gathering and Presided over the function. Prof. (Dr.) Ramana Naik Banothu, FIE, Jt. Hon. Secretary, IEI, TSC, briefed about Chief Guest and Speaker, Er T Anjaiah, FIE, Hon. Secretary, IEI, TSC proposed vote of thanks.

FUTURE PROGRAMMES : NOVEMBER 2020

Date & Time	Event	Chief Guest/Speaker
14.11.2020 Saturday 1700 hrs.	Telangana Irrigation Day (in commemoration of Birthday of Late Er R Vidyasagar Rao , FIE)	
15.11.2020 Sunday 1700 hrs.	FOUNDATION DAY	
18.11.2020 Wednesday 1700 hrs.	GIS DAY –2020 Topic : Technology for Accountability, Transparency and Efficiency in Governance	Brig. J.S. Ahuja Former Director, Survey of India
19.11.2020 Thursday 1700 hrs.	Ers L Venkata Krishna Iyer, K V Srinivasa Rao and M L Swamy 20 th Endowment Lecture	Dr. T.V. Murali Krishna, FIE Former Raja Ramana DRDO Distinguished Fellow, Govt. of India

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