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INDIAN BUILDINGS CONGRESS

Annual Special Addition

BUILT ENVIRONMENT- SOUVENIR

BI-MONTHLY PUBLICATION OF Indian Buildings Congress

Wishing Happy New Year 2020

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सत्यमेव जयते

भारत के उपराष्ट्रपति

VICE- PRESIDENT OF INDIA

MESSAGE

I am happy to know that Indian Buildings Congress (IBC), New Delhi, is organizing its 24th Annual Convention & National Seminar on "Development of Greenfield Townships" from January 6 – 8, 2020 in Vigyan Bhawan, New Delhi.

I commend IBC for organizing this event to bring together all stakeholders including researchers, academicians, engineers, architects, planners, industrialists, builders, estate management agencies, technocrats, administrators and financiers to discuss major challenges and best practices in the arena of Greenfield Townships.

The rising demands of housing around industrial towns and cities has led to deficiencies in urban infrastructure and other basic needs like water, drainage, solid waste disposal and transport, leading to unsustainable development and economic inequalities in these towns and cities. I am glad to know that IBC has been working with a vision to build a living environment which is sustainable, affordable, aesthetic, eco-friendly, energy-efficient, cost-competitive and technology-driven.

I am happy to know that IBC always puts the interest of people first and ensures minimal loss to environment, flora and fauna and ecology of a place while working on a project.

I extend my greetings and good wishes to the organizers and the participants of the 24th Annual Convention & National Seminar on "Development of Greenfield Townships" and wish the event a grand success.

Naidu.

(M. Venkaiah Naidu)

New Delhi
16th December, 2019.

सत्यमेव जयते

अध्यक्ष, लोक सभा
SPEAKER, LOK SABHA

संदेश

मुझे यह जानकर खुशी हुई है कि इंडियन बिल्डिंग्स कांग्रेस (आई.बी.सी.) 6 से 8 जनवरी, 2020 के दौरान **"नए ग्रीनफील्ड नगरों का विकास"** विषय पर अपने 24 वें वार्षिक सम्मेलन और राष्ट्रीय संगोष्ठी का आयोजन कर रही है।

आई.बी.सी., दो दशकों से भी अधिक समय से निर्माण उद्योग और सरकार के बीच संपर्क स्थापित करने में प्रशंसनीय कार्य कर रही है। यह खुशी की बात है कि आई.बी.सी. सतत अवसंरचना को बढ़ावा देने हेतु सर्वसम्मति बनाने के लिए सभी हितधारकों को एक मंच पर ला रही है। वर्तमान संदर्भ में तेजी से बढ़ते शहरीकरण को देखते हुए शहरों के हरित क्षेत्र को कोई नकुसान पहुंचाए बिना पर्यावरण का संरक्षण करने और निर्माण क्षेत्र में विकास को गति देना अत्यावश्यक है।

मुझे आशा है कि संगोष्ठी में होने वाली चर्चाएं, जीवन यापन हेतु एक स्थायी, किफायती, पर्यावरण अनुकूल तथा एक स्वस्थ जीवन के लिए सहायक परिवेश तैयार करने हेतु ठोस सुझाव प्रदान करने में काफी सार्थक सिद्ध होंगी। नए ग्रीनफील्ड नगर, स्मार्ट शहरों के विकास में महत्वपूर्ण सहायक भूमिका भी निभा सकते हैं।

मैं इस सम्मेलन के सफल आयोजन और इस अवसर पर प्रस्तावित स्मारिका के प्रकाशन हेतु अपनी शुभकामनाएं देता हूं।

(ओम बिरला)

नरेन्द्र सिंह तोमर
NARENDRA SINGH TOMAR

सत्यमेव जयते

कृषि एवं किसान कल्याण,
ग्रामीण विकास तथा पंचायती राज़ मंत्री
भारत सरकार
कृषि भवन, नई दिल्ली

MINISTER OF AGRICULTURE & FARMER WELFARE,
RURAL DEVELOPMENT AND PANCHAYATI RAJ
GOVERNMENT OF INDIA
KRISHI BHAWAN, NEW DELHI

MESSAGE

I am happy to learn that the Indian Buildings Congress (IBC) is organizing its 24th Annual Convention & National Seminar on **"Development of Greenfield Townships"** from 6-8 January 2020 at Vigyan Bhawan, New Delhi.

I have been told that the main purpose of the Event is to bring together all stakeholders including Researchers, Academicians, Engineers, Architects, Planners, Industrialists, Builders, Estate Management Agencies, Technocrats, Administrators and Financers to discuss major challenges and best practices in 'Development of Greenfield Townships'.

I am also happy to know that the IBC would be releasing a souvenir on the occasion containing useful articles and messages of dignitaries.

I convey my best wishes for the Annual Convention & National Seminar of the IBC and also for successful release of souvenir, on the occasion.

30/12/19

(Narendra Singh Tomar)

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Resi.: 3 Krishna Menon Marg, New Delhi-110001, Ph.: 011-23794697 / 98, Fax: 011-23794696

हरदीप एस पुरी
HARDEEP S PURI

आवासन और शहरी कार्य राज्य मंत्री (स्वतंत्र प्रभार)
नागर विमानन राज्य मंत्री (स्वतंत्र प्रभार)
वाणिज्य एवं उद्योग राज्य मंत्री
भारत सरकार
Minister of State (I/C), Housing & Urban Affairs
Minister of State (I/C), Civil Aviation
Minister of State, Commerce & Industry
Government of India

MESSAGE

It gives me immense pleasure to know that Indian Buildings Congress is holding its **24th Annual Convention & National Seminar on "Development of New Greenfield Townships" from 6th to 8th January, 2020 in Vigyan Bhawan, New Delhi**

By the year 2030, the deadline for the Sustainable Development Goals (SDGs), 40% of India, or 600 million Indians, will reside in urban spaces. In the upcoming decade, to accommodate these 600 million Indians, India has to build 700 to 900 million square meters of urban space every year. In this context, the theme of this seminar "**Development of New Greenfield Townships",** gains salience. New Townships, that are well planned, and meet the economic, social, and sustainability requirements of India's growing urban population, are the need of the hour.

I convey my best wishes to the organizers of the Annual Convention & National Seminar and look forward to reading the suggestions made by the experts and participants.

(Hardeep S Puri)

New Delhi
02 January 2020

Office:- Room No. 104-C, Nirman Bhawan, New Delhi-110011; Phone: 011-23061166, 23061162, 23062089 (Fax)

उपराज्यपाल
दिल्ली
LIEUTENANT GOVERNOR
DELHI

सत्यमेव जयते

राज निवास
दिल्ली-११००५४
RAJ NIWAS
DELHI-110054

MESSAGE

I am pleased to learn that the Indian Buildings Congress is organizing its 24th Annual Convention & National Seminar on **"Development of New Greenfield Townships"** from 6th – 8th January, 2020 in Vigyan Bhawan, New Delhi.

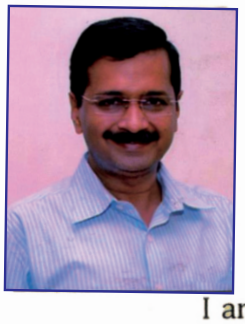
The existing scenario of ever increasing and all pervasive congestion, haphazard and unplanned development with increased possibility of disasters coupled with saturated infrastructure makes providing sustainable, smart and intelligent cities to citizens a challenging task. However, developing new 'smart' townships would not only address the above issues but would also spur economic growth. These new townships should be conceptualised around 'ease of living'.

I hope that the seminar will deliberate on these aspects including dissemination of latest technologies available to encourage developers to use resources in a sustainable manner.

I convey my best wishes to the organizers and participants of the Annual Convention & National Seminar.

(Anil Baijal)

ARVIND KEJRIWAL
CHIEF MINISTER



सत्यमेव जयते

GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI
DELHI SECRETARIAT, I.P. ESTATE, NEW DELHI-110002
Tel. : 23392020, 23392030

D.O. No. : OSD CMI/128
Date : 30/12/19

MESSAGE

I am pleased to learn that the **Indian Buildings Congress** is organizing its' 24th Annual Convention & National Seminar on the theme of **"Development of Greenfield Townships"** from 6th to 8th January, 2020 in Vigyan Bhawan, New Delhi and is bringing out a souvenir on this occasion.

I hope that the articles, features and views of the prominent experts of the field, published in the souvenir will benefit the readers.

I extend my best wishes for the success of the seminar and publication of the souvenir.

(ARVIND KEJRIWAL)

MANISH SISODIA
मनीष सिसोदिया

DEPUTY CHIEF MINISTER
GOVT. OF NCT OF DELHI
उप मुख्यमंत्री, दिल्ली सरकार
DELHI SECTT, I.P. ESTATE
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NEW DELHI-110002
नई दिल्ली-110002
Email : msisodia.delhi@gov.in

D.O. No. DyCM/2019/885
Date : 31/12/19

MESSAGE

It gives me immense pleasure to know that the Indian Buildings Congress is organizing its 24th Annual Convention & National Seminar on "Development of New Greenfield Townships" on 6-8 January, 2020 in Vigyan Bhawan, New Delhi.

I am told that IBC has been doing commendable work in the field of Built Environment and I hope that the recommendations and conclusions of the Seminar will be useful to building professionals and the Community at large.

I wish the organizers and participants of the Seminars all success.

(MANISH SISODIA)

सत्येन्द्र जैन
Satyendar Jain
स्वास्थ्य, उद्योग, लौक निर्माण, ऊर्जा, गृह,
शहरी विकास, सिंचाई एवं बाढ़ नियंत्रण मंत्री
**Minister of Health, Industries, PWD,
Power, Home, Urban Development and
Irrigation & Flood Control**

सत्यमेव जयते

राष्ट्रीय राजधानी क्षेत्र, दिल्ली सरकार
Govt. of National Capital Territory of Delhi
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D.O. No. minheath/8068

Date : 18/12/2019

MESSAGE

I am happy to note that Indian Buildings Congress (IBC) is organizing its 24th Annual Convention & National Seminar on **"Development of Greenfield Townships"** on 6th-8th January, 2020 in Vigyan Bhawan, New Delhi thereby bringing together all stakeholders including Researchers/Academicians/Engineers/Architects/Planners/Industrialists/Builders/ Estate Management agencies/Technocrats/Administrators and Financiers for discussing major challenges and best practices in 'Development of Greenfield Townships'. Further to commemorate the occasion, a Souvenir is being brought out which shall contain useful information about the industry.

I wish all the best to the participants attending the Seminar for making it a grand success.

(SATYENDAR JAIN)

दुर्गा शंकर मिश्र
सचिव
Durga Shanker Mishra
Secretary

भारत सरकार
आवासन और शहरी कार्य मंत्रालय
निर्माण भवन, नई दिल्ली–110011
Government of India
Ministry of Housing and Urban Affairs
Nirman Bhawan, New Delhi-110011

MESSAGE

I am glad to know that the Indian Buildings Congress is holding its **24th Annual Convention & National Seminar on "Development of New Greenfield Townships" between 6 - 8 January, 2020 in New Delhi.**

The focus of the Greenfield Townships is to invest in the infrastructure and development of cities and bring them at par with global standards and green development to serve the residents in best possible manner.

I wish the Seminar will serve the thinking platform to share the objective of developing sustainable and inclusive citizen friendly Greenfield Townships that enhance the quality of life of its citizens and will generate lot of interest among all stake holders.

I wish the Annual Convention & National Seminar grand success !

(Durga Shanker Mishra)

New Delhi
20 December,2019

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Technical Articles

From President's Desk

Due to fast pace of urbanisation, the shortage of adequate infrastructure and services has been recognised as the most important road block on the path to rapid, equitable and sustainable growth of cities in India. Both the local and national Governments in the country are struggling to find mechanisms to fill the gap between demand & supply and to accelerate the supply of infrastructure and services to meet the demands of rapid growth of urbanisation and motorisation.

In many cities due to fast pace of growth, the existing infrastructure and the services have already reached the saturation point and are on the verge of collapse. Besides this, there is no sufficient vacant land in the cities to construct additional infrastructure and services. The overhauling of the existing infrastructure and services is not only a challenging task as well as inconvenient to city dwellers but also cost prohibitive.

To meet the gap in housing, industries, commerce, other related infrastructure and to cope with inevitable urbanisation, planning, design, construction of new Greenfield township complete with commercial, industrial and residential units, schools, hospitals, retail stores, sports facilities, private security, integrated waste disposal, multi modal transport system is the need of the hour for sustainable urban development where the Planners will be able to write on a blank canvas without having any constraints. The construction on Greenfield land does not need to remodel or demolish any pre-existing structure.

I am also glad that the Indian Buildings Congress is holding its 24th Annual Convention & National Seminar on "Development of New Greenfield Townships" from 6th to 8th January, 2020 in Vigyan Bhawan, New Delhi.

The Greenfield project commissioned with present requirements not only feasible for the economy but also brings growth and prosperity in the economy of country. The Greenfield townships are aimed at enhancing industrialisation and manufacturing and creating jobs. Smart and intelligent Greenfield townships are the present requirement of the economy and are sustainable in long run.

The objectives of the Greenfield towns are to achieve spatial intelligence, effectiveness in solving urban problems, competitive services and inclusion. Greenfield smart, intelligent & compact towns technologies based on digital infrastructure and digital services offer a potential way of monitoring and managing physical and social resources in the townships. The Governments and the Indian Building Industry need a push in this direction to set up more New Greenfield townships which can cater to the need of city dwellers at least for next seventy five years.

Wishing forthcoming Annual Convention & National Seminar a grand success and a very happy new year to all members of IBC!

Dr. Anoop Kumar Mittal

CENTRAL PUBLIC WORKS DEPARTMENT
Dedicated to Nation Building Since 1854
CPWD: COMMITTED TO INNOVATIVE DEVELOPMENT FOR A NEW INDIA

IBC News

Two Days Training Program on "Planning, Design, Installation, Operation and Maintenance Management of HVAC Systems in Buildings"

Two days Training programme on "Planning, Design, Installation, Operation & Maintenance Management of HVAC System in Buildings" was organized by Indian Buildings Congress in collaboration with Indian Society of Heating, Refrigerators, Air-conditioning, Engineers (ISHRAE), on Nov. 13-14, 2019 at IRC,HQ, New Delhi.

Senior executives from the reputed air-conditioning firms and Consultants were invited to conduct the programme as faculty members. Topic on HVAC system Design for high performance Buildings, equipment selection, VRV system, indoor air quality and design of HVAC System including heat load calculations were

Training Programme in Progress

Shri D. S. Sachdev, Director, IBC, Executive Training and Fmr. DG, CPWD introduced the Program and appreciated ISHRAE for collaborating to organize the most contemporary and commendable programme related to comfort conditioning of Buildings. The programme was attended by 28 participants which included Architects and Engineers from UP PWD, Nagaland PWD, Mizoram PWD, Chandigarh UT, PBMC Portblair, Chhattisgarh PWD, E-in-C, Branch, MES, IRCON, and CPWD, participated in the programme.

covered by them. Shri J.K. Choudhury, Former Chief Engineer, CPWD spoke on Techno Economic Comparison of Various Air-conditioning Systems to ensure proper selection and execution of HVAC works in Buildings.

The Officers, who attended the programme, took keen interest in the deliberations and appreciated the programme content and the presentations. At the end of the programme, participation certificates were distributed to the participants.

CONGRATULATION

IBC congratulates Shri V.R. Bansal, Superintending Engineer, North Delhi Municipal Corporation on his elevation as Chief Engineer. He has over 35 years of experience in the field and has handled various buildings and road projects including construction of multi-level Car Parking, Road-Under-Bridges, besides having experience in structural design of buildings, maintenance works and implementation of Building Bye-laws. Some of the prestigious projects he has executed include India Population Project-VIII funded by World Bank and setting up of modern slaughter House at Gazipur. He has been actively associated with the activities of Indian Buildings Congress and is Permanent Invitee of Governing Council.

Happy New Year 2020 celebrated in IBC, HQ, New Delhi

Happy New Year was celebrated on January 1, 2020 at IBC, HQ. Dr. A.K. Mittal, President, IBC & former CMD, NBCC (India) Ltd.; Shri O.P. Goel, Founder President, IBC & former D.G., CPWD; Shri K.B. Rajoria, Past President, IBC & former E-in-C, Delhi PWD; Shri R.N. Gupta, Vice President, IBC &Chairman & Managing Director, M/s Ramacivil India Construction Private Limited and Shri Pradeep Mittal, Honorary Secretary, IBC graced the occasion who were welcomed by presenting flower bouquets.





The mementos were also distributed to the IBC Secretariat Staff in recognition of their contribution to the work of IBC office.













Activities of Local Centres

Chhattisgarh State Centre-Raipur

17 नवम्बर, 2019 को आयोजित चतुर्थ मासिक बैठक का प्रतिवेदन

इंडियन बिल्डिंग्स कांग्रेस छत्तीसगढ़ राज्य केन्द्र रायपुर की चतुर्थ मासिक बैठक 17 नवम्बर, 2019 को आयोजित की गई। कार्यक्रम की अध्यक्षता श्री कृष्ण कुमार वर्मा द्वारा की गई तथा संचालन श्री रवि जग्गी, द्वारा, श्री एस. के. अग्रवाल के मार्गदर्षन में हुआ। श्री कृष्ण कुमार वर्मा द्वारा उपस्थित सदस्यों के स्वागत तथा आपसी परियच के साथ बैठक प्रांरभ हुई।

बैठक में श्री एस.के.अग्रवाल द्वारा जानकारी दी कि जी.ई.सी., एनआईटी एलुमनि एसोसिएशन रायपुर द्वारा उनके पत्र दिनांक 15 अक्तूबर, 2019 के माध्यम से गोल्डन टावर बिल्डिंग में आई.बी.सी. रायपुर, केन्द्र हेतु 722 वर्ग फीट स्थल आबंटित किया गया है जिसका भुगतान करने पर कार्यालय भवन संचालित किया जा सकता है, अतः प्रारंभिक तौर पर रुपये 5 लाख देने का सर्वसम्मति से निर्णय लिया गया।

विभिन्न विभागो से पूर्व में आई.बी.सी. रायपुर द्वारा करवाए गए कार्यक्रम की शुल्क वसूली हेतु वित्त कमेटी का गठन किया गया जिसमें श्री शिव श्रीवास्तव, श्री व्ही.के.चंद्राकर, श्री हरीष पुरोहित, श्री सौरभ घोड्ड, श्री प्रषांत बानी शामिल किए गये। आगामी वृहत कार्यक्रम के तहत ''छत्तीसगढ़ के चार चिन्हारी नरवा, गरबा, घुरुवा, बारी'' विषय पर सेमीनार करने हेतु एक समिति का गठन किया गया।

इंडियन बिल्डिंग्स कांग्रेस छत्तीसगढ़ राज्य केन्द्र, रायपुर द्वारा 'विज्ञान प्रसारण कार्यक्रम'

इंडियन बिल्डिंग्स कांग्रेस छत्तीसगढ़ राज्य केन्द्र रायपुर द्वारा ''इसरे'' रायपुर उपकेन्द्र के सहयोग से 30 नवम्बर,2019 को कल्याण पब्लिक स्कूल शंकर नगर, रायपुर में स्कूल संचालक श्री राजेश सक्सेना के मुख्य आतिथ्य, श्रीमती शीला गुर्जर प्रचार्य के विषेश आतिथ्य में सांईस टेक्नोलाजी इंजिनियरिंग एंव मैथ्स (ज्म्ड) पर कार्यषाला का आयोजन किया गया जिसमें लगभग 200 बच्चे शामिल हुए।

श्री राजेश साहू द्वारा स्कूली छात्र–छात्राओं को विभिन्न प्रकार के साईस माडल जो कि स्क्रैप व घर की टूटी–फूटी वस्तुओं से बनाए गए थे उनका प्रशिक्षण दिया गया। इन माडलों के साथ ही विद्यार्थियों ने नयूटन, बाइल्स के नियम भी आसानी से सीखे। पुरानी प्लास्टिक के बोतलों से बने एयर कार, प्लास्टिक पाईप से बना विद्युत जेनरेटर, माचिस तिलियों से बने रेखा गणित के विभिन्न प्रयोग, पेंसिल से बनी इलेक्ट्रानिक मोटर बच्चों के लिए विषेश आकर्शण के केन्द्र रहे।

इंडियन बिल्डिंग्स कांग्रेस छत्तीसगढ़ केन्द्र रायपुर के कार्यालय हेतु स्थान का आवँटन

इंडियन बिल्डिंग्स कांग्रेस छत्तीसगढ़ राज्य केन्द्र, रायपुर के कार्यालय भवन हेतु एन.आई.टी.,रायपुर में निर्माणाधीन एलुमनी एसोसियेसन के भवन में 722 वर्ग फीट की जगह आबंटित की गई। 1 दिसंबर, 2019 को श्री आबिद अली नीमचवाला, मैनेजिंग डायरेक्टर विप्रो के मुख्य आतिथ्य तथा श्री दीपक खांडेकर आइ.ए.एस. सेक्रेटरी ट्राइबल वेलफेयर, भारत सरकार के विषेश आतिथ्य में आयोजित बैठक, श्री के.डी.दीवान की अध्यक्ष्यता में संपन्न हुई जिसमें आई.बी.सी. छत्तीसगढ़ राज्य केन्द्र, रायपुर के अध्यक्ष श्री कृष्ण कुमार वर्मा द्वारा बुकिंग राषि के तहत 5 लाख रुपये का चेक सौंपा गया। शेष 15 लाख रुपये की राशि अतिशीघ्र सौंपी जाएगी ताकि हस्तांतरण उपरांत रायपुर राज्य केन्द्र का कार्य सुचारु रुप से चल सके।

Mumbai State Centre-Maharashtra

A meeting to decide future course of action and activites of Indian Buildings Congress in Mumbai Local Centre was held at 11:AM on 1st Nov., 2019 at 17th floor, Pratishtha Bhawan, 101-M.K.

Sr. no	Name	Designation	Organisation
1.	Smt.Usha Batra	SDG	CPWD
2.	Shri Pradeep Mittal	Hony. Secretary	IBC (HQ), New Delhi
3.	Shri Arvind Garg	Chief Engineer	WkumTLQA
4.	Shri L.Dung Dung	Chief Engineer	PWD, Mumbai
5.	Shri K. K.Agarwal	Chief Engineer	Mumbai-2
6.	Shri C.B.Upadhaya	SE(P)	PR Mumbai
7.	Shri K.N.Lakshman	EE(P)	Mumbai-1
8.	Smt. Namita Nitesh	Architect	CPWD
9.	Shri Ashok Pal	EE (C)	Mumbai-1
10.	Shri Yagya Dutt Sharma	Assistant Engineer (C)	PWD, Mumbai
11.	Shri Prasanna Kulkarni	SDE	PWD, Mumbai
12.	Shri Akash Chakor	AE-1	PWD, Mumbai
13.	Shri Appasaheb Patil	Asstt. Superintending Engineer	PWD, Mumbai

14.	Shri Gunaji Gaonkar	Deputy Engineer	PWD
15.	Shri Vinod Kadam	Deputy Engineer	PWD
16.	Smt. Surekha Pawar	Assistant Engineer (I)	PWD, Mumbai
17.	Ms. Ankita Patil	Techno-legal Associate	Project Engineers
18.	Shri Niraj Pattarkar	Consultant	Garware polyesters
19.	Shri Vinod T. Harisinghani	PMC-Arbitrator	CIArb
20.	Shri Rajesh Bhogale	Sub-divisional Engineer	PWD, Mumbai
21.	Shri Shailendra Borse	Executive Engineer	PWD, Maharashtra
22.	Shri Sirajuddin Mulani	Sectional Engineer	PWD
23.	Shri K. Ganesh	Executive Engineer (HQ)	CPWD
24.	Shri Achhey Lal	Executive Engineer (GCD)	PWD
25.	Shri M.S.Bhole	Assistant Engineer- II	PWD

Honorary Secretary welcomed all the members present in the meeting. Following issues were discussed and decided in the meeting:

1. Hon.Secretary shared history of IBC and discussed extensive work done by it over the years.
2. The professionals who attended the meeting for the first time were encouraged to enrol as members and benefits of becoming a member were discussed.
3. The profile of IBC and brochure of the upcoming seminar were distributed and professionals were encouraged to publish papers and share their work in the same.
4. It was decided that steps are to be taken in order to connect with various organisations and encourage them to become members of IBC.
5. An adhoc committee consisting of following members was constituted so as to enable taking future course of action:
   i) Shri K.K. Agarwal, President, Mumbai Chapter,
   ii) Shri Appasaheb, Patil Vice President, Mumbai Chapter,
   iii) Ms. Ankita Patil, Secretary, Mumbai Chapter.
6. The Committee members were briefed about their roles and it was decided that the future events and meetings shall be planned and executed accordingly.
7. Committee members to plan for next meeting.
8. Questions and doubts of members were also clarified and discussion was concluded.

Bihar State Centre- Patna

आई.बी.सी. बिहार राज्य चैप्टर की आम सभा बैठक

डन टावर बिल्डिंग में आई.बी.सी. रायपुर, केन्द्र हेतु 722 वर्ग फीट स्थल आबंटित दिनांक 14 दिसम्बर, 2019 के अपराह्न में श्री कृष्ण कुमार गुप्ता,अभियंता प्रमुख–सह–अपर आयुक्त–सह–विषश सचिव, भवन निर्माण की अध्यक्षता में इंडियन बिल्डिंग्स कांग्रेस, बिहार चैप्टर, पटना की आम सभा आई.बी.सी., कार्यालय परिसर पटना में सम्पन्न हुई।

सर्वप्रथम पूर्व कार्यकारिणी द्वारा वर्श 2019 में सफलता पूर्वक सम्पन्न कराए गए कार्यक्रमो के संबंध में धन्यवाद प्रस्ताव पारित किया गया। तत्पश्चात नई कार्यकारिणी के गठन की कार्यवाई प्रारंभ की गई तथा सर्व सम्मति से विभिन्न पदाधिकारियों का चुनाव किया गया जो निम्न प्रकार है:–

अध्यक्षः–

श्री कश्यप कुमार गुप्ता – अभियन्ता प्रमुख –सह–अपर आयुक्त–सह–विशेष सचिव, भवन निर्माण विभाग, बिहार, पटना

उपाध्यक्षः–

श्री फनी भूषण सिंह – मुख्य अभियन्ता, केन्द्रीय लोक निर्माण विभाग बिहार, पटना।

श्री राकेश कुमार – मुख्य महाप्रबंधक, बिहार राज्य भवन निर्माण निगम लिमिटेड।

श्री सुनील चौधरी – निदेषक (अनुश्रवण), भवन निर्माण विभाग, बिहार पटना।

श्री दीपक कुमार बक्सी– पटना।

मानद सचिव

श्री हरेन्द्र दुबे – से.नि. उप सचिव, जल संसाधन विभाग, बिहार, पटना।

कोषध्यक्ष

श्री विनोद कुमार चौधरी – कार्यपालक अभियन्ता, पाटलिपुत्र भवन प्रमंडल पटना।

सदस्य

श्री अनिल कुमार – मुख्य वास्तुविद् भवन निर्माण विभाग बिहार पटना।

श्री राम सागर प्रसाद – तकनिकी सलाहाकार, अधीक्षण अभियन्ता, भवन निर्माण विभाग पटना।

श्री सुधांसु शेखर राय – अधीक्षण अभियन्ता, भवन अंचल भागलपुर।

श्रीमती तारणी दास – अधीक्षण अभियन्ता, भवन अंचल पटना।

श्री विनोद कुमार झा – महाप्रबंधक, बिहार राज्य भवन निर्माण निगम लि. पटना।

श्री शरद चन्द – अधीक्षण अभियंता, अग्रिम योजना अंचल, पटना।

श्री अमृत राम, – अधीक्षण अभियंता, दक्षिण बिहार अंचल पटना।

श्री रामबाबू प्रसाद – कार्य. अभि. संरचना प्रमंडल सं.–2 पटना।

धन्यवाद ज्ञापन के पश्चात बैठक की कार्यवाही समाप्त हुई।

Madhya Pradesh State Centre-Bhopal

Technical workshop on "Planning and Design of Buildings"

A one-day technical workshop on **"Planning and Design of Buildings"** was organized on December 29th, 2019 by the Indian Buildings Congress (IBC) Madhya Pradesh State Centre, Bhopal at 'Courtyard by Marriott' in the capital city of Bhopal, M.P. Shri P.C. Baraskar, Secretary to Government of Madhya Pradesh; Shri Pradeep Mittal, Honorary Secretary, IBC; Shri C.P. Agrawal, Chief Technical Examiner (CTE) and Shri Vijay Singh Verma Chairman IBC Madhya Pradesh State Centre & Engineer-in-Chief PWD (PIU) were present in the workshop along with various dignitaries.

Shri V.S. Verma addressing the Audience

The workshop was attended by 210 delegates drawn from various technical professions of engineers, architects, consultants, contractors, planners etc. from various works departments, PWD, Housing Board, Municipal Corporation, Police Housing Corporation, Bhopal Development Authority, MP Tourism, Capital Project Administration etc. of Government of M.P.

Shri C.P. Agrawal, CTE and Shri P.C. Baraskar, Secretary PWD both appreciated efforts being made by IBC for improving quality of built environment and emphasized need for more such workshops on various other subjects related to built environment.

Shri Vijay Singh Verma, Chairman M.P. State Centre of IBC emphasized need for street numbering and naming for systematizing addresses and locations of built structures to facilitate in locating the address by road users in more easier way. In his presentation Shri Verma also made presentation for preparation of DPRs for making it easily understandable by everybody.

Shri Kursheed Alam made a presentation on HVAC and dealt its parameters for effective functioning focussing on Innovative and cost-saving techniques. Shri Nitin Berry from Master Builders BASF delivered his presentation on "Water Proofing and Expansion joints". Ms. Sangeeta Singh of Panetron India Pvt. Ltd. explained about admixtures, water proofing of concrete and its durability. Shri Abhijeet Vaishya from 'INSTAPOWER' made his presentation on Facade lighting.

View of Audience

The technical workshopwas concluded with the remarks to make recommendation for implementing the new techniques and items presented and discussed in the workshop.

Formation of IBC Local Indore Centre-Madhya Pradesh

Indian Buildings Congress organized a Technical Seminar on 30th Dec., 2019 at Indore (Madhya Pradesh) in Hotel Shreemaya Residency . Builders, Architects and Engineers from Indore city actively participated in the seminar.

Shri Pradeep Mittal, Honorary Secretary, IBC HQ, New Delhi was Chief Guest of Seminar whereas seminar was presided over by Shri Vijay Singh Verma, E-in-C, M.P. PWD. The Honorary Secretary emphasized the need of formation of the IBC Local Indore Centre (M.P.) so that the people of Madhya Pradesh in the region can also benefit themselves from the technical activities being propagated by IBC at National level. Accordingly, with the concurrence of majority present in the meeting, the IBC Local Indore Centre was constituted alongwith a working committee as detailed below. Shri Hitendra Mehta, newly nominated Chairman of IBC Indore Local Centre assured that he will sincerely carry out the duties assigned to him and will also arrange a technical seminar within January, 2020 at Indore.

Sr. no	Name	Designation	Organisation
1.	Shri Hitendra Mehta	Chairman	Managing Director Mehta and Associates LLP Indore
2.	Shri M.K. Nayak	Vice Chairman	Addl. Project Director, PIU Indore
3.	Shri Narendra Tomar	Vice Chairman	SE, Indore Municipal Corporation
4.	Shri Ashutosh Kanoongo	Vice Chairman	SE, AKVN
5.	Shri Yashwant Dohre	Vice Chairman	DHC Indore Division, MPHIDB
6.	Smt. Rupal Sanghvi	Secretary	Architect
7.	Shri Kushagra Agrawal	Treasurer	Builder, Apollo Creations Pvt. Ltd, Indore
8.	Shri Jitendra Vyas	Executive Member	Structural Engg. Consultant
9.	Shri Neelesh Kumar Gupta	Executive Member	DPC PIU Indore
10.	Shri Raj Kumar Kala	Executive Member	Former Chief Engineer, MP PWD
11.	Shri Om Vijayvargiya	Executive Member	Contractor -Sita Construction
12.	Shri Govind Parchani	Executive Member	Chief Engineer, CAT
13.	Shri Kulbhushan Mittal	Executive Member	Real Estate Developer, Indore
14.	Shri S.C. Garg	Advisor	Former Chief Engineer, MP PWD

National News

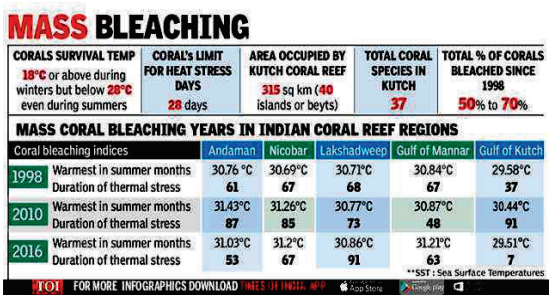
Climate Change - A Warming Arabian Sea is Burning the Colour of Corals

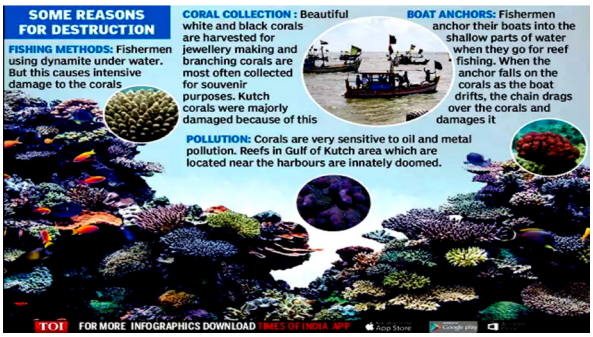
Coral reefs the marine wonders that leave us awestruck by their rock pools of colour are under climate threat. A recent study, published in the reputed science journal Current Science, shows that Coral reefs slowly bleaching away on the Gujarat's Gulf of Kutch shores. A major reason is the frequent 'ocean heat waves' or thermal stress owing to climate change, coupled with anthropological issues.

Bleaching means the change in colour of the corals because of the decay in algae living in their tissues as symbiotic partners. The algae is also the reason that gives the corals their distinct colour. As sea temperature rises above normal summer maxima the corals are forced to expel the algae and turn white. These bleached corals thereafter get prone to disease and ultimately die.

A study undertaken by ISRO's Space Applications Centre (SAC) research team and the department of geophysics, Kurukshetra University analysed sea surface temperatures (SST) from 1982 has reported increased number of heat stress days. The study includes three distinct years of 'Mass Coral Bleaching' (MCB) instances of 1998, 2010 and 2016 recorded during the El Nino Southern Oscillation (ENSO) that caused abrupt rise in sea temperature. The thermal stress of 2010 was the worst for corals of Gulf of Kutch coasts, when mass bleaching occurred. The data reveals that extremely sensitive carbonate reef structures are commonly built up in tropical regions where sea water temperatures exceed 18 degree Celsius during winter and remains below 28 degree Celsius in summer.

However, in 1998, the ISRO-SAC study found that the SST exceeded to 29.58 degree Celsius. Also, against the ideal span of 28 days, the number of heat stress days stood at 37. In 2010 SST went up to 30.44 degree Celsius,





while the total heat stress days rose to 91 days. During the 2016 temperature went up to 29.91 degree Celsius while the number of heat stress days stood at 70.

Normally corals can re-establish themselves (or return to their pre-bleaching state) in a decade or two. "But the quick frequency and intensity of MCB restrains the coral reefs ability to recover from heat stress episodes," the study says. The study utilised data from US-based National Oceanic and Atmospheric Administration (NOAA) and corroborates findings of Suganthi Devadason Marine Research Institute, Tuticorin on the bleaching of corals of the Gulf of Kutch.

The study undertaken in 2016 found 13 of the total 37 coral species had bleached during the 70 days of prolonged heat stress. The study has been conducted by Space Applications Centre scientists Mohit Arora, Nandini Chaudhry and Ashwin Gujrati and Ramesh Patel of the department of Geophysics, Kurukshetra University.

India's Greenest Metro

While Delhi Metro is India's largest metro systems, India's newest metro takes the cake for being the most sustainable. According to Maharashtra Metro Rail Corporation Ltd, Nagpur Metro, which was completed in a record time of 27 months since the project's inception in 2015, is the 'greenest' metro system in India.

View of Nagpur Metro

Shri Brajesh Dixit, Managing Director of MMRC, told "Sixty-five per cent of the energy requirement of Nagpur Metro is met from solar panels on the roofs of the metro rail, stations, depot boundary walls, depot shed etc. This was done from the inception stage. In the first phase, 14 MW solar power capacity has been installed. The energy generated is added to the national grid and the power required is drawn from local sources. Also, procurement of materials and the project management was done on the 5D BIM (Five Dimensional Building Information Modelling) platform."

Vaishno Devi Shrine Adjudged as Best Swachh Iconic Place in India

Shri Mata Vaishno Devi Shrine in Jammu and Kashmir has been adjudged as the 'Best Swachh Iconic Place' in the country in the 'Swachh Iconic Places' list released by the Ministry of Jal Shakti, Department of Drinking Water and Sanitation.

The Shrine has been adjudged on the basis of the overall improvement in sanitation. Several initiatives were taken in the last few years to ensure the cleanliness of the entire shrine area. More than 10 million devotes visit every year in the Mata Vaishno Devi shrine situated in Trikuta range of mountains. Now in the temple of faith of devotees, the echoes of Devi of cleanliness are also being heard along with 'Jaighosh of Mata Vaishno Devi'.

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Mata Vaishno Devi Shrine Complex

The initiatives of water kiosks, reverse vending machines, equid dung management centre, installation of kill waste machine, collection, transportation and disposal of waste, waterless urinals, Rain water harvesting along with regular round the clock mopping up of waste through workforce of 1300 sanitation workers (Shrine cadre and outsourced) have enabled the shrine to achieve the top rank. The Shrine was in direct competition with dozen other iconic places including Chhatrapati Shivaji

CEO of Mata Vaishno Devi Shrine Board receiving award from President

Terminus (Maharashtra), Taj Mahal (Uttar Pradesh), Tirupati Temple (Andhra Pradesh), Golden Temple (Punjab), Manikaranika Ghat(Varanasi), Ajmer Sharif Dargah (Rajasthan) among others.

It is pertinent to mention that in the year 2017, the shrine received a special award from the Ministry of Drinking Water and Sanitation for remaining second, behind only to the Golden Temple. In 2018, the shrine was also declared as the cleanest religious place by the India Today Group. Hon'ble President Ram Nath Kovind has conferred the prestigious award to the shrine during the Swachh Mahotsav organised by the Ministry of Drinking Water and Sanitation on September 6, 2019.

With Six Runways, Jewar Set to be India's Largest Airport

The upcoming Jewar airport will have six runways, which would make it the largest airport in India once completed. This was announced by Yamuna Authority CEO Arun Vir Singh. Currently, Delhi's Indira Gandhi International (IGI) airport is the only one in the country to have three runways.

"Some 5,000 hectares in Jewar is earmarked as an aviation hub in Yamuna Expressway Industrial Development Authority's (YEIDA) master plan. Everything, including the six runways, will fall within these 5,000 hectares designated for the airport. After completion, Jewar will definitely become India's largest airport," CEO Singh said.

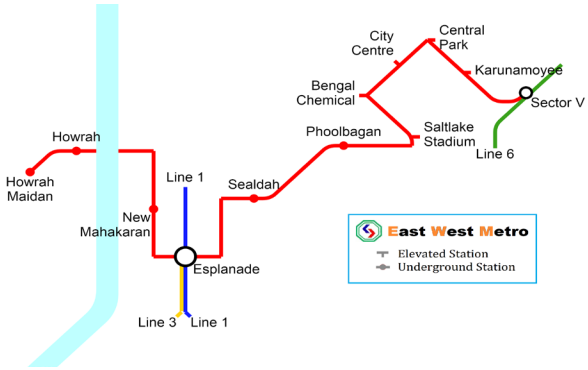
Shailendra Bhatia, the nodal officer for Noida International Airport Limited that's spearheading the project, said, "While Jewar airport is expected to start operations with two runways in the first phase by 2022-23, building additional runways is a component of the subsequent phases, which will start after phase 1 is commissioned." In its Vision 2040 report, the Indian Civil Aviation ministry had said, "The national capital with 66 million passengers in fiscal 2018-19 is now the seventh largest airport in Asia. It will see a significant growth when its fourth runway and fourth terminal are commissioned in three to four years."

According to CEO Singh, YEIDA's airport traffic projections for next 30 years indicate 50-70 million passengers by 2050 from areas such as neighbouring Haryana, Delhi, Ghaziabad and Noida. "Hence, it's best, if Jewar is equipped to deal with air traffic and passenger pressure of the future," he said. With the Delhi-Mumbai airports already reaching saturation points, Jewar will be the next big airport to take the load off these aviation hubs.

India's First Underwater Metro in Kolkata to Start Soon

The first underwater train in India will be soon operational under Kolkata's Hooghly River, Union Railway Minister Piyush Goyal announced. The underwater train is an "example of excellent engineering". This train is a symbol of the progress of the railway in the country. With this, Kolkata residents will feel comfortable, and the country will feel proud. The tunnels will have four protective cover to prevent water leakage in the two tunnels.

The train will be part of the Kolkata Metro Line 2, also known as the East-West Metro. The 16km-line will be made operational in two phases. The first phase, connecting Salt Lake Sector 5 station to Salt Lake Stadium station, will span across 5 km The new metro line is expected to cut travel time for commuters significantly. The underwater sector on this line will connect Salt Lake Sector 5 station to Howrah Maidan station. Once operational, the under-the-river Metro ride will be all of 60 seconds long.



Construction of the metro tunnels under the river began at the Howrah end in April 2017. The tunnels are 520 metres long and about 30 metres deep. Two top-order tunnel boring machines, nicknamed Rachna and Prerna, were brought from Germany in parts and assembled underground for the construction of the tunnels. The Chief Engineer of the project, Shri Parshuram Singh has said in 2017: "Kolkata had the honour of getting India's first Metro. Now, it will get yet another honour of getting India's first metro under the river." As of now, Kolkata has just one metro line, known as North-South Metro.

Telangana District Bags Top Spot in Rural Swachhta Survey

Pedapalli in Telangana has jumped two places in the annual sanitation survey to become the cleanest district replacing Satara in Maharashtra. However, the most remarkable improvement was recorded by Faridabad which jumped to the second rank in the year -2019 rural swachhta survey findings from a lowly 71 a year back. Rewari, again from Haryana, was placed third in the survey which covered 690 districts in the country. The drinking water and sanitation department shared

the highlights of survey findings. Among larger states, Tamil Nadu has topped the list from 11th position in 2018. Haryana and Gujarat slipped to second and third positions respectively, each a rank lower than their 2018 performance.

This time the Swachhta Survey was carried out in 17,200 villages in 690 districts and the ranks were allocated based on quantitative and qualitative sanitation (swachhata) parameters, which included feedback from the people, direct observation by third party assessors and service level progress by the local administration. The government claimed that feedback for the survey was received from more than three crore citizens through mobile app and more than 12 lakh responses were received via calls. Surveyors visited schools, anganwadis, haats, health facilities and religious places to assess the level of sanitation which included availability of toilets and clean surroundings such as no stagnation of water or filth.

According to survey, 83% citizens reported sufficient arrangements in their villages to manage liquid waste and 84% reported sufficient arrangements for managing solid waste. Interestingly, 72% districts claimed that they have established ODF (Open Defection Free) sustainability cell, which will play a key role in ensuring that people do not revert to their old habits due to poor upkeep of toilets or any other issues. Drinking water and sanitation Secretary, Shri Parameswaran Iyer had said it was crucial for all stakeholders to ensure that people stick to their changed habit of using toilets for the next three years. If it's sustained, then there will be no going back. The Centre has also started work on sustaining ODF status at villages.

7 Raj Rly. Station in List of India's 10 Cleanest

Seven railway stations in Rajasthan, including three from the capital region of Jaipur, bagged the top 10 places in a railway cleanliness survey which was released on 2nd October, 2019. The three stations in the state capital are Jaipur (No. 1), Durgapura and Gandhinagar-Jaipur. The other four are Jodhpur (2), Suratgarh (6), Udaipur (8) and Ajmer (9).

Among 109 suburban stations, Andheri, Virar and Naigaon stations in Maharashtra were found to be the cleanest, says the report released by Minister Piyush Goyal. Anand Vihar adjudged to be Delhi's cleanest station, ranked 26th .

A total of 720 stations were ranked based on different parameters, and the process also involved taking feedback from passengers and direct observation by third-party assessors. Suburban stations were included for the first time in this survey and even green cover at stations was considered while ranking them. The report named North Western Railway as the cleanest railway zone, followed by South East Central Railway and East Central Railway.

Releasing the report, Shri Goyal said cleanliness at stations and in trains has improved dramatically in the past five years while claiming that there has been a significant transformation from "Suffer" to "Safar".

2022 Target for Single-Use Plastic End

India is working toward ending the consumption of single-use plastics by 2022. "Hygiene, protection of environment and protection of life were of keen interest to Gandhi," said Prime Minister, speaking on the anniversary of the freedom movement leader's birth. "Plastic is dangerous to all these three goals. So we need to reach the goal of ending single-use plastic by 2022." Meanwhile, India held off a plan to impose a blanket ban on single-use plastics as it was seen as a measure too disruptive for industry at a time when India is dealing with an economic slowdown and job losses.

"India, today is on the verge of starting a historic movement against single use plastic, setting an example for the world. Reuters had also reported that India was set to impose a nationwide ban on plastic bags, cups and straws on Oct. 2, in a sweeping measure to stamp out single-use plastics from cities and villages that rank among the world's most polluted.

Concerns are growing worldwide about plastic pollution, especially in oceans, where nearly 50% of single-use plastic products end up, killing marine life and entering the human food chain, studies have shown.

Govt Plans 1,400km Long Great 'Green Wall' of India

Rough contours of proposed 1,400km 'green wall' Forest belt likely to run roughly from covering entire Aravali range and beyond. 'Green wall' will act as barrier for dust from west and check eastward march of Thar

desert and to check desertification. Project yet to get formal nod, details to be worked out.

The Centre is mulling an ambitious plan to create a 1,400km long and 5km wide green belt from Gujarat to the Delhi-Haryana border, on the lines of the "Great Green Wall" running through the width of Africa, from Dakar (Senegal) to Djibouti, to combat climate change and desertification. Though the idea is at a nascent stage, it has generated a lot of excitement among officials in different ministries who believe that the project, if approved, may turn out to be a legacy programme in India's efforts to deal with land degradation and the eastward march of the Thar desert.

It is believed that creating a green belt from Porbandar to Panipat will help restore degraded land through afforestation along the Aravali range that spans across Gujarat, Rajasthan, Haryana and Delhi, and act as a barrier for dust coming from the deserts in western India and Pakistan. "The idea of creating a huge green belt was part of the agenda of the recent conference (COP14) of the United Nations Convention to Combat Desertification (UNCCD) in India. But it could not be taken up there as final clearance is awaited.

Though the "Great Green Wall" of Africa, mooted almost a decade ago, is still far from reality due to the involvement of many countries in its implementation, India seeks replicate the idea as a national priority under its goal to restore 26 million hectares of degraded land by 2030.

The Aravali has been identified as one of the key degraded zones to be taken up for greening under India's target to restore 26 mha of its land. India has, at present, 96.4 mha of degraded land which is 29.3% of the country's total geographical area (328.7 mha). "A legacy programme like converting such a huge tract of land as a green belt in high-intensive land-degraded states will be great boost.

Pilot Project by Delhi Government to Purify Drain Water with electrocoagulation technology gives Positive Result

Delhi Jal Board and the Irrigation and Flood Control Department of Delhi Government have deployed the city's first "drain water purification system" in Shahdara link drain near Akshardham, where the electrocoagulation technique has been used to purify sewage water.

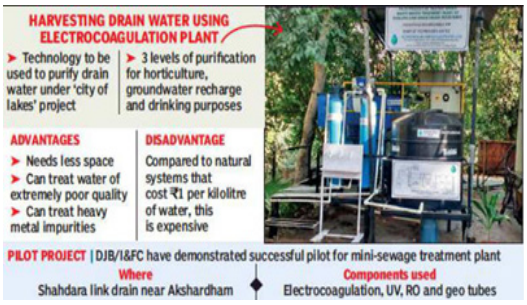
Shri Ankit Srivastava, the technical advisor to DJB and consultant for the 'City of Lakes' project under which 200 lakes are to be revived — said that last year in December, the team had demonstrated how constructed wetland systems can be used to purify sewage water in Rajokri lake, and under this new decentralised sewage treatment plant (D-STP) at Akhshardham, the team has successfully tested the other end of the spectrum — which is a completely technological solution for purifying and reusing sewage water. "Both the systems have their own advantages and a combination of the solutions between these two extreme solutions will be used in the 200 selected waterbodies," he said.

The electrocoagulation-based system installed near Akshardham also employs other purification systems like geo-tubes and further tertiary purification levels if need arises. The mobile equipment has the capability to recycle drain water and produce three different purification levels of output water for which three taps have been installed. "Any STP depends on the design of output level. It can be drinking water level purification, ground water recharge level purification and for horticulture use," Srivastava said.

The Akshardham unit has the electrocoagulation unit as its primary purification unit, which produces water clean up to biochemical oxygen demand (BOD) level 10 while UV and Reverse Osmosis have been used in further stages to reduce BOD to five and potable water levels. "Instead of using chemical coagulants, the electrocoagulation uses metal plates. When direct current is supplied to it, the metal plates turn into ions and help in coagulating the pollutants. The settled solid is then separated. The process can be understood to be similar to the formation of cottage cheese," he said.

Heavy metals, phosphate compounds and problematic pollutants can be easily removed using this electricity-based purification. A DJB official said that the

electricity input for the unit is not much and the plant can be run using solar power. While a natural STP like Rajokri model costs around Rs 1 for purification of 1,000 litres of water, the electrocoagulation will be slightly more expensive. However, the units require less space and are useful for heavily polluted waterbodies that cannot be purified using natural STP. "If we remove the land cost required in natural STPs, this technology too can be cost effective.



3 levels of purification for horticulture, groundwater recharge and drinking purposes

Mangalore Students Produce Power from Speed Breakers

Four students of electrical and electronics engineering, NMAMIT, Nitte - Ganesh Prasad, Jithesh Kumar A, Sneharaj Kalmady and Sukesha Suvarna K- have developed a prototype that can produce electricity from speed breakers. The prototype converts kinetic energy of vehicles moving over speed breakers to mechanical energy using the crank-shaft mechanism. The mechanical energy so produced is used to rotate electric dynamo to generate electricity.

The electricity so generated is stored in batteries. It can be used to light street lights and traffic lights. K Vasudev Shettigar, their guide and the head of the department of electrical and electronics engineering, said, "Electricity plays a very important role in our life. Due to population explosion, the current power generation has become insufficient to fulfil our requirements. Hence, we need to discover new technologies to generate electricity. The students have come forward to exploit energy that is literally being wasted." Any vehicle in motion produces various forms of energies due to friction between the vehicle's wheels and the road. Heat energy is produced when vehicles move over the rough surface of roads. However, when they move at a high speed and face resistance from the wind, these energies are wasted. The prototype is using these energies to produce electricity.

If the model is implemented on busy highways or roads in the state capital, it can generate electricity that can lit five lamps of 40W. "This method of generating electricity is most reliable and cheaper than non-conventional renewable methods of electricity generation such as wind and solar energies," he added.

SDMC Green Waste Project Will Keep Delhi's Poor Warm

In a unique community initiative, South Delhi Municipal Corporation has launched a project to provide free hot water to people living in JJ colonies during the winter season. As part of a pilot project, the facility was launched at Ambedkar Basti in RK Puram Sector 1. The horticulture department, which has been using hot water for its daily activities using the heat generated during composting of organic waste, will now use the same technique — albeit in a bigger scale — to help people who cannot afford geysers during winters.

According to SDMC's horticulture department director Alok Kumar, methane gas generated during composting of shredded green waste is being used to heat the water. "The temperature of shredded waste increases as soon as we add cow dung slurry and chemicals to start the decomposition process. Malis have so far been using this mixture for roasting potatoes and boiling water in small containers after keeping them inside the shredded green waste overnight," he explained.

Considering the amount of green waste generated from the roadside and parks daily, the civic official said that a decision was taken to set up such plants at parks/ nurseries located close to slum areas. At a park near RK Puram, a plant has been set up for supplying 1,000 litres of hot water every day. "We have made a 15x18 feet iron mesh structure and filled it with two tonnes of shredded

green waste. In the middle, we have kept five iron containers — each of 200 litre capacity — and covered them with green waste. Water pipes have been installed for inlet and outlet of water in these iron containers," said Vishwendra, deputy commissioner, SDMC (South Zone).

Every night, corporation staff will fill these containers with water collected from nearby tubewells and leave it to simmer overnight for at least 10 hours. Ambedkar Basti councillor Tulsi Joshi has held meetings with locals and asked them to ensure that every one stands in queue to collect the hot water. The south corporation also plans to supply hot water to dhobi ghats in the area. SDMC is planning to set up a similar plant at Ekta Camp, Kanak Durga Camp and the slum cluster near Vasant Kunj.

Obituary

Shri T.N. Gupta, one of the founder member of IBC; Past Vice President, IBC and former Scientist in CBRI; Executive Director, BMTPC & Advisor to Ministry of Urban Development, passed away on December 28, 2019. Indian Buildings Congress deeply mourns his sad demise and shares bereavement with the members of his family.

प्लास्टिक वेस्ट मिला बनाया जाएगा तारकोल, 850 मीटर सड़क में 16 लाख टन खपत

प्लास्टिक वेस्ट को खत्म करने के लिए इंडियन ऑयल कॉर्पोरेषन (आई.ओ.सी.) ने नया अविष्कार किया है। तारकोल में अब 3% प्लास्टिक वेस्ट डाला जाएगा। पानीपत स्थित रिफाइनरी परिसर में आई.ओ.सी. के चेयरमैन श्री संजीव सिंह ने देष के पहले ऐसे प्लांट का उद्घाटन किया, जिसमें प्लास्टिक वेस्ट के मिश्रण से तारकोल बनेगा। यह तारकोल अब 25 किलोग्राम के पॉलीबैग में भी मिलेगा । अब तक ड्रम में ही तारकोल मिलता था। एक और बड़ी बात है कि यह पॉलीबैग सिंगल यूज प्लास्टिक के वेस्ट से बनाया जाएगा। जो गर्म करने के साथ ही घुल जाएगा।

इंडियन ऑयल के चेयरमैन श्री संजीव सिंह ने कहा कि इस तारकोल वाली सड़क सामान्य से ज्यादा मजबूत होंगी। प्रयोग के तौर पर इस तारकोल से आई.ओ.सी. के फरीदाबाद रिसर्च एंड डेवलपमेंट सेंटर में 850 मीटर लंबी सड़क बनाई गई है। सेंटर के निदेशक डॉ. एस.एस.वी. रामाकुमार ने कहा कि 850 मीटर लंबी सड़क बनाने में 16 मीट्रिक टन प्लास्टिक वेस्ट का उपयोग किया गया। इससे समझा जा सकता है कि प्लास्टिक वेस्ट को खत्म करने में यह प्लांट कितनी बड़ी भूमिका निभाएगा।

5 जी के स्वागत के लिए तैयार है देश में बनाया गया दमदार एंटीना

आइ.आइ.टी., आइ.एस.एम., धनबाद ने अत्याधुनिक 5 जी एंटीना तैयार किया है, जो प्रोजेक्ट की पूर्णता के बाद फरवरी तक सरकार को सौंप दिया जाएगा। एंटीना की फ्रीक्वेंसी शानदार है और बैटरी लाइफ पांच गुना अधिक, जबकि आकार और वजन 4 जी एंटीना के बराबर ही है।

मोबाइल और इंटरनेट की पांचवीं जेनरेशन (पीढ़ी) यानी 5 जी की शुरुआत का भारत को बेसब्री से इंतजार है। केंद्र सरकार के विज्ञान एवं अभियंत्रण अनुसंधान बोर्ड ने धनबाद, झारखंड स्थित भारतीय प्रौद्योगिकी संस्थान (इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी, आइ.आइ.टी.) व भारतीय खन्न विद्यापीठ (इंडियन स्कूल ऑफ मांइस, आइ.एस.एम.) को 5 जी नेटवर्क सेवा लिए स्वदेशी एंटीना तैयार करने का प्रोजेक्ट सौंपा था। संस्थान के विशेषज्ञों के अनुसार अत्याधुनिक एंटीना तैयार कर लिया गया है। एंटीना के सिग्नल प्रोसेसिंग का काम पूरा हो गया है। फरवरी तक इसे सरकार को सौंप दिया जाएगा।

आइ.आइ.टी., आइ.एस.एम., धनबाद के इलेक्ट्रॉनिक्स इंजीनियरिंग विभाग के वैज्ञानिकों की टीम ने कड़ी मशक्कत के बाद यह एंटीना बनाया है। इस प्रोजेक्ट का नाम डिजाइन एंड डेवलपमेंट ऑफ मल्टी बैंड सकरुलरली पोलराइज्ड कॉम्पैक्ट मेटा–मैटेरियल एंटीना फॉर मोबाइल एप्लीकेशन रखा गया है।

आइ.एस.एम.के इंजीनियरों के मुताबिक 5 जी नेटवर्क का एंटीना विशेष प्रकार के तांबा और एफ.आर.–4 एपॉक्सी मैटेरियल से बनाया गया है। एंटीना बनाने वाली टीम के सदस्य प्रो. राघवेंद्र कुमार चौधरी ने बताया कि अब तक अमूमन 2 जी, 3 जी, 4 जी का मोबाइल नेटवर्क उपलब्ध है। इनमें 1.6, 1.8, 2.1 और 2.4 गीगाहर्ट्ज तक के बैंडविथ का उपयोग होता है। हमने 5 जी के लिए 6 गीगाहर्ट्ज के बैंडविथ का उपयोग किया है। एंटीना को हैक करना भी हैकर्स के लिए कतई आसान नहीं होगा। एंटीना की बैटरी लाइफ पांच गुना अधिक है। वहीं, आकार और वजन 4 जी की तरह ही है।

4 जी की तुलना में 5 जी इंटरनेट सेवा 20 गुना तक ज्यादा स्पीड देने में सक्षम होगी। इससे डाटा डाउनलोड और अपलोड होने में काफी कम वक्त लगेगा। वहीं, कंटेंट, वीडियो और अन्य सेवाओं की बेहतर क्वालटी के कारण लोगों के जीवन में क्रांतिकारी बदलाव आएंगे।

लद्दाख में 'विशेष विंटर ग्रेड डीजल' से अब बर्फीले मौसम में भी दौड़ेंगी गाड़ियां

अब बर्फीली तूफानों के बीच भी लद्धाख क्षेत्र में डीजल की गाड़िया दौड़ सकेंगी। केंद्रीय गृह मंत्री श्री अमित शाह ने लद्धाख क्षेत्र के लिए विशेष विंटर ग्रेड डीजल उपलब्ध कराने की योजना को हरी झंडी दिखाई। इंडियन ऑयल की पानीपत की रिफाइनरी मे तैयार यह डीजल माइनस 33 डिग्री सेंटीग्रेड तापमान पर नही जमता है। दरअसल, लद्धाख में तापमान की गिरावट के साथ सर्दियों में सामान्य डीजल जम जाता है, जिससे गाड़ियों को चलाने में परेशानी होती है। इस अवसर पर केंद्रीय पेट्रोलियम मंत्री श्री धर्मेंद्र प्रधान भी मौजूद थे।

वहीं केंद्रीय पेट्रोलियम एवं प्राकृतिक गैस तथा इस्पात मंत्री श्री धर्मेंद्र प्रधान ने इंडियन ऑयल की मानवीय आवश्यकता और सेवा पर आधारित इस पहल की तारीफ की। उन्होने कहा कि इससे लद्धाख में विंटर ग्रेड डीजल की अबाध आपूर्ति संभव होगी, परिवहन की गतिविधियां यदि बिना रुकावट चलती रहेंगी तो वहां लोगों के रोजगार और पर्यटन आधारित अर्थव्यस्था को मजबूती मिलेगी।

गौरतलब है कि विशेष विंटर ग्रेड डीजल में लगभग पांच प्रतिशत बायोडीजल का मिश्रण भी किया गया है। इसकी वजह से जहां डीजल वाहन के लिए बेहतर रहेगा वहीं इसके जम जाने की समस्या से निजात मिलेगी। यह डीजल बी.आइ.एस. (ब्यूरो ऑफ इंडियन स्टैंडर्डस) के मानकों पर भी खरा है।

अभिशाप से वरदान में तबदील होगी पराली, मालामाल होंगे किसान, प्रदू ण पर ब्रेक

''आम के आम गुठलियों के दाम'' और वह भी उस पराली के लिए जो पूरे उत्तर भारत में प्रदूषण का प्रमुख कारण बनी हुई है। अब यही पराली किसानों के लिए आय का साधन बनेगी।

धान की फसल के बाद किसानों के लिए पराली का निस्तारण एक चुनौती पूर्ण काम होता है। अधिकतर किसान पराली जला देते हैं। लेकिन यह तरीका प्रदूषण का कारण बनता है। आइ.आइ.टी. दिल्ली के सेंटर फॉर बॉयोमेडिकल इंजीनियरिंग की प्रोफेसर श्रीमती नीतू सिंह व छात्र श्री अंकुर कुमार व श्रीमती प्राचीर दत्ता ने पराली के निष्पादन का बेहतरीन व सस्ता तरीका खोज निकाला है। उनकी इस खोज से प्लास्टिक से बने डिस्पोजल बर्तनों (कप,कटोरी,प्लेट आदि) का विकल्प भी मिल गया है। अब पराली किसानों के लिए आमदनी का स्रोत बन सकती है और लोग इससे बने डिस्पोजल बर्तनों का प्रयोग कर प्लास्टिक को न कह सकते हैं।

इस बाबत प्रो. श्रीमती नीतू सिंह ने बताया कि पराली को पर्यावरण अनुकूल केमिकल के जरिये प्रोसेस कर पल्प बनाया जाता है। इस पल्प को कई उत्पादों के प्रयोग में लिया जा सकता है। किसान इस पल्प को बेच भी सकते हैं, जिसकी बाजार में कीमत 45 रुपये किलोग्राम तक मिल सकती है जबकि पल्प से डिस्पोजल बर्तन भी आसानी से बनाए जा सकते हैं। अभी 100 फीसद पराली से बने डिस्पोजल बर्तन बाजार में सीमित मात्रा में है, लेकिन उनकी कीमत बहुत अधिक है। हमारे इस केमिकल के जरिये बनाए गए पल्प से कम कीमत में 100 फीसद शुद्ध डिस्पोजल बर्तन बनाए जा सकते हैं। इस केमिकल को पेटेंट कराने के लिए हमने आवेदन कर दिया है।

रायपुर स्थित इंदिरा गांधी कृषि विष्वविद्यालय में संचालित एग्री बिजनेस इंक्यूबेटर में इंदौर के युवा दंपती श्री प्रदीप पाण्डेय और श्रीमती पूजा पाण्डेय ने भी पराली से डिस्पोजबल बर्तन तैयार किया है। साथ ही, एग्रो स्टार्टअप भी शुरु किया है और किसानों को इसे लघु उद्योग के रुप में स्थापित करने के लिए प्रेरित कर रहे हैं। श्री प्रदीप पाण्डेय बताते है कि हमने प्लास्टिक से तैयार डिस्पोजेबल को चुनौती मानते हुए पराली से डिस्पोजेबल बर्तन तैयार किया है। यह स्वतः गल जाएगा और इससे खाद भी बनाई जा सकती है।

श्री प्रदीप ने बताया कि पराली को पानी में डूबो कर एक से दो दिन रखने के बाद उसकी लुग्दी तैयार की जाती हैं। लुग्दी से आसानी से डिस्पोजेबल बर्तन तैयारे किया जा सकता है। इसके लिए अलग से मशीन की जरुरत नहीं पड़ती । कागज के डिस्पोजेबल बनाने वाली मशीन से ही यह बन सकता हैं। इससे कप, गिलास, थाली, प्लेट कटोरी भी बनाई गई है।

प्लास्टिक से बने डिस्पोजेबल कप, प्लेट आदि के कारण नालियां जाम हो जाती थीं, लेकिन पराली से तैयार ये सामान नालियों को साफ करने का काम करेंगे। ये डिस्पोजेबल बर्तन नाली में जाते ही लुग्दी बन जाते हैं और उसमें मौजूद गंदगी को अपने साथ लपेट लेते हैं। जब उसे बाहर निकालते हैं। तो नाली पूरी तरह से साफ हो जाती है। श्री प्रदीप कहते हैं कि अगर तालाब की सफाई करनी है तो उपयोग किए जा चुके पराली के डिस्पोजेबल

बर्तन को उसमें फेंक दें। 12 घंटे के बाद निकालने से तालाब पूरी तरह से साफ हो जाएगा। पराली के डिस्पोजेबल से खाद भी तैयार की जा सकती है। अगर इसके साथ गोबर को मिला दिया जाए तो 10 से 15 दिन में खाद बन जाती है।

सौर ऊर्जा से चलेगा 'हरित जेनरेटर'

आइ.आइ.टी.,दिल्ली ने सौर ऊर्जा को एकत्रित करते हुए लेड रहित बैटरी बनाने में सफलता प्राप्त की है। यह बैटरी हरित जेनरेटर की तरह भी काम कर सकती हैं। आइ.आइ.टी.,दिल्ली केमिकल इंजीनियरिंग विभाग के प्रोफेसर श्री अनिल वर्मा व छात्र डॉ. राजीव व श्री मानश ने यह फ्लो बैटरी बनाई है।

इसको लेकर प्रो. वर्मा ने बताया कि अभी सौर, पवन और पानी से बनी बिजली को एकत्रित कर लेड एसिड से बनने वाली बैटरी प्रयोग में लाई जाती है, जिसका जीवन कम होता है और इसे बनाने व इसके निस्तारण से जल, वायु और भूमि प्रदूषित होती है। इसके मद्देनजर यह फ्लो बैटरी बनाई

है। इसमे वेनेडियम रेडॉक्स में ऊर्जा को संरक्षित रखा जाता है। इसके बहाने संरक्षित ऊर्जा बिजली के रुप में प्राप्त की जाती है। इस बैटरी का प्रयोग 20 सालों तक किया जा सकता है जबकि इसे जेनरेटर की तरह प्रयोग किया जा सकता है। भारत में इसके पेटेंट के लिए आवेदन कर दिया गया है।

ऊबड़–खाबड़ रास्तों को भी आसान बनाएगी यह बैसाखी

दिव्यांगजनों के लिए उनकी बैसाखी ही उनके कदम होती है, लेकिन उनके कदम अक्सर ऊबड़–खाबड़ या पथरीले रास्तों में स्थिर हो जाते हैं। इस दौरान बैसाखी उन्हें आफत सी लगती हैं इस समस्या से निपटने के लिए आइ.आइ.टी.,दिल्ली मेकेनिकल इंजीनियरिंग विभाग के प्रोफसर श्री जे. पी. खटैट व उनके छात्र श्री अरविंद और श्री श्रीनिवास ने नए डिजाइन की बैसाखी (फ्लेक्समोटिव) बनाई है।

यह आरामदेह बैसाखी किसी भी रास्ते में चलने लायक है। इस पर प्रो. श्री जे.पी. खटैट ने कहा कि आम बैसाखी में कई महत्वपूर्ण बदलाव कर नई बैसाखी बनाई गई है। आम बैसाखी में नीचे रबड़ लगी होती है, जो ऊबड़–खाबड़ रास्तों व पथरीले रास्तों में सहायक नहीं होती है। इस कारण दिव्यांगों को अधिक ऊर्जा का प्रयोग करना पड़ता है। वहीं आम बैसाखी की बनावट का विपरीत असर हाथों व कंधों पर भी पड़ता है, जिससे कई बार दिव्यांगों की नस दब जाती है। इसके मद्देनजर हमने नई बैसाखी तैयार की है। नई बैसाखी के नीचे लोहे की पत्तियों से डिजाइन बनाया गया है।

ये पत्तियां स्प्रिंग की तरह कार्य करती है और सभी तरह की सतहों पर चलने में सहायक होती हैं। वहीं, इससे मरीज के कंधों व हाथों पर पर अधिक दबाव नहीं पड़ता है। उन्होंने बताया कि इस प्रोजेक्ट में अखिल भारतीय आयुर्विज्ञान संस्थान (एम्स) भी शामिल है। इसका दाम एक हजार रुपये तक रखा जाने के लिए प्रयास किया जा रहा है।

पहली बार सड़क के गड्ढे भरने की मशीन बनाई, 2 लोग दिन में 100 गड्ढे भर सकेंगे

सड़क पर गड्ढों से एक साल में देश में 9 हजार से ज्यादा हादसे हुए । इनमे करीब साढ़े तीन हजार लोगों की जानें जा चुकी हैं। गड्ढों की वजह से होने वाले इन हादसों को कम करने के लिए सेंट्रल रोड़ रिसर्च इंस्टीट्यूट (सी.आर.आर.आई) ने मशीन तैयार की है। इसकी मदद से पहले से 5 गुना तेजी से गड्ढों को भरा जा सकेगा। सी.आर.आर.आई. ने पहली बार देश में यह तकनीक ईजाद कर पेटेंट करा लिया है। इसे जेसीबी में इस्तेमाल किया जाएगा। सी.आर.आर. आई. मुख्यालय दिल्ली में मशीन का प्रदर्शन कामयाब रहा। सी.आर.आर. आई. के निदेशक श्री सतीश चंद्रा ने बताया कि अप्रैल 2020 से मशीन बाजार में बिक्री के लिए उपलब्ध हो जाएगी। पहले चरण में 500 मषीनें तैयार करने का लक्ष्य रखा गया है। इन मशीनों से स्थानीय निकायों और पी.डब्ल्यू.डी. को सबसे अधिक मदद मिलेगी। अभी तक मैनुअल गड्ढे भरे जाते थे, जिसमें तीन मशीन ओर 6–8 लोगों की टीम लगती है, जो पूरे दिन मे अधिकतम 25 गड्ढे भर पाती है। लेकिन इस मशीन से 2 लोग एक दिन में 100–100 गड्ढे भर सकते हैं।

मशीन को चलाने के लिए दो लोगों की जरुरत होगी। एक मशीन को चलाने वाला ऑपरेटर और दूसरा गाइड करने वाला कर्मचारी होगा। मशीन, रोलर, कटर मिक्सर तीनों का काम करेगी। इसके प्रयोग से पर्यावरण को बचाए रखने में भी मदद मिलेगी, क्योंकि इसमें कोल्ड मिक्स तकनीक का प्रयोग किया जाएगा। इससे तारकोल को गर्म करने की जरुरत नहीं पड़ेगी। इस तरह धुआं नहीं होगा।

आग से बचाएगा 'द फायर वॉरियर'

बहुमंजिला भवनों में अब आग से पार पाना आसान होगा। भारतीय प्रोद्योगिकी संस्थान (आइ.आइ.टी.) मंडी, हिमाचल प्रदेष के प्रशिक्षुओं ने 'द फायर वॉरियर' नाम से फायर फाइटिंग रोबोट तैयार किया है, जो आग बुझाने व भवन में फंसे लोगों को तलाश करने मे मदद करेगा। इससे समय रहते आग पर काबू पाना संभव होगा, साथ ही जान–माल की क्षति को भी रोका जा सकेगा।

आग की घटनाओं से देशभर में हर साल जान–माल का भारी नुकासान होता है। आग बुझाते समय दमकल कर्मियों को भी जान से हाथ धोना पड़ता है। यह रोबोट इन सभी समस्याओ से निजात दिला सकता है। अग्निशमन कर्मियों का कहना है कि इस तरह के तकनीकी उपायों का जल्द से जल्द व्यावहारिक अमल में लाने की आवश्यकता है। आइ.आइ.टी. के छात्रों ने बताया कि यह रोबोट मौके पर दमकल कर्मियों की जगह भी काम करने मे दक्ष होगा। अग्निशमन कर्मी भी घटनास्थल के बाहर से इसे आसानी से संचालित कर सकेगा। रोबोट उच्च क्षमता के कैमरे और जी.पी.एस. से लेस होगा, जिससे आग प्रभावित क्षेत्र में फंसे लोगों को आसानी से खोजा ओर बचाया जा सकेगा। बीटेक कंप्यूटर सांइस, मैकेनिकल इंजीनयिरंग और इलेक्टिकल इंजीनियरिंग तृतीय वर्ष के छात्रों ने मिलकर यह रोबोट बनाया है। इसके अलावा संस्थान के एम.टेक. के तीन छात्र–छात्रओं ने जी.एस.एम आधारित फायर सेफ्टी अलर्ट सिस्टम भी ईजाद किया है। यह सिस्टम बिजली, आग व गैस से भवनों को बचाएगा। इस तकनीक को टेक फेस्ट में प्रथम पुरस्कार मिला है।

सार्वजनिक शौचालयों, ट्रेनों में हैंडवॉश को सुलभ बनाएगी यह युक्ति

ट्रेन हो या सार्वजनिक शौचालय, अधिकांश जगह हाथ धोने का साबुन (लिक्विड सोप) मुहैया नहीं होता। कई जगह सोप खत्म हो जाता है, तो कहीं इसका इंतजाम ही नहीं होता है। मेरठ, उ.प्र. स्थित मेरठ इंस्टीट्यूट ऑफ इंजीनियरिंग एंड टेक्नोलॉजी (एम.आइ.ई.टी.) के प्रोफेसर ने इसका समाधान प्रस्तुत कर दिखाया है। ताकि स्वच्छ भारत में स्वच्छता का अधिकार हर किसी को, हर जगह सुलभ हो।

इस समस्या से निपटने और देशभर में चल रही स्वच्छता की मुहिम को एक कदम आगे बढ़ाते हुए एम.आइ.ई.टी. के प्रोफेसर श्री नितिन शर्मा ने ऐसा हैंडवाश प्रोसेसर–कम–डिस्पेंसर बनाया है, जिससे खुद ही लिक्विड सोप तैयार होता रहेगा। न तो बार–बार खाली होने की समस्या रहेगी और न ही भरने की। आम डिस्पेंसर के मुकाबले यह लंबे समय तक काम करता रहेगा। प्रो. श्री नितिन कहते हैं, यही नहीं, ज्यादातर सार्वजनिक शौचालयों में निम्न गुणवत्ता का लिक्विड सोप उपयोग किया जाता है। इस समस्या के समाधान के लिए हैंडावाश प्रोसेस–कम–डिस्पेंसर डिजाइन किया गया है। इसमें बस कुछ मात्र केमिकल रखना होता है, जो पानी के साथ अपने आप लिक्विड सोप (साबुन) में बदल जाता है। उच्च गुणवत्ता का एक लीटर सोप 20 रुपये में तैयार हो सकता है, जोकि बाजार में उपलब्ध अन्य हैंडवाश लिक्विड सोप के मुकाबले काफी कम कीमत है। मेरठ इंस्टीट्यूट आफ इंजीनियरिंग एंड टेक्नोलॉजी ने इस युक्ति को पेटेंट करा लिया है।

संस्थान के चेयरमैन श्री विश्णु शरण अग्रवाल बताते हैं कि नगर निगम और कैंट बोर्ड को इसका प्रयोग करने का प्रस्ताव भेजा जा रहा हैं। लिक्विड सोप बनाने के लिए प्रो. श्री नितिन शर्मा ने एसिड स्लरी (साबून बनाने में प्रयुक्त रसायन), पानी और सोडियम क्लोराइड का उपयोग किया है। इसमें 20 फीसद केमिकल है, शेष 80 फीसदी पानी। डिस्पेंसर में पानी और केमिकल डालने के बाद 10 मिनट में सोप तैयार हो जाता है। एक डिस्पेंसर मैन्युअल है, जबकि दूसरा बैटरी चालित। गांवो के शौचालय में मैन्युअल, जबकि शहरों में बैट्री चालित डिस्पेंसर लगा सकते है।

वेस्ट टू वंडर पार्क में कचरे से बनेगी बिजली

दिल्ली में कबाड़ से बनाए गए वेस्ट पार्क मे उत्पन्न होने वाले कूड़े का उपयोग भी अब बिजली और खाद बनाने के लिए होगा। इसके लिए यहां पर वेस्ट टू एनर्जी प्लांट की स्थापना की जाएगी। इसके लिए निगम ने सिक्योरिटी प्रिट्रिंग और मिंटिंग इंडिया लिमिटेड के साथ समझौता किया है।

इस बाबत दक्षिणी दिल्ली नगर निगम अधिकारियों और सिक्योरिटी प्रिट्रिंग और मिंटिंग इंडिया लिमिटेड (एस.पी.एम.आइ.एल.) के अधिकारियों के बीच समझौता ज्ञापन पर हस्ताक्षर किए गए हैं। इस समझौते के तहत निगम इस प्लांट से 1400 यूनिट बिजली प्रतिदिन और 600 किलो जैविक खाद प्रतिदिन बनाएगा। इस अवसर पर महापौर श्रीमती सुनीता कांगड़ा ने कहा कि प्रस्तावि प्लांट की ओर से 700 घनमीटर बायो गैस भी उत्पादित होगी। प्लांट से बनाई गई जैविक खाद का प्रयोग निगम के पार्को में किया जाएगा।

प्लांट से उत्पादित होने वाली बिजली का प्रयोग पार्क में किया जाएगा, वहीं खाद का उपयोग वेस्ट टू वंडर पार्क के पांच किलोमीटर दायरे में आने वाले 250 पार्को में उपयोग किया जाएगा। उन्होने बताया कि यह प्लांट ईको फ्रेंडली प्रोजेक्ट है और वेस्ट टू वंडर पार्क में आने वाले लोगों के लिए उदाहरण पेश करेगा कि किस प्रकार से जैविक कचरे का निश्पादन किया जा सकता है।

महज 30 सेकंड में जख्म से खून बहना रोक देगा स्वदेशी पाउडर, जल्द मार्केट में होगा उपलब्ध

भारतीय युवा वैज्ञानिक ने रास्ता और कारगर स्वदेशी पाउडर विकसित कर दिखाया है। जख्म वाले स्थान पर डालते ही 30 सेकंड के अंदर यह खून का बहना रोक देगा। एन.आइ.टी. (राश्ट्रीय प्रौद्योगिकी संस्थान) राउरकेला में बायोमेडिकल इंजीनियरिंग से एम.टेक. श्री साबिर हुसैन की इस युक्ति को रक्षा अनुसंधान एवं विकास संगठन (डी.आर.डी.ओ.) ने मान्यता दी है।

बंगाल के पूर्वी बर्धमान जिले के खंउघोष के रहने वाले श्री साबिर के इस शोध को हाल ही डी.आर.डी.ओ. के डेयर टू ड्रीम इनोवेशन कॉन्टेस्ट में प्रथम पुरस्कार मिला । श्री साबिर कहते हैं, दुर्घटना में अक्सर लोगों की अधिक खून निकलने से मौत होने की बात बचपन से ही सुनता था। तभी प्रण किया कि बायोमेडिकल इंजीनियरिंग की पढ़ाई कर कुछ बड़ा काम करुंगा, ताकि लोगो की जान बच सके। यह स्टॉप ब्लीड पाउडर मौत से जंग कर रहे जख्मी लोगों के लिए संजीवनी का काम करेगा।

श्री साबिर का कहना है कि पाउडर पर तीन वर्ष तक गहन शोध किया। घाव पर रक्त का थक्का कैसे बनता है, किस रसायन की क्या भूमिका है, इसमे फाइब्रिनोजन, थ्राम्बोप्लास्टिन और ब्लड प्लेटलेट्स कैसे काम करते हैं। इन बिंदुओ पर अध्ययन कर इसका निर्माण किया। जानवरों पर किया गया प्रयोग बेहद उत्साहवर्धक रहा। यह पाउडर रक्त का थक्का जमाने वाले अवयवों को अत्यधिक तेजी से सक्रिय करता है। प्रो. डॉ. देवेंद्र वर्मा के मार्गदषगन में अंततः सफलता मिल गई। अब कुछ और तकनीकी बिंदुओं पर काम कर रहे हैं। यह पाउडर बाजार में उपलब्ध रक्त का थक्का बनाने वाली दवाओं से पांच गुना कम कीमत का होगा। श्री साबिर ने जो पाउडर तैयार किया, उसके तीन ग्राम की कीमत 250–300 रुपये के बीच आएगी। बकौल श्री साबिर वह जल्द ही इसका व्यवसायिक उत्पादन शुरु कर देंगे।

स्पीड ब्रेकर से जगमगाएंगे शहर –गॉव

अब वह दिन दूर नहीं जब स्पीड ब्रेकर से बिजली तैयार होगी। रोजाना हजारों गाड़ियां सड़कों पर दौड़ती हैं और अब सड़क के स्पीड ब्रेकर से बिजली पैदाकर शहर व गॉव जगमगाएंगे। मंडी में जोनलस्तरीय मॉडल प्रदर्शनी में कुल्लू के राजकीय वरिश्ठ माध्यमिक पाठषाला बंजार के आठवीं के छात्र श्री रोहित ठाकूर ने एक ऐसा मॉडल तैयार किया है, जिससे स्पीड ब्रेकर से बिजली पैदा हो सकेगी। इसके लिए खास सर्किट तैयार किया गया है। स्पीड ब्रेकर से लगातार गाड़ियों के गुजरने से बिजली पैदा होती रहेगी और आपूर्ति षहर व गॉव को दी जाएगी।

श्री रोहित ने बताया कि सड़क पर स्पीड ब्रेकर को रोलर के आकार का बनाया जाएगा । स्पीड ब्रेकर के घर्षण के माध्यम से बिजली पैदा की जा सकती है। इस मॉडल के अनुसार प्रतिदिन बढ़ रही वाहनों की संख्या और उनके सड़क बढ़ रहे दबाव से बनने वाली यांत्रिक ऊर्जा को इकट्ठा कर विद्युत उर्जा में बदला जा सकता है। सड़कों पर बनने वाले स्पीड ब्रेकरों के नीचे टरबाइन लगाकर डाइनमो से जोड़कर यांत्रिकी ऊर्जा को विधुत ऊर्जा में बदला जा सकता है। इसके लिए श्री रोहित ने खास सर्किट भी बनाया है जो धीरे–धीरे पैदा होने वाली बिजली को स्टोर भी कर सकेगा और रात में अंधेरा दूर कर सकेगा।

बकौल रोहित, इस भाग–दौड़ भरी जिंदगी में सड़कों पर हजारों गाड़ियां दौड़ती हैं और इससे हम अलग–अलग सर्किट के हिसाब से बिजली का उत्पादन कर सकते हैं। स्पीड ब्रेकर से पैदा होने वाली बिजली से हम स्ट्रीट लाइटों को भी सप्लाई कर सकते हैं, जिससे बिना किसी अतिरिक्त खर्च के शहर और गॉव में रोशनी कर सकते हैं। इससे ऊर्जा की बचत भी होगी और खर्च भी कम आएगा। इसका इस्तेमाल घरों में भी किया जा सकता है और अन्य उपकरणों को भी चलाया जा सकता है। ऐसे में बिजली की कमी से सरकार को परेशान भी नहीं होना पड़ेगा। अत्याधिक वाहनों वाले शहरों मे अगर इसका इस्तेमाल किया जाए तो इससे काफी अधिक बिजली का उत्पादन होगा। दिन–प्रतिदिन बिजली की समस्या से सरकारों को विधुत परियोजनाओं पर कम निर्भर रहना पड़ेगा।

रीढ़ की हड्डी के ऑपरेशन में अब नहीं होगी कोई चूक

आइ.आइ.टी., कानपुर के इंजीनियरों और संजय गांधी एस.जी.पी.जी. आइ., लखनऊ के डॉक्टरों ने मिलकर खास सर्जिकल टूल विकसित किया है। दावा है कि यह दुनिया में अपनी तरह का पहला यंत्र है। रीढ़ की हड्डी, विशेषकर गर्दन वाले हिस्से में ऑपारेशन की जटिलता इस टूल 'सर्जिकल डिस्ट्रेक्टर' से दूर हो जाएगी। सफल प्रयोग के बाद इसका व्यावसायिक उत्पादन शुरु किया गया है।

भारतीय प्रौद्योगिकी संस्थान (संस्थान इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी, आइ.आइ.टी.) कानपुर के मैकेनिकल इंजीनियरिंग विभाग के प्रोफेसर डॉ. नचिकेता तिवारी, डिजाइन प्रोग्राम छात्र श्री कार्तिक, संजय गांधी स्नातकोत्तर आयुर्विज्ञान संस्थान (एस.जी.पी.जी.आइ) लखनऊ के ऑर्थोसर्जन (अस्थि शल्य चिकित्सा विशेषज्ञ) डॉ. जयेश सरधरा और डॉ. संजय बिहारी की टीम ने यह सर्जिकल डिस्ट्रेक्टर तैयार किया है। स्टील से बने आठ इंच के इस यंत्र का प्रायोगिक परीक्षण (लेब टेस्ट) सफल रहा है। अब इसके व्यावसायिक उत्पादन के लिए एक बड़ी कंपनी ने काम शुरु कर दिया है। स्टील की जगह अब इसे टाइटेनियम धातु से बनाया जा रहा है। वर्ष 2020 में इसका प्रयोग एस.जी.पी.जी.आइ. में सर्जरी के दौरान वरिष्ठ चिकित्सकों की देखरेख में होगा।

रीढ़ की हड्डी के गर्दन वाले हिस्से में पतली हड्डियां, रक्त नलिकाएं और मस्तिष्क से जुड़ी बारीक तंत्रिकाएं होती हैं। इसलिए सर्जरी के दौरान यह हिस्सा खोलना कठिन होता है। इसे अभी तक सामान्य उपकरण के जरिए हाथ से ही खोला जाता है। ऐसे में हड्डियां फिक्स नहीं हो पाती है। उनके खिसकने का डर रहता है। गैप फिक्स रहे, इसके लिए डॉक्टरो को बार–बार हाथ से ही हड्डी खिसकानी पड़ती है, जिसमें चूक की संभावना बनी रहती है।

सर्जिकल डिस्ट्रेक्टर के चिकित्सीय हिस्से का जिम्मा उठाने वाले डॉ. जयेश सरधरा ने बताया कि रोबोटिक सर्जरी से रीढ़ की हड्डी के सी–1 और सी–2 जैसे ऊपरी हिस्से का ऑपरेशन नहीं हो पा रहा है। रोबोटिक सर्जरी

निचले हिस्से में ही कारगर है। बच्चे मे पाई जाने वाली गंभीर बीमारी अटलांटा एक्सल डिसलोकशन हो या गर्दन के पास रीढ़ की हड्डी संबंधी बीमारी, रोबोटिक सर्जरी कारगर नहीं है। इसे ऑपरेशन में ऐसे टूल की जरुरत है, जो सर्जरी प्वांइट की स्थिति को देखकर इस हिस्से को खोल सके और हड्डियां फिक्स कर सके। ऑपरेशन के समय इस हिस्से के सभी अवयवों का ध्यान रखना बेहद जरुरी है। इन सभी कामों में यह यंत्र अति उपयोगी साबित हुआ है। सर्जिकल डिस्ट्रेक्टर के प्रयोग से सर्जरी की गुणवत्ता बढ़ेगी।

सर्जिकल डिस्ट्रेक्टर के मैकेनिकल हिस्से पर शोध करने वाले प्रो. नचिकेता तिवारी ने बताया कि स्क्रू मैकेनिज्म पर बने इस उपकरण से हड्डियां मिलीमीटर से भी महीन हिस्से तक खिसकाई और फिक्स की जा सकती हैं। यह डिस्ट्रेक्टर हड्डियों के बीच किए गए गैप को फिक्स कर देता है, जिससे हड्डियां जरा भी नहीं हिलतीं। सर्जरी के दौरान चिकित्सक को यह चिंता नहीं करनी होगी कि हड्डियां सरक तो नहीं गई। इस उपकरण से ऑपरेशन का समय भी करीब एक तिहाई कम हो जाएगा।

Where the mind is without fear and the head is

Held high, where knowledge is free,

Where the world has not been broken up into fragments by

narrow domestic walls,

Where words come out from the depth of truth,

Where tireless striving stretches its arms towards perfection

Where the clear stream of reason has not lost its way

into the dreary desert sand of dead habit,

where the mind is lead forward by thee into ever- widening

thought and action,

into that heaven of freedom, my Father,

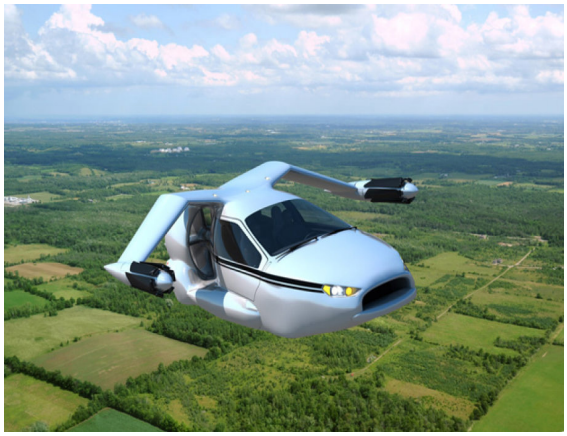
let my country awake.

Rabindranath Tagore

International News

दुनिया की पहली फ्लाई एंड ड्राइव कार हुई लॉंच, 160 कि.मी. प्रति घंटा है स्पीड

दुनिया की पहली 'फ्लाई एंड ड्राइव कार' को मियामी में एक इवेंट मे 11 दिसम्बर, 2019 को लॉन्च किया गया। इसे पायनियर पर्सनल एयर लैंडिग व्हीकल (Personal Air Landing Vehicle PAL-V) नाम दिया गया है। इस कार में रिट्रैक्टेबल ओवरहेड और रियर प्रोपेलर लगाए गए हैं। जिनकी मदद से यह 12,500 फीट की ऊचाई पर उड़ान भर सकती है। कार हवा में 321 किलामीटर प्रति घंटा और सड़क पर 160 किलोमीटर प्रति घंटा की रफ्तार से उड़ ओर दौड़ सकती है। टू– सीटर इस 680 किलो वजनी कार में 230 हॉर्स पावर का चार सिलेंडर इंजन लगा हैं। यह महज 10 मिनट में थ्री व्हील कार से जायरोकॉप्टर में बदल जाती है।



यह कार कार्बन फाइबर, टाइटेनियम और एल्युमिनियम से बनी हैं इसको टेक ऑफ के लिए 540 फुट का रनवे चाहिए । हालांकि, इसके उतरने के लिए महज 100 फीट का रनवे प्रर्याप्त है। इस कार की हर यूनिट की क्षमता और मजबूती का परखने के लिए इसे कम से कम 150 घंटे तक उड़ाया जाता है। इस दौरान इसे कई मुश्किल परीक्षणों से गुजारा जाता हैं। यह 27 गैलन गैस टैंक से लैस है जिसकी वजह से यह 500 किलोमीटर तक की उड़ान भर सकती है। सड़क पर यह कार एक बार में 1200 किलोमीटर तक दौड़ेगी। इसमे मोटरसाइकिल की तरह ही हैंडलबार दिया गया है, जिसकी मदद से सड़क और हवा में नियंत्रित किया जा सकता है। कंपनी ने इसके कॉमर्शियल प्रोडक्शन वर्जन को तैयार कर लिया है।

इसकी कीमत लगभग 4.30 करोड़ रुपये है। अभी तक इस कार की 70 बुकिंग हो चुकी हैं। इसकी पहली डिलीवरी 2021 में होगी। कंपनी ने इसकी बिक्री के लिए एक शर्त रखी है। शर्त के मुताबिक,खरीदार के पास ड्राइविंग लाइसेंस के साथ पायलट लाइसेंस भी होना चाहिए। यूरोपियन एविएशन सेफ्टी एजेंसी के मुताबिक, कंपनी इस कार का सस्ता वर्जन पाल–वी लिबर्टी स्पोर्ट भी तैयार कर रही है, जिसकी कीमत 2.40 करोड़ रुपये होगी।

This 'Artificial Leaf' Sucks in CO_2 and Makes Fuel

Scientists have created an "artificial leaf" that could turn carbon dioxide into fuel. The new technology was inspired by the way plants use photosynthesis to turn carbon dioxide into glucose and oxygen. The artificial leaf mimics this process with the help of a cheap red powder called cuprous oxide and produces methanol and oxygen.

The methanol can be collected and used as fuel by heating the solution so the water evaporates, according to the paper published in Nature Energy. Lead researcher Yimin Wu, an engineering professor at the University of Waterloo said: "This technology has achieved the solar to fuel efficiency about 10%. This is already larger than the natural photosynthesis (about one per cent). The next step is to partner with industry companies to scale it up with a system engineering of flow cell for the production of liquid fuels. More efficient artificial leaves can be developed along the lines with industry partners."

New Efficient Way to Convert Heat into Electricity Found

Researchers have found a new way to capture heat and turn it into electricity, an advance that could increase

the efficiency of energy generation from car exhaust, interplanetary space probes, and industrial processes.The scientists, including those from The Ohio State University in the US, found a new way to design thermoelectric semiconductors -- materials that could convert heat to electricity.The new method is described in a study, published in the journal Science Advances, and is based on tiny particles called paramagnons - materials which are not quite magnets, but produce a magnetic field around them.

"Because of this discovery, we should be able to make more electrical energy out of heat than we do today," said study co-author Joseph Heremans of The Ohio State University. According to the researchers, the method is something "nobody thought was possible," until now. The study noted that magnets, when heated, lose their force of magnetism, and become what is called paramagnetic. A flux of magnetism, the researchers said, created a type of energy called magnon-drag thermoelectricity, which they added, could not be used to collect energy at room temperature until now.

Heremans said that such semiconductor materials in use over the last 20 years "are too inefficient and provide too little energy," making them less useful. The study noted that when one side of a magnet is heated, the magnetism in the colder side increases, producing a property called spin which pushes the electrons in the magnet, creating electricity.

China's Huge New 'Starfish' Airport Opens

China's new $11bn (£8.8bn) mega airport has opened its doors, days before the country's 70th anniversary celebrations. The Daxing International Airport in the capital Beijing was formally opened by President Xi Jinping. It will handle 72 million passengers a year and was built in less than five years. The airport spans 700,000 square metres, or 98 football fields, says state media outlet China Daily. It is the world's biggest international airport terminal.

The Daxing airport - said to be the world's largest terminal in a single building - is expected to receive a large amount of the 170m passengers the city expects to welcome by 2025. The new airport, which is located around 46km (29 mi) south of Tiananmen Square, was designed by famed architect Zaha Hadid. With the opening of the airport, Beijing has joined a group of cities, including New York and London, that have two-long haul international airports.

Greener Tourism- Moving Island Floats on 7 Lacs Discarded Plastic Bottles

Riding on the laguna in Abidjan, Ivory Coast's economic hub, the unusual complex floats on a platform made from 700,000 discarded bottles and other buoyant debris. Its inventor, Frenchman Eric Becker, says his creation can help tourism become greener, more mobile tourism -something less harmful to seas and coastlines than traditional fixed, concrete resorts.

His "Ile Flottante" -French for "Floating Island" -- comprises two thatched bungalows and a restaurant with a bar, two small pools, trees and shrubs and a circular walkway, spread out over 1,000 square metres (10,700 square feet).

Visitors are brought to the moored island by a boat. Electricity is supplied by solar panels, backed by a generator. Water is provided by a pipe from the shore. The island is bigger than a moored boat and handier than a

jetty as it can also be taken to other locations, Becker said.

The seaside resort offers visitors a cool drink or tasty meal, a dip in a pool, a karaoke session or an overnight stay, all with a view. It has around 100 customers a week, mostly curious Ivorians or ecologically-friendly tourists.

609-Year-Old Ancient Turkish City Mosque Transported

A 609-year-old mosque is being transported two-and-a-half miles away from an ancient Turkish city that is due to be flooded. The Er-Rizk Mosque is moved from Hasankeyf, which is going to be flooded because of construction of the Ilisu dam, to the new Hasankeyf Culture Park.

The building, which weighs a whopping 1,700 tonnes, was transported on a Self-Propelled Modular Transporter along the Tigris River. The mosque's minaret, which was built in 1409 under the order of Ayyubids' ruler Ebu'l Mefahir Suleyman, was moved separately.

All of the historic sites in Hasankeyf have been gradually transported to prepare for the construction of the new dam. Six structures have already been relocated – Artuklu Hamam (bathhouse), Sultan Süleyman Koc Mosque, Imam Abdullah Zawiyah, Zeynel Abidin Mausoleum and Eyyubi Mosque were among the previously relocated structures along with the middle entrance of a castle

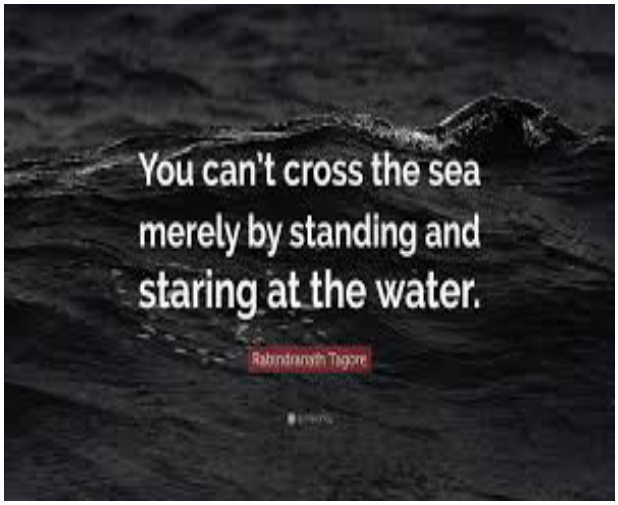
A First: Woman swims across English Channel 4 times non-stop

US endurance swimmer Sarah Thomas has become the first person to swim across the English Channel four times without stopping, refuelling only on a liquid formula during her 54-hour feat. The 37-year-old from Colorado performed her record-breaking swim a year after receiving treatment for breast cancer.

Distance to cover was 129 km but due to strong tides she ended up swimming closer to 209 km. Ms Thomas said dealing with the current was extremely tough and

challenging as it was constantly pushing her off-course. And she was stung by a jellyfish.But the worst thing was "dealing with the salt water. It really hurts your throat, your mouth and your tongue", she said.

Only four swimmers have previously crossed the Channel three times without stopping She consumed only a liquid diet during her swim. Her support crew, following her in a boat, kept throwing her a bottle — containing a mix of carbohydrates, electrolytes and some caffeine, with a little apple juice — every 30 minutes

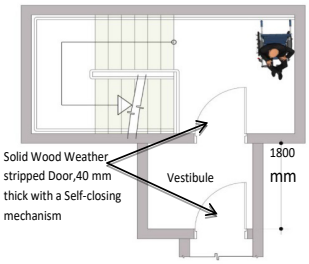


Minimizing Fire Fatalities in India

Avinash Gupta,

P.Eng., CBCO, CRBO, LBO & Dominic Esposito, M.A.Sc., P.Eng.

As one of nature's most destructive forces, accidental fires can be unforgiving. They can erupt in all conditions, at any time,and without notice.



Despite best efforts by regulatory agencies to prevent fires from occurring, fires do take place. In North America, regulations governing the use and storage of flammable materials, fire suppression requirements, and exit routes are well established. However, in India and many other countries in the subcontinent,awareness relating to its establishment and adherence to the proper guidelines that can help minimize loss of life from fire is severely lacking. Much work needs to be done to bring awareness to the best practices to be followed in case of a fire emergency for the safe evacuation of occupants. In India, building fires are mostly accidental. They are usually caused by human error; faulty electrical components, general negligence, and improper maintenance. Deficient fire regulations only add to the inadequacy of protection against the loss of life and property. Yet another major reason for the cause of building fires in India is the improper storage of combustible materials in habitable buildings. In such cases, presence and close proximity to flammable materials in a habitable building significantly reduces the time available to the occupants for the safe evacuation from the building.

For improving the performance level of an exit-enclosure, a vestibule at each floor level and for each exit enclosuremust be provided to help maintain

Besides non-operational/non-functional or locked emergency exits, some of the other important reasons for high fatalities caused by fires in India, is the inaccessible roads for fire tenders in thickly populated narrow lanes, existing unauthorized factories in residential areas, General negligence of the citizens and the system coupled with absence of adequate active, direct, and effective fire-protection systems. A recent fire in a commercial building in Surat, the State /Province of Gujarat, resulted in the death of at least 18 people. According to publicly available data, in 2015 alone, India suffered 1,800 fire-related deaths–many of them avoidable.

In this report,as registered professional engineers and licensed building code officials working in North America, we recommend a few cost-effective fire-protection measures that can improve the performance level of a building to help minimize fatalities.

In the event of a fire emergency, the most important requirements are to evacuate the occupants to safety, controlling the spread of fire, and extinguishing fire.

Buildings in India are generally constructed of masonry and concrete. Use of such materials provides an indirect (passive) fire protection system for the building. In such cases, wall and floor assemblies resist penetration of fire from one floor to the other, thus delaying the spread of fire.

For complex buildings, active fire-protection systems are essential. Active fire-protection systems include automatic fire detection and fire suppression systems. For extinguishing fire and protecting both the building and neighboring structures, an effective fire-fighting system is essential. This includes accessible fire access routes, operational fire hydrants, and standpipe systems. Loss of life can be minimized when both active and passive life safety systems are working coherently.

An automatic sprinkler system designed, installed, tested, and maintained as per relevant codes is an active and effective fire-protection and life safety system.Functions performed by this system, independent of the fire department response time include, controlling the extent of fire by distribution of water so as to decrease the heat release rate (buoyancy or resilience), controlling fire growth and fire spread to adjacent buildings, cooling the fire compartment and therefore preventing it from reaching flashover. In addition to providing substantial property protection, a functioning sprinkler system allows additional time to the occupants for safe evacuation.

Exits must be located and arranged so that they are clearly visible, separate, remote, and accessible at all times. They must also be easily

For the successful operation of an automatic sprinkler system, adequate and reliable water supply in terms of pressure, volume and time is required. Due to limited availability of water in many parts of India, it is difficult to achieve fire-protection, as intended.The available information suggests there are no such provincial or municipal bylaws available in India that can be enforced by the regulators for installing such systems.

To make all of the above-stated fire protection and fire suppression systems work effectively, coordination between local governments, local municipalities, professional designers, owners, and builders is essential.

A major concern that has been ignored in India is the evacuation of occupants requiring assistance, such as persons who use wheelchairs.In North America, it is the fire responders who help to rescue such persons.Because fire responders in India take more time to reach the fire site due to constraints such as non-accessible narrow lanes, streets and overcrowded roads, persons who use wheelchairs as well as those who cannot self-evacuate are at a greater risk of not being rescued.

In North America, after receipt of notification of a fire, fire responders will typically deploy a full first alarm assignment at a fire scene within 10 minutes or less. In comparison, there are no national regulations that mandate such a requirement in India. Therefore, an alternative method should be designed to evacuate people who are not capable of self-preservation (ability to evacuate unassisted).

Therefore, exit routes are to be kept free of obstructions and they are to be functional at all times. Obstructions in the exit route reduce the useable width and also the number of persons that can pass through it, thereby

Fires can spread quickly and may become life threatening in minutes. By the time one notices a fire on the floor or hears an alarm, it may be too late to plan an escape. One should not waste time and must evacuate the building immediately.

A system that includes detection is one of the significant life safety systems that should be installed in all commercial buildings in India for alerting occupants of a fire emergency. Once the occupants are alerted of a fire emergency, the second most important component for evacuating the buildings are the exits, which are considered as temporary refuge areas that provide access to a safe place (e.g., the exterior of the building). Exits that can accommodate the occupants of the building with required exit-capacity should be available. The distance from the most remote point in the floor area to an exit should be minimized. Time taken to reach an exit generally depends on the health of the occupants of the building. For example, patients in a hospital or a nursing home would take more time to reach an exit due to the factors relating to occupant's age, health, and mobility. In addition to travel distance and queuing time, time taken to reach an exit is also influenced by the number of people living in a building at any given time (occupant load), number of exits, obstructions in the exit route, width of corridors/aisles, width of egress doors and their exit capacity.

In the absence of reliable and functioning automatic fire-suppression systems and fire department access routes, the possible and feasible fire safety provisions explained below, would help reduce the number of fire related deaths, if followed diligently.

An exit is a path that does not stop at an exterior exit door, but continues to provide access to the city street or a space that is remote from the building. Every floor area that is intended to be used for occupancy is required to be provided with a minimum of two exits to allow the occupants of the building to evacuate safely before fire makes the environment untenable. A minimum of two exits is required to ensure that the occupants are still able to evacuate if one of the exits becomes inaccessible due to smoke or fire.

For the safety of occupants, exits are to be separate (independent), fire separated from the remainder of the building, and remote from every other exit. A minimum distance of 9 m between the two exits would qualify these to be remote exits.

In addition, exits are to be located and arranged so that they are clearly visible or that their locations are clearly indicated. All exits are to be accessible at all times. They must also be clearly (easily) identifiable and visually non-confusing.The intent of the above-listed requirements is to limit delays in evacuation or movement of occupants to a safe place in case of an emergency. Adherence to the above requirements also helps emergency responders reach the exits and carry out their emergency operations effectively and without delay.

Smoke build up in the exit route could also lead to delays or ineffectiveness in fire emergency response operations. During fire, heat and smoke rise, and staying closer to the ground and crawling can help evacuate the building safely. Therefore, exit routes are to be kept free of obstructions and they are to be functional at all times. Obstructions in the exit route reduce the useable width and also the number of persons that can pass through it, thereby increasing the possibilities of queuing/ stampede. For meeting the requirements of a functional exit door, it must open in the direction of exit travel and swing on its vertical axis. Exit doors that serve an exit stair are to be provided with self-closing mechanisms and should never be secured in an open position. In addition, exit doors should be provided with weather stripping or smoke seal that helps prevent the passage of smoke from the adjoining areas into the exit enclosure. The above measures will ensure that the exit enclosure, which is used as a temporary refuge is not contaminated or compromised during a fire emergency.

The integrity of exit enclosures must be maintained at all times, requiring all penetrations to be fire stopped to

seal the openings. For improving the performance level of an exit-enclosure, a vestibule at each floor level must be provided to help maintain smoke free exit-enclosure.

Every exit door is to have an exit sign placed over or adjacent to it. Every exit sign is to be visible on approach to the exit, located and arranged so that it is clearly visible or its location is clearly indicated. Exit signs should be in conformance with ISO 3684-1 and ISO 7010. If no exit is visible from a corridor used by the occupants, an exit sign with an arrow or pointer indicating the direction of egress is to be provided.

An exit-enclosure and an exit route must be equipped with emergency lighting to provide illumination to an average level of at least 10 lx during all conditions including loss of regular power. Each building must be provided with emergency power supply to maintain emergency lighting/power from a power source such as a generator or batteries or a combination thereof that will continue to supply power automatically for a period of not less than one hour in the event regular power supply to the building is interrupted.

Increasing the performance level of fire and life safety in a building to a level that would be acceptable in North America would require significant capital expenditure. Keeping this in mind, short term measures have been recommended with the goal of eventually upgrading the building practices in India.

The life safety and evacuation of occupants from a building in case of a fire emergency is a complex subject and it is not possible to compress all of the aspects related to them in one article. If the above-suggested options are followed as short-term measures, it would be reasonable to conclude that the number of fatalities would likely be reduced. Based on our experience as skilled fire protection professionals, the above cost-effective alternative measures are the best options as of now. For new building, perhaps, more onerous measures could be incorporated into the design and construction of buildings.

Active Ahmedabad

Bhimji Velji Sorathia Construction Private Limited

Registered on 23 May 2013 | CIN: U45203GJ2013PTC075200

4 DIRECTORS

Ramesh Bhimji Hadiya

Jiteshkumar Bhimji Hadiya

101 DOCUMENTS AVAILABLE

0 Financials

77 Charges

59 Count

Planning Greenfield Smart Cities In India

Jit Kumar Gupta

Former Advisor (Town Planning), PUDA, Punjab

Introduction-- Urbanization in India is known for its massiveness and spread, with 377 million urbanites residing in 7935 cities and level of urbanization placed at 31.1% (Census2011).Last decade(2001-2011), will be known for two reasons in the parlance of Indian demography. First time in the demographic history, urban India added more population (91 million) as compared to rural India (90 million), putting India on the fast trajectory of urbanization. Secondly, for the largest growth in the number of towns from 5161 to 7935.Based on massive differential between urban and rural growth rate (2.1% against 0.7%), by 2030, 600 million will live in urban areas. Number of urban/rural population will share parity by 2050. Estimates made by United Nations reveal, India will have 7/ 9 mega cities by 2030/2050 with population exceeding 10 million. Delhi will be most populated urban agglomeration globally in 2050 with population exceeding 34 million.

Urban Challenges-- Emerging urban scenario on Indian canvas portrays rapid uncontrolled growth; haphazard expansion; sub-standard infrastructure; inefficient traffic and transportation; growing poverty, environmental pollution and large consumption of non-renewal resources and energy. Majority of these urban problems have genesis in the way cities are planned, developed, managed and governed. Urban Planning process in India is based on exclusion and secrecy, serving few elites and excluding majority of urban residents. Planning lacks clarity regarding ownership and responsibility. Being a state subject, each state has its own agenda and pattern of urban planning with multiple agencies operating at state/local level. In this scenario of duplication and overlap, planned growth of cities has emerged as the major casualty. Urban governance is conspicuously ineffective and resultantly inefficient. Most of the urban centres are being managed and developed by proxy. In the face of ever rising land prices, urban migrants have no option but to create make shift shelter while encroaching on every possible available derelict public/ private land. Cities lack capacity/capability to provide basic and essential services, creating adverse/inhuman living conditions for majority of urbanites, making cities highly inefficient, unproductive, unsustainable and discriminatory.

Contouring Smart Cities—Smart cities is not a new concept. Concept has been used globally to promote cities supporting quality living, promoting operational efficiency and to overcome major urban ills pertaining to energy, quality of life, governance , poverty, transportation, environment, resources, sustainability ,service delivery etc., using technology. Accordingly, term has been defined differently considering the basic and essential needs of the city and available technology. Smart city is typically defined as 'an environmentally conscious city that uses information technology to use its energy and other resources efficiently'. Another definition refers, smart city in relation to creation of a knowledge infrastructure. According to Caragliu and Nijkamp; " A city can be defined as 'smart' when investments in human and social capital and traditional and modern communication infrastructure fuel sustainable economic development and a high quality of life, with a wise management of natural resources, through participatory action. Forbe identified eight components of a Smart City: 'smart governance, smart energy, smart building, smart mobility, smart infrastructure, smart technology, smart healthcare and smart citizen'.

Reshaping Urban Development--Looking at the contents of a smart city and existing scenario of ever increasing and all pervasive poverty; congestion; obsolescence, haphazard and unplanned development, a new regime of urban planning becomes essential to make cities smart. Urban planning has enormous capacity and capability to make cities smart through: eliminating slums ; promoting safety against crime; natural/ manmade disasters; making cities eco- friendly; promoting sustainability; enhancing quality of life; generating resources and creating land bank.

Promoting Disruptive Planning- Urban planning remains central and critical for promoting smart cities. Fact has been duly acknowledged, appreciated and accepted globally. No city can be made smart unless it is backed /supported by a comprehensive, integrated, innovative, state of art, dynamic, flexible, effective and efficient mechanism of urban planning. Since cities do not exist in isolation and have high degree of connectivity with surrounding areas/settlements, planning approach

adopted should invariably look at cities both inward and outward. Accordingly most efficient cities globally, have adopted regional perspective for planning. Regional planning model has helped in minimizing local competition/ conflicts, over/under investment in infrastructure and overcoming confusion over role and responsibilities of various agencies. It has promoted co-operation and growth of both city and region. Bringing flexibility in planning remains critical to promote smart cities for enabling them to effectively meet and cater to urban dynamism. Master plans should remain providers of framework into which local projects can be fitted. They should serve as a guide to evaluate development proposals in a rational manner considering defined vision of city growth and development. Not being merely definers of land use, master plans should be evolving / devolving along the city's changing needs and aspirations. However, bringing flexibility requires great deal of skill and innovations. Globally cities, that have made a mark in urban planning, have created a multi-disciplinary planning team to do justice to planned growth; making the process both inclusive and participatory and an intermix of top down and bottom up approach involving people, communities, Non Governmental Organizations (NGOs), Community Based Organizations (CBOs), voluntary organizations and local authorities.

Re-Ordering Mobility—Cities generate 70% of green-house gasses with majority of contribution coming from transportation and buildings. Challenges posed by transportation sector accordingly remain daunting and formidable in creating smart cities. Promoting sustainable urban transport should accordingly form integral/ essential part of any smart city strategy. Smart cities should have different order of priority for transportation led by pedestriansation, cycling and public transport with least priority going to personal transport. Smart cities should promote planning for people and not for vehicles besides promoting accessibility rather than mobility. In smart cities sustainable transport would essentially call for minimizing use of personalized vehicles; promoting non- mechanized/ non-fuel based options for travel; using public transport with large capacity run essentials on non-polluting fuels /electricity; using state of art technology manufacturing zero-emission vehicles; making cities more compact to limit the need of mechanized travel; land use planning to rationalize the travel pattern etc. Involving use of information technologies will reduce travel by using homes as offices, schools, libraries etc. Promoting flatted instead of plotted development can be leveraged for minimizing travel needs of the city. However, creating sustainable urban transport would require a multi- pronged strategy based on leveraging advantages of all modes of travel, involving communities and stakeholders besides professionals engaged in urban/transport planning; increased use of environment-friendly public transport; halting of urban sprawl and promoting innovative city planning, development and management.

Involving Smart Technologies--Smart cities, besides being smart will also have to be intelligent. Accordingly, technology must form integral part and appropriately leveraged for better planning, management and day to day operations of such cities. Globally, smart cities are extensively using Information Communication Technologies/ IOT/Cloud/ Disruptive technologies to promote good governance, bringing transparency and involving residents in planning and decision making. ICT is also being used to reduce/bridge gap between people's aspiration and administrative decision making besides rationalizing traffic and transportation, creating awareness among road users and reducing pollution and green-house gas emissions. Technology has also been leveraged to generate enormous data regarding city, its growth/operations for using valuable base/input for rational decision making. Intelligent systems have been used to integrate data generated by different sources in the organization at the city level and to bring high degree of integration among the working of the various departments within the organization.

Conclusion -- Looking critically and objectively at the entire context of smart cities, it can be fairly concluded that effective urban planning holds the key to promote smart cities and make them a distinct reality. However, no single approach can be universally applied to plan smart cities. Each city being unique in terms of its context/ growth/ developmental potential, accordingly would require different planning and development approach/ strategies/ options for achieving smart growth. With urban centers holding the key, future growth and development of the cities will be contingent largely upon the quality, proficiency, efficacy and efficiency of 'Planning Profession and Professionals'.

Greenfield Development for Sustainable Development

Dr. K. M. Soni, ADG(Retd.),CPWD & **Usha Batra,** SDG, CPWD

Abstract - Sustainable development is essential for ecological balance and future generations. Apart from ecological balance, objective of sustainable development includes economic development. Since, infrastructure development generates large employment both for unskilled and skilled workers, objective of sustainable development cannot be achieved without sustainable infrastructure development.

Old cities are already over saturated or showing the signs of saturation in terms of population, traffic, services and pollution hence Greenfield development is only the solution for infrastructure development. This also has the advantage of developing new cities as per new generation requirements.

Additionally, Greenfield development provides flexibility to the urban planners to plan the cities as per latest requirements considering the concept of smart cities for better and ICT based amenities and services.

Introduction- Greenfield development is defined as the real estate development of land not previously used for residential, commercial or industrial purposes. Thus, it provides complete flexibility to architects and urban planners to plan infrastructure as per the requirements without any area constraints. Thus, Greenfield development is carried out on Greenfield land.

Greenfield land is basically undeveloped land in a city or rural area either used for agriculture, horticulture or barren land left to evolve naturally. In India, such land is not normally available in cities hence it is the land of rural areas which may or may not have been declared under municipal limits. Usually, agriculture land is used for farming however it may be irrigated or rain fed though land acquisition of irrigated land is not easy and resisted by the farmers.

Greenfield development when carried out adjoining to existing cities, it offers benefits to the existing city also. For example, new airports are being planned in Navi Mumbai and Zevar in UP near Delhi to avoid congestion of Mumbai and Delhi airports respectively which are going to offer several benefits to these cities.

Difference Between Greenfield And Brownfield Development- As already discussed, Greenfield development is basically on green areas however green areas might have been used for agriculture purposes or just for weed growth but there is no infrastructure development on such land. Brownfield development is on the land which has been previously used for development though currently may be in use or not. Thus, most of the Brownfield development is through redevelopment. Pockets left for future development but services developed in existing habitat area can also be considered as Brownfield development as they do not offer complete flexibility to the developers.

Let us understand it with some examples. Naya Raipur has been developed entirely on new agricultural land hence this is Greenfield development. Similarly, Amravathi in Andhra Pradesh or GIFT city in Gujarat are the examples of Greenfield development. Examples of Brownfield development are redevelopment of east Kidwai Nagar in Delhi and Bhendi bazaar in Mumbai. Brownfield development is essential due to dilapidated structures and safety of the occupants while Greenfield development is required for economic and flexible development.

Greenfield development has many advantages, main being the economy as land is cheaper, provides affordable housing, provides higher degree of freedom to the developers, provides freedom to install casting yards and plants and has space for construction of accommodation for workers, does not create disruption to the traffic during construction, has more space for creation of public amenities and services, and has space availability for inclusive growth. Greenfield development has limitations of using agricultural land and chokage of the entries of the existing cities in case they are planned close to existing cities without leaving green areas.

Greenfield development also has advantage of developing smart cities in true sense as it is planned from the scratch. Due to availability of open land, Greenfield development also has the advantages of taking up latest and innovative infrastructure i.e. smart development for services like metro rails, airports, bus stations, industries, commercial complexes, exhibition cum convention centres, and tourist facilities for developing financial and economic zones. Therefore, integrated architectural planning is feasible in Greenfield development.

Greenfield Development Strategy-Greenfield development involves huge expenditure and thus government does not take up such development. Government normally facilitates the land acquisition, infrastructure development and investment. Private sector thus takes up development by self financing, financing through financial institutions and collecting money from individuals and may be even acquiring land through government agencies. Thus, large investment gets diverted into such development. Since land cost is cheaper, many builders tend to take up development


अबतक नहीं बिके 8,500 फ्लैट्स, डीडीए ने फिर बढ़ाई तारीख

and as such land may be purchased at higher than market prices. Fake demand is then projected to attract investment and flat prices are jacked up. In such cases, when supply is in excess to the demand, prices go down leading to slow down or stalling the projects. In such cases, everyone is at loss and economy of the nation slows down. Therefore, a proper strategy is essentially to be prepared.

Recently Government of India has put Rs.25000 crores in alternative investment fund for completion of 1500 incomplete projects of those private builders who have not completed the projects and are lingering on for many years. This figure of incomplete flats is more than 4.60 lakhs which does not include the projects whose cases are in Supreme Court. Therefore, Greenfield development is most risky for entering a target market because the losses involved in pulling out are substantial. Still, there is no guarantee that the projects with such large investment will be successful. It can be understood from the report published in Hindu Business Line on 29th January 2018, despite a housing shortage in India, there is an inventory overhand, Mumbai topping the list with 4.8 lakhs, Delhi 3 lakhs, Bengaluru also 3 lakhs. In terms of share of vacant houses to total residential stock, Gurugram ranks the highest at 26 per cent. According to the national census, vacant houses constitute around 12 per cent of the share of the total urban housing stock. In China, a discussion goes on "Ghost Cities" though such houses may find occupants after few years but are blocking the financial resources for a long period.

Even government agencies are finding difficult to sell their houses due to their wrong assessment of the demand or inappropriate type of houses or construction at inappropriate places. Therefore, strategy of Greenfield development should include the following:

i. Master plan of Greenfield development

ii. Integrated services

iii. Land acquisition norms

iv. Development norms

v. Demand and supply analysis

vi. Risk analysis and insurances

vii. Financial management

viii. Construction resource management

ix. Solid waste management

x. Impact on environment agricultural production and rate inflation of essential commodities in that area

Selected Greenfield Development- Brownfield development is going to take place on continuous basis but on lower scale. Greenfield development comes up at a faster rate and on large scale. Thus, it has to be planned properly and should be taken up selectively based on population growth, demand analysis, institutional requirements, commercial requirements, economic centres, waste management, environmental aspects, distance from existing cities, impact of such developing centres on existing cities, transport connectivity to existing cities, investment potential and employment opportunities after development.

A developing country and developing economy cannot sustain wastage of vacant inventory of dwelling units, natural resources, public money and agricultural land hence government and developers have to take up selected Greenfield development based on demand and supply analysis.

Conclusion - Greenfield development is inevitable due to its advantages but a proper development strategy has to be made to ensure that such development is carried out as per the demand analysis in sustainable manner incorporating smart development and sustainable features. Large number of stalled projects in Greenfield area in the country shows that developers have taken up projects without analysis resulting into national wastage of limited resources.

Greenfield development has many advantages particularly of cheaper construction for affordable housing and pollution free environment.

Approach Road to Japanese Bridge on River Yamuna at Nizamuddin Delhi

Use of flyash for the first time in the country for embankment work

K.B. Rajoria

Former E-in-C, Delhi PWD & Past President, IBC

1. Background

Civil Engineers are fore-runner in development activities and in-order to work for environmental friendly activities, there has to be insistence on "Reduce,"Reuse" or "Recycle". During nineties, for the first time in the country, P.W.D. Delhi took initiative to use Flyash, on large scale for approach road on high embankment, to the new Nizamuddin Bridge at Delhi, constructed under Japanese Aid programme. Flyash a by-product of Coal-fired electric generating plants was treated as an environmentally hazardous waste material and it's disposal was becoming a national issue. Potentials of flyash as an alternate engineering material remained untapped. Decision was taken to utilize 1.5 lac cubic meter flyash for this project. A proper technical and feasibility study was done with the help of Central Road Research Institute. Since the Bridge was on National Highway, the proposal for use of Flyash was submitted for approval to Ministry of Surface Transport, Govt. of India. Non acceptance of use of flyash by the Ministry became an administrative issue, which was got resolved with the intervention of Cabinet Secretary Govt. of India.

2. Japanese Bridge at Nizamuddin Delhi

A new bridge at Nizamuddin Delhi was constructed on river Yamua, downstream of existing bridge, under Grant-in-Aid programme from Govt. of Japan, in 1998. This was a "Replacement Bridge", since existing bridge had developed symptoms of distress. The scope of the Grant-in-Aid from Japan included construction of a new bridge, with short approaches on either sides, to connect to approach road of existing bridge. Later on, it was decided in consultation with the Ministry of Road Surface Transport Govt. of India, that to cater for traffic of 100,000 PCUs per day, both bridges were required. Therefore, it was decided that new approach, instead of short approach be constructed up to eastern bank of river, for connecting new Nizamuddin Bridge, which was four lane (14.5m) wide with 3.5 meters wide cycle track. About 8 meter high embankment was required.

3. Planning of Road Embankment with Flyash

(i) The subsoil strata predominantly consisted of non-plastic silt and silty sand. It was considered as cohesionless material for sheer and settlement considerations. In consultation with CRRI, the preliminary design of embankment was developed. It was decided to provide flyash core protected by earth cover on exposed side (downstream) as well as on top. On upstream side, it was adjacent to embankment of existing bridge and, not exposed to river water. Materials used were, (i) Fly ash 1,30,000 cum, (ii) Earth 1,05,000 cum and (iii) Red Bajri 20,000 cum. It was a bold decision, to use flyash in such a large quantity. Fortunately as PWD Engineers, we had a confidence for taking such decisions, on account of the fact that under confined conditions, flyash was already used by us for Vishvesvaraya Setu and Hanuman Setu.

(ii) The technical parameter of available flyash were favourable, as it had low specific gravity. The main technical properties of flyash were, (i) Grain size distribution- Fine grained material (ii) Atterberg Limits-Non plastic (iii) Specific gravity ranged from 1.2 to 1.4 as compared to soil which ranged between 1.65 to 2. (iv) Compaction Characteristics were better than sand (v) Permeability was high (vi) Shear strength was higher than normal earth (vii) it had low compressibility, (viii) the predominant components were silicon, aluminum and iron in the form of oxides. Carbon was also present which acted as dilutent of active pozzolanic mixture in flyash.

(iii) Economic viability was considered by way of comparison with estimated cost of conventional fill material that is earth. Most of the earth was to be transported from long distance and transportation cost was high. The indirect cost factor was safe disposal of flyash on account of clearing land used for collection of flyash. There was a direct saving of about Rs. 45 lac to Delhi Vidyut Board, by way of shorter distance for disposal of Flyash.

(iv) Besides, gainful utilization of flyash also reduces the environmental pollution.

4. Specifications for Flyash fill filling

The Specification for flyash embankment work was decided in consultation with CRRI. Salient features of the specification are as follows.

(i) Clearing and Grubbing of site.

(ii) Places where foundation of embankment was in an areas with stagnant water, it was decided to dewater and thereafter, ground supporting the embankment to be leveled and compacted.

(iii) Flyash and cover material to be spread in layers of uniform thickness, not exceeding 200mm and to be compacted by mechanical means. Moisture content to be controlled. For rolling both vibratory and static rollers were to be deployed and 95% of optimum density was to be achieved.

(iv) Same procedure to be repeated for each layer.

(v) After completion the embankment from bottom to top it was having layers as follows:

(a) 2m Ash (b) Soil Cover (c) 2m Ash (d) Soil cover (e) Ash as per requirement of height, up to 2m. (f) Soil cover (g) Red Bajari and (h) Road crust

(vi) On the side slope one meter soil cover to be provided. It was then to be covered by stone pitching.

(vii) After undertaking slope stability analysis, the side slopes of embankment were worked out.

5. After designing and planning, the detailed estimate was framed. This estimate was submitted to Ministry of Surface Transport and Highways. They technically examined the proposal based on flyash filling of embankment and did not approve the proposal for this project. Main reason put forward by the Ministry was that for such an important road link on National Highways, the embankment with new material with no earlier experience was not considered suitable. Thus in a way the Ministry discouraged for use of new material (flyash) inspite of the fact that, comprehensive study was conducted in collaboration with the Central Road Research Institute.

6. Reference to Cabinet Secretary

In view of the fact that there was difference of opinion between Ministry of Road Transport & Highways and Govt. of Delhi, the matter was referred to Cabinet Secretary, and the Ministry of Urban Development was also involved. A meeting was held in the Chamber of Cabinet Secretary which was attended by high level officers of both the Ministries and Govt. of Delhi. The Ministry of Road Transport and Highways was represented by Mr. A.D. Narain, Director General. The P.W.D. was represented by my-self as Engineer-in-Chief, Mr. K.N. Agarwal Chief Engineer and Late Mr. Anant Kumar Superintending Engineer. The subject matter was explained to him and both sides gave their point of view. He enquired about importance of road and was told that it was the most important link between Delhi and east Delhi as also Noida. He wanted to know, if the embankment was washed due to rains or otherwise whether an alternative link was available. He was informed that existing approach of old bridge was available. Besides, there were other bridges on the river Yamuna in nearby vicinity. After careful consideration, it was decided that new technology of using flyash should be tried, in national interest and proposal of P.W.D. was approved. The project was implemented by using flyash.

7. IRC Specifications for Use of Flyash

After the successful use of flyash on this project, as structural fill material, a report was sent to Indian Roads Congress. IRC recognized the need to coding the specification for use of flyash on road work. The Geotechnical committee of IRC took a look at the Specification followed for this project and drafted the specifications for further use of flyash in road project.

From Editor-in-Chief Desk

Accidents in Buildings of Urban Areas

Urban areas are expanding and there is no control by local authorities. There are accidents and in turn there is loss of human life. It is necessary to examine and analysis the causes of such accidents and remedial measures taken.

The recent fire in a unauthorized factory building at Delhi and death of more than fifty persons exposes the vulnerability. It shows, how owner and those who operate these factories were completely unconcerned with provisions of law. Even law enforcing agencies are responsible for their causal approach. It is necessary to take severe actions. It is also necessary to evolve foolproof enforcement procedures. Only then such accidents can be avoided.

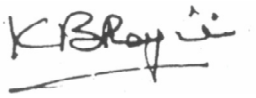
Buildings where number of families live, fall down on account of structural failures. At times, there is loss of life. These buildings have generally out lived their life. It is necessary that there is timely inspection and structural repairs carried out as required. If declared unsafe and beyond repair, such buildings are to be got vacated timely.

Several cases have been reported where buildings under repair, fall down and damage adjacent buildings. These repairs are not done according to principles of structural engineering. It is necessary that approval for such repairs is given after examining the methodology for implementation. Besides, inspection by third party to enforce, proper execution of works is also necessary.

During recent past, several deaths have been reported during cleaning of manholes. These deaths are on account of presence of toxic gases in confined areas. By now, even common man must be aware of the cause of these accidental deaths. It is necessary that proper machinery and pumps are deployed to avert such accidents.

To make human living safe in urban areas, occupants should have general awareness. Local bodies and media have important role to spread message. Besides, there should be preparedness to deal with emergency situation. Engineers and other implementing agencies must handle such situations properly and timely, to avert accidents.

Wishing a very happy new year to all members of IBC and their families!



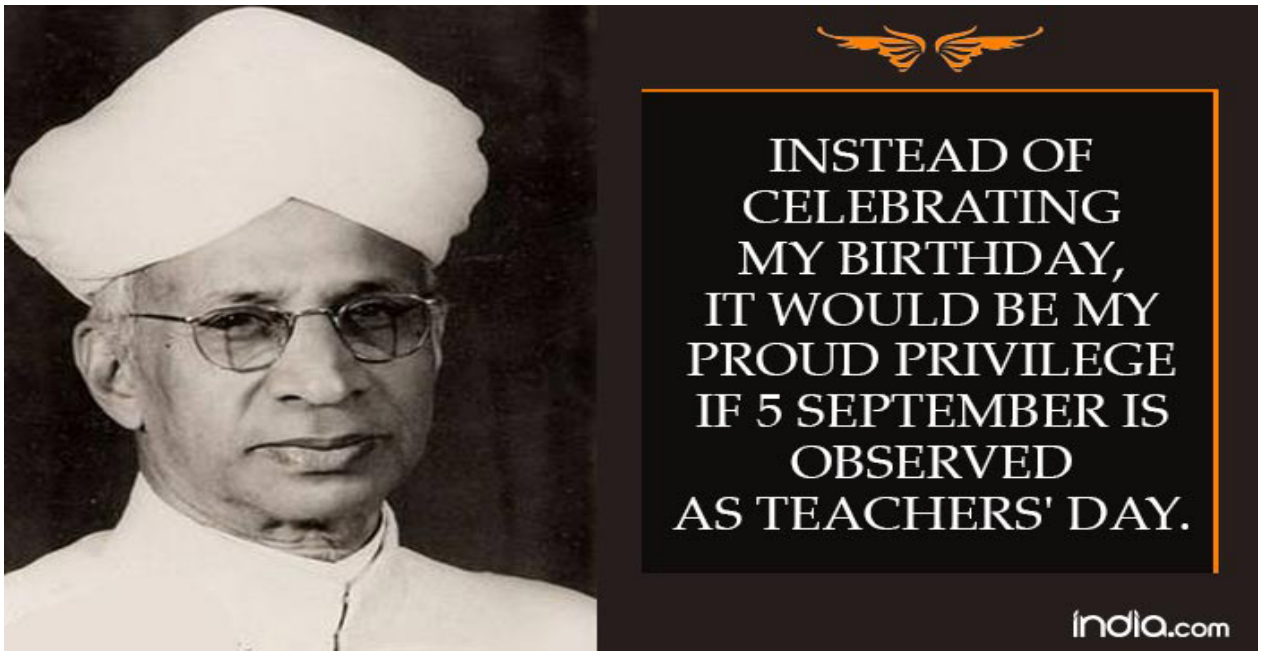
(K.B. Rajoria)

INDIAN BUILDINGS CONGRESS

Mid Term Session and Seminar – May-June 2020

Proposal for Theme Suggestions Invited

Mid Term Session and Seminar of Indian Buildings Congress will be held sometimes in May June, 2020. A Seminar on a topical subject would be held along with the session. Members of the Indian Buildings Congress are requested to suggest a suitable theme for the above Seminar. An explanatory write up on the proposed theme along with sub-themes may be sent to the Indian Buildings Congress by Jan 15, 2020.



24th Annual Convention and National Seminar "Development of New Greenfield Townships" January 6-8, 2020 at Vigyan Bhawan, New Delhi

The 24th Annual Convention and National Seminar on the theme "Development of New Greenfield Townships" was held in Vigyan Bhawan, New Delhi on January 6-8, 2020. The Inaugural Function of the 24th Annual Convention and National Seminar was held on January 6, 2020 which was attended by several high ranking dignitaries. Shri Hardeep Singh Puri, Hon'ble Minister of State (Independent Charge), Ministry of Housing and Urban Affairs and Civil Aviation, was the Chief Guest of the Inaugural function.

Lighting of Ceremonial lamp by the Chief Guest Shri Hardeep Singh Puri, Hon'ble Minister of State (Independent Charge), Ministry of Housing and Urban Affairs and Civil Aviation

In the Inaugural Session, The Hon'ble Minister also presented the Awards of IBC life time achievement, Outstanding Contribution awards, Smt. Satya Goel Memorial Award, IBC trophies for excellence in Built Environment and Commendation Certificates for Excellence in Built Environment to the awardees.

On the occasion, the Hon'ble Minister also released Technical publication i.e. IBC Journal, Preliminary Publication and Annual Special Edition of Built Environment-Souvenir.

Three Technical Sessions were held on 7th January 2020 and one technical session was held on 8th January,

View of Dignitaries on Dais - Chief Guest Shri Shankar Agrawal IAS (Retd.), Fmr. Secretary, MoUD and Guest of Honour Dr. Markanday Ahuja,Vice Chancellor, Gurugram University in Valedictory Session

Guest of Honour Shri Markanday Ahuja, Vice Chancellor; Gurugram University addressing the gathering

Chief Guest Shri Shankar Agrawal, IAS (Retd.) addressing the gathering in Valedictory Session

2020 in which total 23 papers by various eminent authors from different institutions across the country were presented on the theme of the National Seminar "Development of New Greenfield Townships".

The Valedictory Session was held on 8th January, 2020. In the Valedictory Session, Shri Shankar Agrawal, IAS (Retd.), Former Secretary, MoUD was the Chief Guest and Dr. Markanday Ahuja, Vice Chancellor; Gurugram University was the Guest of Honour.

Shri Deepak Narayan, Past President, IBC and Chairman, Technical Committee, IBC, in his presentation gave the overview of the presentations made in the technical sessions.

Shri M.C. Bansal, Advisor, IBC and Chief Rapporteur presented the Recommendations of the Seminar.

In the Valedictory Session the Chief Guest awarded, S.P. Jakhanwal Best Baper Award and IBC awards to the awardees for Best papers presented during IBC Seminars in 2018-2019.

24th Annual General Meeting

24th Annual General Meeting was held on 7th January, 2020 in Vigyan Bhawan, New Delhi.

97th Governing Council Meeting of IBC

The 97th Governing Council meeting of IBC was held on 8th January, 2020 in Vigyan Bhawan Annexe, New Delhi.

Dr. A.K. Mittal, outgoing President extended a warm welcome to all Members of newly elected Governing Council and thanked all Office Bearers, GC Members, Past Presidents and Permanent Invitees for their participation, support and valuable contribution towards upliftment of IBC and also requested each and every member to extend similar support to new team.

Outgoing Hony. Secretary readout the names of GC members; designated / nominated by various departments as per rules and those got elected during 24th Annual General Meeting on 7th January, 2020. Each and every GC member present in the meeting was greeted with applause at the announcement of their name.

Outgoing President Dr. A.K. Mittal as per recommendation by the outgoing EC, proposed the name of Shri Pradeep Mittal as President, IBC for the year 2020. Thereafter, newly elected Governing Council unanimously elected Shri Pradeep Mittal, Consultant & Advisor as President, IBC for the year 2020.

Shri R.N. Gupta was co-opted to the new Governing Council under Rule 9.4.2 of Rules and Regulations of IBC by newly elected Governing Council Members

Similarly, on recommendations of the Executive Committee, Dr. A.K Mittal, President proposed the names of Shri P.K. Gupta, Chairman & Managing Director, NBCC (India) Limited; Shri Vijay Singh Verma, Engineer-in-Chief, MP PWD; Shri Anant Kumar, ADG (Tech) CPWD; Shri R.N. Gupta, Chairman & Managing Director, Ramacivil India Construction Private Limited and Shri Chinmay Debnath, Superintending Engineer (Bldg.), Tripura PWD for Vice President. Governing Council unanimously approved above names as Vice Presidents, IBC for the year 2020.

Dr. Anoop K. Mittal proposed the name of Shri Hitesh Paul Gupta, Consultant Proprietor, Hitech Engineering Consultants as Hony. Secretray, as recommended by outgoing EC. Governing Council unanimously approved the name of Shri Hitesh Paul Gupta as Hony. Secretary for the year 2020.

Dr. Anoop K. Mittal proposed the name of Shri P.K. Jain, Joint Director General Works (Design) E-in-C's Branch, as Hony. Treasurer, IBC as recommended by EC. Governing Council unanimously approved appointment of Shri P.K. Jain as Hony. Treasurer for the next year 2020.

Under Rules 9.1.3.1 to 9.1.3.10 of the Rules & Regulations of IBC, certain seats are vacant. It was proposed that GC may authorise the EC to fill the vacancies under Rules 9.1.3.1 to 9.1.3.10. Council unanimously approved and authorized EC to fill up the remained vacancies in various Rules.

OFFICE BEARERS

Dr. Anoop K. Mittal Presenting Bouquet of Flower to Shri Pradeep Mittal

Shri Pradeep Mittal & Shri O.P. Goel Presenting Bouquet of Flower to Dr. Anoop K. Mittal

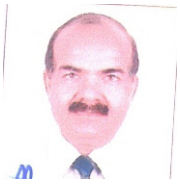
Shri Pradeep Mittal Presenting Bouquet of Flower to Shri O.P. Goel

Dr. Anoop K. Mittal Presenting Bouquet of Flower to Shri P.K. Gupta

Dr. Anoop K. Mittal Presenting Bouquet of Flower to Shri Anant Kumar

Shri Pradeep Mittal & Dr. Anoop K. Mittal Presenting Bouquet of Flower to Shri R.N. Gupta

Dr. Anoop K. Mittal Presenting Bouquet of Flower to Shri C. Debnath



Shri P.K. Jain

Shri Vijay Singh Verma

Shri Pradeep Mittal & Dr. Anoop K. Mittal Presenting Bouquet of Flower to Shri H.P. Gupta

INDIAN BUILDINGS CONGRESS

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