

# Urban Update

Volume V, Issue VIII

DECEMBER 2019

**CITIES MUST BECOME INCLUSIVE,  
address needs of specially-abled**



+ Every nation needs to address  
**'CLIMATE URGENCY'**



European Union



AIIILSG

# KNOWLEDGE LAB FOR LOCAL GOVERNANCE



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# UrbanUpdate

Setting The Agenda For Tomorrow's Cities



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Top News



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AIILSG are proud to  
announce the launch of  
the first issue of the  
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Newsletter



No government for  
Gandhi's dream  
of a New India



Government's 5th  
Year Review for  
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# WEEKLY E-NEWSLETTER

Urban Update is a leading magazine on sustainable development of cities brought out by All India Institute of Local Self-Government (AIILSG). Bringing together the experience of the multilateral sector with that of the private sector and the local governments themselves, the magazine focuses on the challenges and solutions for city leaders and local governments.

Urban Update plays a special role – that of a primary, indispensable link among stakeholders that nurtures community. A wellspring of writing and imagery reinforces our vision of evangelizing Urban Infrastructure, Governance, Culture and Sustainability.

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# UrbanUpdate

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# Urban policy interventions in 2019

Urban policy making in 2019 addressed some key areas which could help improve quality of life by a good measure

**A**mong several initiatives announced in India in 2019 was firstly the one related to water conservation. This is of particular significance given that some cities have gone through unprecedented water crises. In Chennai, for example, emergency measures had to be undertaken to provide some minimum water to residents. NITI Aayog in a report in June 2018 said that 600 million people of India face high to severe water stress. Alongside were recurring press reports which said that many large cities were running out of ground water. In this context Jal Shakti Abhiyaan was launched. During the monsoon (and retreating monsoon) months, several interventions in five areas namely water conservation and RWH, Renovation of water bodies, Reuse and recharge structures, Watershed development, and Intensive afforestation were to be undertaken in select water stressed districts.

The year saw droughts, excess rains, extended rains, downpours – all in one season. It is therefore imperative to put in place appropriate water management measures to secure supply for human needs as also for agriculture which is largely rain fed, and industry. The Prime Minister has personally focused on the subject through platforms such as Mann Ki Baat to build awareness. On the urban front there is need to focus on reuse and recycling through a host of measures. On the agriculture side there is big scope for sustainable water use and crop choice. The programme on water conservation needs to be carried through and accelerated in the coming year and beyond. It needs to evolve into a mass movement on the lines of Swachh Bharat Abhiyan.

Another important policy initiative which

was spoken about but not fully rolled out was the ban on single use plastic. The hazards of plastic waste to human life and the environment are now well known. In India, several states and local governments have announced bans on some kinds of plastic and thermocol; implementation though has been less than optimal and results unclear. While the national ban on single use plastic was expected to be implemented from October 2 with the aim of ridding the country of such plastic by October of 2022, the announcement has been delayed possibly due to concerns about its effect on the economy. However it is quite likely to come about soon, once we have greater momentum in discovering alternate materials especially for packaging. Innovation and leadership are very important in this process.

Safety on our streets is a big priority and action was taken by amending the Motor Vehicle Rules. The amended rules came into effect from September 2019. These hiked the fines and penalties for road rules violation by a big measure. For example driving without a license would now entail a fine of Rs 5000 as against Rs 500 earlier. Other violations invite similar steep fines. However, many states are yet to implement these new rules, while some have watered down the fines to lower levels. Road fatalities are often due to careless driving, and higher penalties are a way of reducing such tragic loss of lives.

We trust some of these policy measures can be implemented fully in the year to come and lead to more livable cities. In this issue of Urban Update, we look at some aspects of urban policy making in the year gone by and what we could possibly expect in the year to come. Urban Update wishes all readers a very happy, healthy and prosperous new year. ■



Cleanliness shows how 'smart' we really are. If a city lacks in sanitation, then it cannot be deemed as 'smart'. I believe that children could be the ambassadors for campaigns which promote sanitation in the country


**Rajnath Singh**  
Union Minister for Defence, Government of India



Climate change is real. The world recognised it and adopted a comprehensive agreement in Paris. If there is an inconvenient truth in the form of climate change, we are providing a convenient action plan. We (India) are walking the talk

**Prakash Javadekar**  
Union Minister for Environment, Government of India

## PIN POINT



To decarbonize by 2050, it means to not build one single fossil fuel based facility. No more pipelines. No more fossil fuel development. The first rule: stop digging the hole deeper

**Jeffrey Sachs**  
Director, Sustainable Development Solutions Network



Smart cities have to be done in collaboration with public, and we expect the govt to do everything. The advantage is that we are developing country, we have opportunity to develop with latest technology and learn lessons from others

**Deepak N G**  
Director, Innovative Business, Dassault Systems

## BUZZ



**Juan Carlos Jobet**  
Minister of Energy, Chile  
@JCJobet

Climate change is the biggest challenge of our generation. Our carbon neutrality plan is ambitious but its essence is simple. We will replace fossil fuels with clean electricity across the board



**Amitabh Kant**  
CEO, NITI Aayog  
@amitabhk87

Two and three wheelers constitute almost 80% of India's domestic automobile sales. Indian states must leverage this and provide impetus to electrification of these two segments to provide size and scale to India's e-mobility efforts & make India the global manufacturing base



**International Renewable Energy Agency**  
@IRENA

Transport is responsible for around 30% of global energy consumption, & its energy use is expected to grow substantially by 2050. However, a combination of low-carbon approaches can cut transport emissions by almost 80%



**Thierry Breton**  
European Commissioner, Internal Market  
@ThierryBreton

25 years is the time needed for all our #industries to transform and take full ownership of the green and digital revolution. In the next 5 years, we are preparing with @EU\_Commission for the sustainable growth of a generation, for 2050 and beyond

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All India Institute of Local Self-Government (AIILSG) along with Raipur Municipal Corporation (RMC) and Raipur Smart City Development Ltd organised 'Urban Dialogues: Mor Raipur' on November 20, 2019, at Sayaji Hotel, Raipur. The conference brought into light developments under 'Smart Cities Mission' in Raipur and advancement made by the city in the fields of environment, water and overall sustainable development

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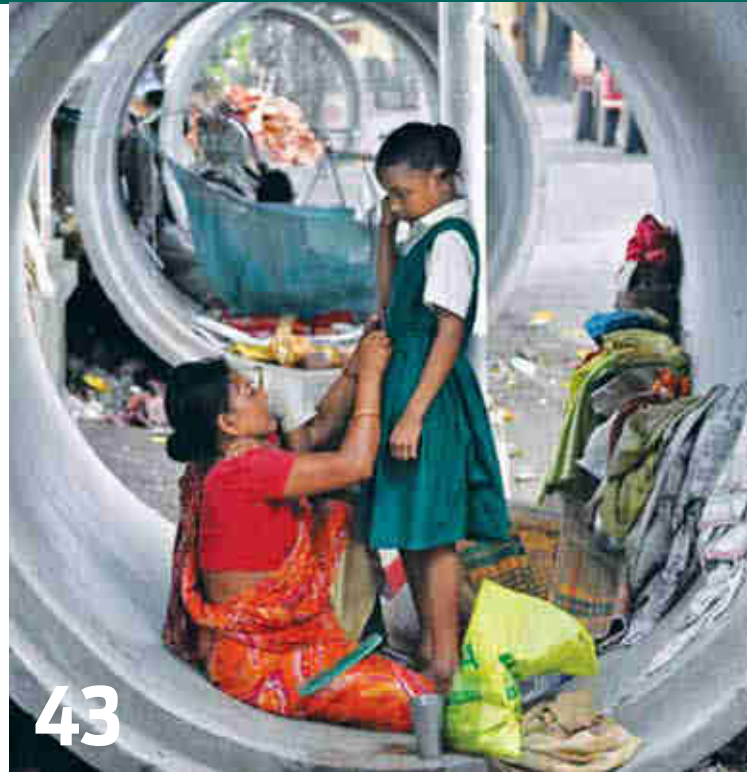
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Once the lifeline of the National Capital – Yamuna is today at a stage where efforts are being made to revive the river. Release of unchecked chemical effluents, waste dumping, release of untreated sewage, etc. have been major reasons behind the present state of the river. Toxicity levels have grown to an extent that the river witnesses seasonal foaming, especially during festivals. To know more on the issue team Urban Update spoke to Ravi Agarwal, Co-Director and Founder of Toxics Link

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Urban centres give hopes and aspirations of a good life to people by providing better living conditions and access to advanced civic services. But odds are stacked against the specially-abled population in our cities. The built environment is not disabled-friendly in most of our cities. Making cities inclusive by including persons with disabilities in the agenda of urban planning and design is a must

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Inspired by Swedish young girl Greta Thunberg (16), youngsters around the globe are campaigning and demanding their governments address the climate crisis. We cannot delay our actions further. We need to act now...



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Manisha Kothe, Deputy Mayor, Nagpur lighting the inaugural lamp at the Inter-City Forum

## 'Equi-City2019 finale'

# A glance at the year

**A**ligning with the aim of the project towards increasing awareness on sanitation and health, the Equi-City team, on site, organised a series of sensitisation campaigns on sanitation and health issues throughout 2019 in Nagpur. Furthermore, working in line with the participatory governance approach a City Development Forum Meeting and Intercity Forum Event were organised which had experts from urban sector participating in them. This year being the concluding year of the Equi-City Project, the team worked towards delivering visible outcomes such as development of a mobile application for gathering citizens' feedback for services provided by Nagpur Municipal Corporation (NMC).

Following are the activities carried out in 2019 under the Equi-City Project:

**Sanitation and health awareness campaigns facilitating Swacch Bharat Mission in Nagpur**

Equi-City team in Nagpur facilitated sanitation and health awareness campaigns in the city targeting NMC schools, residential areas, shops and sanitation workers promoting healthy and hygienic lifestyle.

The team along with NMC conducted awareness campaigns on sanitation and quiz competitions in all the ten zones of Nagpur and in NMC affiliated schools. The Equi-City team created awareness in the residential areas and shops around the schools regarding sanitation, environment and cleanliness of the city. Apart from these campaigns at schools, the team also carried out health and sanitation campaigns at various locations for sanitation workers and health checkups near Bhandewadi dump site. The team was able to sensitise around 15000 people including sanitation workers about keeping their environment clean.

**City Development Forum meeting for updates on projects and activities**

The Equi-City team along with NMC organized a City Development Forum meeting on April 23, 2019, to update the CDF members with the status of the Equi-City project-based activities organized in the past year and review the same. Also, to get feedback and suggestions for the upcoming project activities.

The project activities that were carried out under the Equi-City in the year 2018-19 regarding Participatory Forum, Organisational Diversity, Capacity Building and Research, Monitoring and Implementation and Information Dissemination were discussed.

## Sensitisation workshop on equality and diversity

The two day long interactive session was organised by the Equi-City team on May 14 and 15, 2019, at IMA Hall, Nagpur in order to sensitise NMC officials. The main focus of the sensitisation workshop was to educate officials on the Equality and Diversity Framework while promoting and advocating for inclusive and harmonious workplace. In addition, the workshops were focused on enabling handle diverse population within the city and address their concerns. Further, officials will be able to consider their own roles and responsibilities in creating a working environment which is free from discrimination on any ground and enables teams to reach their full potential.

## Equi-City mobile app form monitoring and evaluation of services in Nagpur

The Municipal Rating System Mobile Application under the project was formally launched on Google Play store for open downloads by citizens and officials both. The mobile application consists of basic information about Nagpur city along with Prabhag/Ward wise corporator details with contact information. There is also a questionnaire based survey on the basis of which satisfaction level of citizens about the civic services is judged and this helps in making better decisions



towards improvement of services in the wards lacking behind.

The app has a web based backend which enables capturing of real time survey data. It provides a platform for citizens to feed the real-time data in the form of response to questionnaires. The app will ramp up time for fast data collection which will help the NMC to get accurate data to analyze citizens' perception on service quality being provided by the corporation.

The mobile app will also act as a bridge to pass the information in real time from citizens to the authorities. This can turn out to be a highly effective solution and should reduce the reporting time and improve quality of reports being generated.

Some of the envisioned outcomes are:

- ◆ Improvement in real-time monitoring process of various services
- ◆ Centralised dashboard at ward and zone Level
- ◆ Ensuring accountability of real data.
- ◆ Transparency in record keeping.
- ◆ Creation of digital database of works done as per the requirement of project

### Inter-City Forum and best practices sharing event

Inter City Forum (ICF) has been established under the Equi-City project in order to bring together stakeholders and local authorities on a single platform, to engage in collaborative

solutions and coordinated action for equitable delivery of municipal services. This multi-stakeholder process (MSP) is fundamentally about participatory decision-making and information sharing at the regional level. If the key stakeholders take ownership of all stages and levels of decision-making, development activities are more likely to build on local strengths, meet local needs and priorities, and foster self-determination and sustainability.

All India Institute of Local Self-Government (AIILSG) along with the NMC organised Inter-City Forum and Best Practices Sharing Event under on November 30, 2019, at Hotel Centre Point, Ramdaspeth, Nagpur. The ICF commenced with the introduction and a welcome note by Jayant Pathak, Regional Director, AIILSG, Nagpur. The event was inaugurated by Manisha Kothe, Deputy Mayor, Nagpur, in the presence of Ram Joshi, Additional Commissioner, Nagpur, Chetan Gawande, Mayor, Amravati, Kusum Sahu, Deputy Mayor, Amravati, Nanda Jichkar, former Mayor, Nagpur, Ramnath Sonawane, CEO, Nagpur Smart and Sustainable City Development Corporation Ltd. and Pashim Tewari, Technical Director, AIILSG. The event was conducted for government agencies, organisations, NGOs, private agencies, CSOs, and others to collaborate to achieve a common goal.

The Amravati Municipal Corporation presented best practice on implementation of Pradhan Mantri

Awaz Yojna through online monitoring system at every stage of application in Amravati. Dr Tikes Bisen, Tata Trust, presented best practice on Model Urban Primary Health Centres (UPHC) Project in Nagpur. The Model UPHC Project has contributed in capacity building for improving management and efficiencies, digitisation of patient details in UPHC, paperless OPD, syndromic data analysis planned, remodelling of the warehouse, digitisation of supplies, policy changes, reducing expenditure on diagnostic services and optimal use of resources in UPHCs. The final presentation was given by Assistant Commissioner, NMC, Milind Meshram. He talked about tax monitoring system in Nagpur which increases the value of property data and streamlines payments with enriched analytics through spatial and visual data processing. The system helps in faster processing of complex data and analysis, increased understanding of what, where and how to optimise resources, gain geographical insights about data points and optimise planning & improve revenues. The session ended with a brief knowledge sharing about the best practices followed by suggestions and Q/A.

### Regular activities

The Equi-City team regularly keeps in touch with CDF, Diversity Committee and NMC officials and keeps them updated about the on-going and upcoming activities under the project. Project activities are managed and organised on a regular basis. Further, a monthly newsletter and a monthly article in Urban Update magazine are also published to highlight the activities under the Equi-City project. A separate website of the Equi-City is also in place to have feedbacks from the citizens as well.

### Upcoming activities

- ◆ Leadership workshop targeting elected representatives and NMC officials.
- ◆ Equi-City mobile app download drive targeting colleges throughout the city. ■



Ram Joshi, Additional Commissioner, Nagpur addressing the Inter-City Forum



As the year 2019 is coming to an end, this is a time to reflect and look back to assess what has been done for cities and what has been the impact of those efforts. It is timely to reflect upon all the changes, challenges and developments encountered by municipal corporations in their efforts to make cities better places to live in



2019



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**Delhi pollution levels spike due to poor public transit infra: CAG**

NEW DELHI: A report released by the Comptroller and Auditor General (CAG) on Tuesday, December 3, has shown that Delhi government's inability to develop two inter-state bus terminals (ISBTs) in the north and south western entry points of the city has contributed significantly in spiking pollutions levels in the capital.

**Last decade the warmest in recorded history: WMO**

MADRID: The annual assessment of the Earth's climate carried out by the World Meteorological Organisation (WMO) has indicated that it is almost certain that the last decade (2010-20) has been the hottest on record. Weather experts from the WMO also warned that Heatwaves and floods,



which used to be 'once-in-a-century' occurrences, are now being more regular due to the bleakness of the Earth's deteriorating climatic condition.

**Delhi to get 100 free wifi hotspots on Dec 16**

NEW DELHI: Arvind Kejriwal, Chief Minister of Delhi, has announced the state government's plan of launching free Wi-Fi hotspots across various locations of Delhi, starting from December 16. The Chief Minister said that the first 100 hotspots will be launched on December 16. After this, 500 new hotspots would be added per week in the National Capital.

NEW DELHI: While hearing an application seeking direction to formulate an action plan to restore sea water quality along the Indian coastal areas, the National Green Tribunal (NGT) expressed concern about the deteriorating coastal water quality and rising coastal pollution. A bench headed by Justice Adarsh Kumar Goel, NGT chairperson also noted that municipal and industrial effluents are polluting the seas and endangering the environment.



**NGT asks for action on rising sea pollution**

**Centre to develop satellite mechanism to monitor green cover**

NEW DELHI: Prakash Javadekar, Union Environment Minister, has announced that the government is developing a satellite based mechanism to check the greenery and vegetation cover in India. Efforts were being made to develop a system, incorporating satellites, which will efficiently monitor the minute detailing of the forestation and monitor the growth of saplings planted.

**Sydney breathes toxic air due to bushfires**

SYDNEY: The recent Australian bushfires have led to the city of Sydney being covered in a dense haze. It is reported that the air quality there is "extremely toxic", making the city breath "hazardous" air. AQI, in some parts of the city, has significantly exceeded the 'Severe' mark on December 11. The situation, however, is temporary as winds are expected to take away the pollutants from Sydney and fan off the bushfire.

**Indian Railways to be transformed into 'Green Railways'**



NEW DELHI: Cabinet Committee on Economic Affairs (CCEA) has approved complete electrification of railway

network, with an aim to transform the Indian Railways into green railways, powering it with renewable energy. A memorandum of understanding (MoU) was signed on December 2 between the Ministry of Railways and the Department for International Development, UK for collaboration on energy and sustainability, as a part of its obligations and commitment to reduce carbon footprints.





**6 months for GMC to take action on Bandhwari landfill**

GURUGRAM: Considering 25 lakh tons of legacy waste at the Bandhwari landfill in Gurugram, the National Green Tribunal (NGT) has instructed the Gurugram Municipal Corporation (GMC) to take immediate action. According to NGT, failure in taking action within six months will result in “coercive action” which would include withholding of officials’ salaries. Also, GMC has been asked to submit ₹25 lakh guarantee.



COIMBATORE: To stop manual scavenging, the Coimbatore Municipal Corporation is now using Robots to clean blocked drains in the city. Sanitary workers are provided with a bot, controller and a screen to clean the manholes without coming in contact with the toxic gasses. The bot has the capacity to go as deep as 20 feet to clean clogged drains.

**800 traffic personnel to enforce odd-even**

NEW DELHI: To properly enforce the odd-even scheme, Delhi Traffic Police deputed 200 teams across the city. Each team had four

traffic personnel to penalize defaulters by imposing a challan of ₹4,000. Unlike previously, this time private CNG vehicles were not exempted. However, cars with women or schools students on board, police vehicles, armed forces, union cabinet ministers, governors were exempted.



**MPCB uses drones to measure air pollution levels**

MUMBAI: Maharashtra Pollution Control Board (MPCB), to increase the efficiency of pollution monitoring across the state, introduces drones to monitor air quality in the cities. This move upgrades the board’s ability to get real-time data on vehicular pollution. The pilot project of is recently implemented in Andheri in Mumbai and would be extended further based on the success of this.



**No more ‘Manual Scavenging’**

**Citizens call for action against pollution at India Gate**

NEW DELHI: To protest government’s inaction on air pollution, hundreds of Delhiites gathered at India Gate on November 5 to demand concrete action to improve the situation. Vimlendu Jha, environmentalist, said, “This issue which comes up each November and is forgotten by December. Due to negligence, Delhi has become a gas chamber.” Youth wearing colorful masks shouted slogans like “There is no Earth B”, “Are we the last generation?”, and demanded “bring back blue skies”.

**BRPL, Ola to install battery swapping stations for EVs**

NEW DELHI: Major power PSUs BSES Rajdhani Power Limited (BRPL) and BSES Yamuna Power Limited (BYPL) joined hands with Ola Electric to install battery swapping stations across Delhi to be used by two and three wheeler electric vehicles. The two have signed an MoU for the same. Ola would be managing and operating the stations while BSES will be identifying areas where the installation of the facility would be optimal.

**Bengaluru, highest ranking Indian city in PICSA index**

BENGALURU: The new index named Prosperity and Inclusion City Seal and Awards (PICSA) Index rated Bengaluru as India’s highest ranked city at 83<sup>rd</sup> position of 113 cities worldwide. The PICSA index rates cities on the basis of economic growth and also its quality and distribution across the population. Zurich secured the first rank whereas, Delhi was ranked 101 and Mumbai 107. The top 20 cities were awarded the PICSA Seal. The index was released in Bilbao on November 21.

**Naini lake to be tourist spot soon**



NEW DELHI: One of Delhi's biggest lakes, the Naini Lake of Model Town, will be open for citizens for boat rides and a soft adventure park soon. The initiative has been proposed by the Delhi Tourism and Transportation Development Corporation (DTTDC) and includes the maintenance of a restaurant in the vicinity of the lake. National Environmental Engineering Research Institute (NEERI) has been approached for the upkeep of the lake.

**Delhi students set 2 environmental world records**

NEW DELHI: Students of Delhi-NCR registered two new world records in the Guinness Book. The first record was registered in the category of 'Environmental sustainability lessons to the largest number of students at one place.' The second record is of 'the largest number of assembly and lighting of solar lamps.'

**Tejas Express offers biodegradable water bottles for passengers**

NEW DELHI: Tejas Express is now serving water to its passengers in biodegradable bottles. "At least 1,500 bottles are being served on Tejas Express every day in both up and down trips," said Ashwini Srivastava, Chief Regional Manager, Indian Railways Catering and Tourism Corporation (IRCTC).



**AP launches ₹46,675 cr project to supply water in every household**

HYDERABAD: The Government of Andhra Pradesh has launched an ambitious project to provide drinking water to every household in the state by 2022. The project aims to provide 1418.49 million liters of water daily to about 110 urban local bodies in the state. Under the proposed plan, drinking water will be supplied to 46,982 rural areas and 99 urban area habitations.



**Nuclear power can be boon in fighting climate change: DG IAEA**

VIENNA: The first-ever International Conference on Climate Change and the Role of Nuclear Power was held on October 7. Cornel Feruta, the acting Director-General of International Atomic Energy Agency (IAEA) at the opening of the event said, "without significantly increasing

the use of nuclear power worldwide, it will be difficult to achieve the goal of reducing harmful emissions and fighting climate change".



**India plans to set up 100 new airports by 2024**

NEW DELHI: By 2024, India will be adding a total of 100 airports to its existing 126 facilities. Connectivity of smaller towns and villages would be enhanced as a result of the proposed initiative which seeks to add approximately a thousand new routes to the existing infrastructure. In order to accommodate this new development, the domestic aircraft fleet is also planned to double from the existing figure to 1,200.



**India slips to 102 in Global Hunger Index**

NEW DELHI: India has been ranked 102 in the recently released Global Hunger Index report which features a total of 117 countries, slipping 6 positions since the previous report. India has been ranked the lowest amongst all South Asian countries and the report has warned that the progress towards the predetermined 'Zero Hunger by 2030' is 'under threat'.



**India to invest \$60 billion in gas infrastructure**

NEW DELHI: Dharmendra Pradhan, Minister of Petroleum & Natural Gas in his opening remarks at the third International Think Tank Meeting (ITT) said that India is investing over \$60 billion in developing natural supply and distribution infrastructure as it chases the target of more than doubling the share of natural gas in its energy base to 15 per cent by 2030.



### Quality of life declining in India's major metropolises

NEW DELHI: According to Economist Intelligence Unit's Global Liveability Index, Delhi dropped down six places from 112 to 118, while Mumbai slipped from 117 to 119. The decline in Delhi's position has been attributed to an increase in petty crime cases over the past year, and extremely poor air quality levels meanwhile Mumbai's downgrade came from loss of evaluation in its culture category.

### PM Modi receives 'Global Goalkeeper' award



NEW DELHI: The Bill and Melinda Gates Foundation presented the 'Global Goalkeeper Award' to Narendra Modi, Prime Minister, India, in New York, on September 25, for the 'Swachh Bharat Abhiyan' launched by the government. The cleanliness mission was one of the first few ambitious projects launched by PM Modi. The mission was launched on October 2, 2014.

### UN-DESA releases Intl Migrant Stock 2019

NEW YORK: The number of international migrants reached 272 million in 2019, increase of 51 million since 2010, states International Migrant Stock 2019 released by UN Department of Economic and Social Affairs (UN-DESA). Today, 3.5 per cent of global population are international migrants.



NEW DELHI: After Swedish Climate Activist, Greta Thunberg inspired millions of youngsters about the consequences of climate change, tons of people joined her in at least 150 countries to take part in a global movement called "Global Climate Strike". Youth worldwide turned up on the streets, public parks, to fight for their future. In India the climate strike was organised in 13 cities, including Delhi, Mumbai, Chennai, Bengaluru and Kolkata.

### Indonesia refuses to take garbage from other countries

JAKARTA: Indonesian authorities have refused to take any more garbage-filled shipping containers in order to prevent the country from being a dumping ground for foreign trash.

About 250 containers were seized across the archipelago in a few months and have already been sent back, an Indonesian customs official said. Of the 250, 49 containers seized on Batam Island have been shipped back to the US, Germany, France, Hong Kong and Australia.



### SDMC launches 'Plastic Waste Shramdan Campaign'

NEW DELHI: The SDMC has initiated a campaign, 'Plastic Waste Shramdan Campaign'. It is a part of the 'Swachhta Hi Sewa' initiative. Gyanesh Bharti, SDMC Commissioner instructed the officials to conduct daily field visits to ensure compliance of the plastic ban in SDMC areas.

### India's first remote heart surgery completed successfully

NEW DELHI: Dr Tejas Patel of the Apex Institute in Ahmedabad, Gujarat has become the first Indian surgeon to perform a remote heart surgery in India. The patient was lying about 20 miles away from the surgeon. The surgery was performed using a CorPath GRX robot, developed by a



company called Corindus, to treat a condition called atherosclerosis.

### Global Climate Strike

#### IGI Airport gets nation's tallest ATC tower

NEW DELHI: Hardeep Singh Puri, Civil Aviation Minister, inaugurated India's tallest Air Traffic Control (ATC) tower at Delhi's Indira Gandhi International Airport on September 2. The tower, with 102-meter height, was built at a cost of ₹250 crore and comprises of 3 buildings. An additional ₹100 crore were spent on air navigation and advanced automation systems to enhance safety and the capacity of air traffic operations.

#### Bangkok world's most visited city for the 4<sup>th</sup> consecutive year

BANGKOK: The annual ranking published by Master Card Inc named



Bangkok as the world's most visited city for the fourth consecutive year. The Thai capital edged out Paris and London as the world's most popular city to visit, marking a visitor count of 22.8 million per year. Paris and London followed Bangkok, marking 19.1 million and 15.9 million tourist count respectively on an yearly basis.



**'India generates 9.46 million tonnes plastic waste annually'**

NEW DELHI: A new study by Un-Plastic Collective (UPC), a voluntary multi-stakeholder initiative reveals that India generates 9.46 million tonnes of plastic waste annually, out of which 40 per cent remains uncollected and 43 per cent is used for packaging. The study also reveals that most of the plastic is single-use.

**Hazardous waste carrying vehicles to have GPS installed**

BENGALURU: K Sudhakar, Chairperson, Karnataka State Pollution Control Board (KSPCB) has directed the authorities to install GPS system on all the vehicles used for transporting

hazardous waste in the state. The directions came after a review meeting of KSPCB, about the status of compliance of pollution control and environmental protection regulations.



**More subsidy for rooftop solar plants: Go!**

CHANDIGARH: Arun Kumar Gupta, Home Secretary-cum-Principal Secretary (Science & Technology & Renewable Energy), Chandigarh, on August 29, announced that the Indian Government has revised scheme for subsidisation of rooftop solar plants. The rate has now been raised to 40 per cent for plants with a capacity of 3 kWp from 30 per cent. The subsidy amount has been fixed at 20 per cent for 4 kWp to 10 kWp solar plants.



BRASILIA: Amazon rainforests, 'World's Lungs', were devoured by a rampant forest fire at an alarming level. Forest area of more than a soccer field fell every minute. The fire emitted copious amounts of smoke which engulfed many states of Brazil.

**Fire damages 'World's lungs'**

**'Allot unique IDs to water bodies'**

NEW DELHI: A monitoring committee suggested the National Green Tribunal (NGT) that water bodies in the city must be given unique ID numbers for identification. Also, the water bodies should be secured by constructing boundary walls. It further suggested NGT that the government agencies should start mapping of small water bodies on GPS platform on a priority basis, monitoring the water quality, penalising the defaulters and putting high values on these water bodies and pay proper attention for their protection.

**'50 lakh hectares of desertified land to be restored by 2030'**



NEW DELHI: Prakash Javadekar, Union Environment Minister, ahead of the global conference on land desertification held on August 27, at a curtain raiser event, said that India's degraded land, which is 29 per cent of India's total geographical land, needs to be rejuvenated and would be India's primary agenda of the summit. The minister said that India would be restoring 50 lakh hectares of land by the year 2030. Further, the minister added that a center to develop techniques to rectify the desertification of fertile land in India would soon be established at the Forest Research Institute located in Dehradun.

**Delhi, Mumbai perform poorly in Safe City Index**

NEW DELHI: The third edition of 'Safe City Index' launched by the Economist Intelligence Unit (EIU) on August 29 covered 60 cities around the globe across 57 indicators covering digital security, health security, infrastructure security and personal security. Mumbai ranked 45<sup>th</sup> and Delhi 52<sup>nd</sup>. While the average score was 71.2 of overall index, Delhi and Mumbai scored 55.0 and 58.2 points respectively.

**Ocean waves to be renewable energy source**

NEW DELHI: R K Singh, Union Minister of State for Power and New and Renewable Energy (IC), accepted a proposal to use tides and waves to generate electricity as a renewable energy. Tidal energy can provide a capacity of 12,455 MW in Khambhat and Kutch regions. It can potentially add 40,000 MW of capacity, and ocean thermal energy conversion is estimated to be 180,000 MW.





**'CLEAN KERALA' initiative**

*THIRUVANANTHAPURAM: An initiative to make prime tourist destinations across the State of Kerala plastic and garbage free, the 'Clean Kerala' initiative was launched on July 24. For the project to be done in phased manner, nine destinations – Alappuzha, Baked, Kollam, Fort Kochi, Kovalam, Kumarakom, Munnar, Thekkady and Wayand have been identified in phase I. The project aims at getting these destinations Green Certification by making them focus on eco-friendly activities.*



**MTA to benefit rental housing sector**

NEW DELHI: In a bid to balance the interests of both landlords and tenants, the Ministry of Housing and Urban Affairs came up with the Model Tenancy Act (MTA), 2019. The MTA will help to enhance the overall legal framework in terms of rental housing across the country. Durga Shankar Mishra, secretary, MoHUA, said, the new law will encourage more people to rent out their properties and will help tenants to be fear-free of sudden rent hikes and demands by landlords.

**Nepal flooded; over 113 lives lost**

KATHMANDU: On July 28, Nepalese officials reported that floods and landslides due to incessant rainfall in Nepal have claimed lives of more than 113 people and 38 are reported to be missing. 67 others injured in the rain induced disasters in this monsoon, Nepalese Home Ministry officials said. More than 65 districts of Nepal were affected by the disaster.

**Firemen, firefighting robot rescue 84 MTNL officials**

MUMBAI: On July 22, a massive fire broke out in the Mumbai's Mahanagar Telephone Nigam Limited (MTNL) building, in Bandra West. A team of 175 firefighters and 40 laborers led a timely organised rescue operation and rescued all the 84 people trapped on the rooftop. As many as 14 fire engines, seven water tankers, three turn table ladders, 14 ambulances and a firefighting robot was rushed to the MTNL building.

**India, 52<sup>nd</sup> on Global Innovation Index**

NEW DELHI: India ranked 52<sup>nd</sup> in the Global Innovation Index (GII). It is published annually by Cornell University,

INSEAD, UN World Intellectual Property Organisation and GII. India again topped rankings as exporter of IT services. Delhi,



Mumbai and Bengaluru, were also featured in the world's top 100 science and technology clusters.

**Ghazipur landfill to grow taller than Taj Mahal by 2020**

NEW DELHI: The Ghazipur landfill site in Delhi is about to rise higher than the Taj Mahal by 2020. Covering almost the area equal to 40 football grounds, the landfill is growing by 10 meters annually. According to Arun Kumar, superintendent engineer, East Delhi Municipal Corporation, it is already more than 65 meters (213 feet) high. The apex court had already warned the corporation to install red lights to alert passing jets.



**'Green Wave Bicycle Plan' for New York**



NEW YORK: Due to increase in the number of deaths of cyclists, Bill de Blasio, New York's Mayor, planned to launch a five-year, \$58.4 million plan which would see the city constructing bike lanes, redesigning accident prone

intersections, and stepping up enforcement to ensure better safety for cyclists. The initiative is termed 'The Green Wave Bicycle Plan' and aims to add 30 miles, 10 greater than the current 20 miles, of new protected bike lanes annually.

**Kondagaon tops NITI Aayog's development rankings**

NEW DELHI: Kondagaon district in the State of Chhattisgarh topped the rankings of aspirational districts by the NITI Aayog for May 2019. The rankings measured the increasing progress made by over 100 aspirational districts in May 2019 across six developmental areas which include health and nutrition, education, agriculture and water resources, financial inclusion, skill development, and basic infrastructure. Fatehpur, Uttar Pradesh and Pakur, Jharkhand were ranked second and third respectively.



### Mussoorie's 'Wall of Hope'

MUSSOORIE: Citizens of Mussoorie have built a 'Wall of Hope' to inspire tourists not to litter the surroundings. The wall is 12 feet high and 1500 feet long, made out of 15,000 plastic bottles. These plastic bottles are collected from various places in Mussoorie and its surroundings. Shades of warm colours give it an impression of a sunset and compliments the background of the hills. A similar model has been constructed in Goa as well.

### 'Plasticrust', new form of plastic pollution

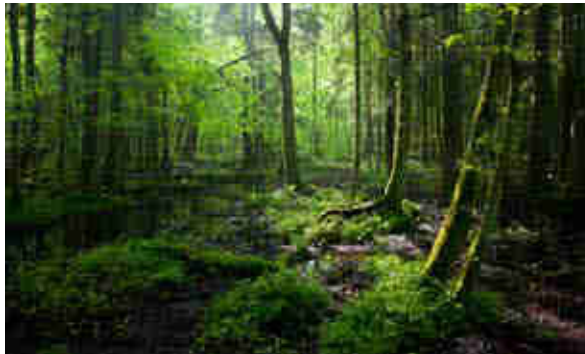
LISBON: Researchers have identified a new form of plastic pollution named 'Plasticrust', which surfaced recently on shoreline rocks in Madeira, a volcanic Portuguese island. 'Plasticrust' is a mixture of plastic and rock and was discovered by a group of Portuguese researchers. The researchers have conducted a study on the new discovery, "Plasticrusts: A new potential threat in the Anthropocene's rocky shores." Lab analysis revealed that the colored crusts were polyethylene, one of the most common types of plastic, often used in food and drink containers.

### MoHUA launches Swachh Survekshan 2020

NEW DELHI: Hardeep Singh Puri, Minister of State (IC) Ministry of Housing and Urban Affairs launched the Swachh Survekshan 2020 on June 6. The survey targets a sustainable on-ground performance of cities along with monitoring of service level performance in cleanliness. The league would be conducted in three quarters April – June, July – September and October – December 2019. Cities would be ranked in two categories: (a) Cities with population of one lakh and above (b) Cities with less than one lakh population.

### BMC signs 23 firms for the conservation of trees

MUMBAI: The Brihanmumbai Municipal Corporation (BMC) signed 23 firms for the maintenance and upkeep of the trees in the city. The contract would cost Rs 116 crore and would see the firms trim 29.75 lakh trees, treat them for infections, remove concrete within a 1.5 m radius around trunks and also remove dead trees ahead of the rains for the coming two years.



### World's highest 'weather station' installed at Mt Everest

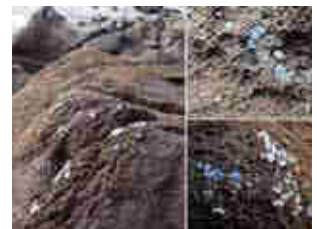
KATHMANDU: Climate scientists Tom Matthews and Baker Perry installed the world's highest operational weather station at Mt Everest. The weather station is 7-feet tall and was erected at a flank called Death Point located at a height of 8,430 meters

on the mountain. Five other weather stations at various heights is installed on the Everest. The other five weather station are located at Balcony area (8,430 m), South Col (7,945m), Phortse (3,810 m), Everest Base Camp (5,315 m) and Camp 2 (6,464 m).



### Dibrugarh to get SWM plant by 2020

DIBRUGARH: Assam government has sanctioned ₹48.49 crore and set a deadline for the completion of solid waste management plant in Lekai of Dibrugarh on May 1, 2020. The SWM plant was one of the major demands put forward by the citizens of Dibrugarh. The residents of the town will have relief from the garbage related issues post the completion of the plant. The plant will be constructed on 210 bigha plot of land.



### Haryana government forms two municipal bodies for Ambala

AMBALA: On June 24, the proposal for the formation of two civic bodies for Ambala has been approved. The area under the Ambala City Municipal Corporation would have 12 adjoining villages excluding Sadar Zone. The Sadar Zone will come under the Ambala Sadar Municipal Council. The villages under the jurisdiction of the freshly formed municipal

corporation are Dangdehri, Manakpur, Lohgarh, Dadiana, Devi Nagar, Nijampur, Ghel Kalan, Ghel Khurd, Kanwala, Kanwali, Kalu Majra and Liharsa. The previous civic body, Ambala Municipal Corporation was dissolved in the February last year abruptly, promising the formation of the newly commissioned two municipal corporation bodies.



### India's largest STP to come up at Okhla by 2022

NEW DELHI: India's largest sewage treatment plant (STP) will come up at Okhla in Delhi worth of ₹1,161 crore. The plant will remove 41,200 kg of organic pollutants and 61,600 kg of solid load per day and can cover about 40 lakh residents of Chandni Chowk, Daryaganj, NDMC areas, Nizamuddin, Okhla, Badarpur, Kalkaji, Malviya Nagar, Katwaria Sarai, Lajpat Nagar, Greater Kailash and Munirka to Badarpur. The project is expected to be completed by June 2022.



### WB finances for healthcare facilities in Andhra Pradesh

NEW DELHI: The World Bank, Central government and Andhra Pradesh government signed the loan agreement for amount of \$328 million for Health Systems Strengthening Project in Andhra Pradesh. The loan from the International Bank for Reconstruction and Development (IBRD) has a six-year grace period, and a maturity of 29 years and six months. The project will benefit 53 million people, by improving healthcare services in all the 13 districts across the state. In addition to this, the project will also help in screening and management of non-communicable diseases. It will also strengthen maternal and child healthcare services presently being provided in the state.

### Mumbai, first to launch

MUMBAI: The Maharashtra Capital becomes the first city in India to launch 'One Nation One Card' system where commuters can use their normal bank debit card in public transports. The card will have a wallet, which can be recharged when in need, can be used for travelling as well as retail purchases.

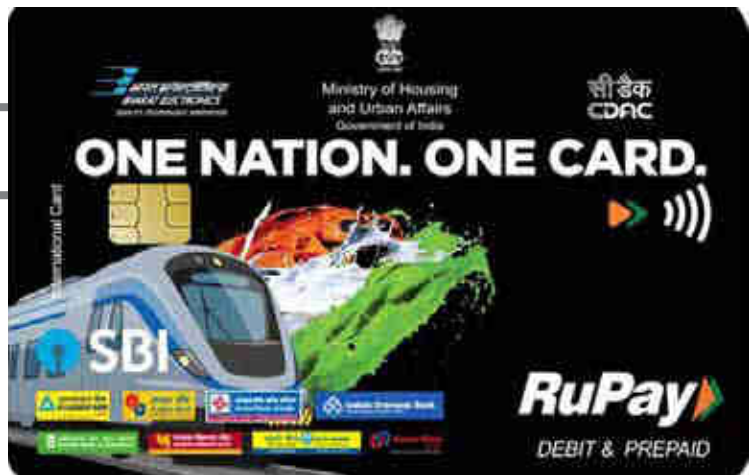
### Solan gets UV water purifier

SOLAN: Himachal Pradesh government installs UV based water purifying system under the lift water supply scheme of the Ashwani Khud by the Irrigation and Public Health (IPH) department in Solan. The UV system is capable of disinfecting five million liters of water per day, which is then circulated to 22,000 people living in the region. The installation of the plant started in June 2019. HP government took this step to address the rising number of jaundice cases in the Solan area.



GCC deploys beach cleaning machines

CHENNAI: The Greater Chennai Corporation (GCC) has deployed 10 cleaning machines, in a bid to keep the city's beach clean. With this move, the corporation is expecting to improve tourism along the city's beaches. The machines are installed at Palavakkam beach, Tiruvalluvar beach and other stretches- near Dooming Kuppam, Nochi Kuppam and Srinivasapuram. It starts working at 6 am every day.



### 2850 toilets to come up along Amarnath yatra route

SRINAGAR: Satya Pal Malik, Governor, J&K who is also the chairman of Shri Amarnathji Shrine Board, on May 27, briefed on the sanitation arrangements made for the pilgrimage. The arrangements

include construction of 516 toilets on the route. Also, to install 2,850 toilets and 516 washrooms along with 150 bottle catchers and 30 bio-bins and 1,515 dustbins along the yatra area.

### Gurugram metro's new extension to be operational by 2025

GURUGRAM: The newly proposed 31.1-kilometer metro link is constituted of 26 new stations, starting at Huda City Center, pass via Subhash Chowk, Sector 10, Sector 23, Palam Vihar and



Udyog Vihar and then connect with the Cybercity metro station. The total estimated cost of the entire project is expected to be around ₹5,126 crore and would be operational by 2025.

### Chandigarh gets new lake for bird life conservation

CHANDIGARH: Artificial lake was constructed at the Sukhna Lake Sanctuary by the Chandigarh Wildlife Wing to mark the World Migratory Bird Day (WMBD). The Sanctuary has registered 32 species of migratory birds in the past year. The lake was constructed with an aim to facilitate these migrating species of birds and provide them a stable, disturbance free environment.





*DHAKA: A UNICEF report, on April 8, said that lives of over 19 million children in Bangladesh are threatened with devastating floods, cyclones and other disasters due to climate change. It points out that Bangladesh's topography, dense population, weak infrastructure make it vulnerable to climate change.*

## Climate change affecting many lives

### UNICEF, ASCI join hands to make way forward for child development

HYDERABAD: The state government has signed an MoU with UNICEF and the Administrative Staff College of India (ASCI) for preparing a comprehensive report and workable plan encompassing issues like children's education, health, safety and hygiene, among others. The MoU was signed after the two organisations UNICEF and ASCI agreed to develop a workable plan for child welfare and development in urban areas of Telangana.

### ICMR launches 'Mission DELHI' to reduce heart-attack deaths

NEW DELHI: The Indian Council of Medical Research (ICMR) on April 25, 2019, launched 'Mission DELHI' to deliver good post-attack care at doorstep with an aim to reduce number of deaths from heart attack. An assistance unit on a motorcycle can be quickly summoned for emergencies like heart attack or severe chest pain. The pilot project has been launched for a radius of three kilometres around the All India Institute of Medical Sciences (AIIMS). There are four bike ambulances and 12 trained nurses who would be the first responders to treat heart attack patients. 'Mission DELHI' (Delhi Emergency Life Heart-attack Initiative) aims to reduce the time it takes for people with a serious heart attack to receive clot-busting medicine. The project will cost ₹5 crore over three years and more, if expanded.



### 'Cutting use of household fuels can save 2.7 lakh lives annually'

NEW DELHI: Indian Institute of Technology (IIT) Delhi conducted a study published in the journal proceedings of

the National Academy of Sciences, revealed that India could make a major dent in air pollution and save about 270,000 lives

a year by curbing emissions from dirty household fuels such as wood, dung, coal and kerosene.



### Saving the Earth may cost \$100 billion per year: GDN

WASHINGTON: Saving the life on earth may cost \$100 billion per year, claim Global Deal for Nature (GDN) scientists who have proposed a policy to prevent mass extinction event on the planet in their study released on April 24. The study was published in 'Science Advances'. It outlines the targets and guiding principles needed to avoid extinction threats of a two degree celsius warming forecast.

### Nepal collects 3000 kg garbage from Mount Everest

KATHMANDU: Under the country's flagship campaign of cleaning, the Sagarmatha Cleaning Campaign, the Nepalese government was able to collect as much as 3,000 kg of solid waste from the Mt. Everest region on April 14. The Nepalese spent approximately 23 million Nepalese Rupees on the campaign.



### Sydney targets to operate 100% on renewable energy by 2030

SYDNEY: Sydney is all set to work towards its renewable energy target – operating 100 per cent on renewable energy by 2030. Chris Derksema, sustainability director, the City of Sydney said on April 2, "We're increasing our renewable electricity target and achieving it earlier because our residents and businesses are demanding it, it reduces emissions and it will soon be cheaper than coal."



## World's largest e-waste recycling plant

### ₹224 crore smart city project begins

COIMBATORE: SP Velumani, Minister for Municipal Administration, TN laid the foundation stone for smart city projects in Coimbatore on March 9. The total cost of various projects started for development of the new city amount to ₹224.10 crore.

DUBAI: The facility is located at the Dubai Industrial Park in an area of 280,000 square feet. The plant can process Waste Electrical and Electronic Equipment (WEEE), IT Asset Disposition (ITAD), refrigerant gas and specialised waste.

### Delhi Metro's fare hike drops number of daily commuters by 3 lakh

NEW DELHI: The average ridership of the Delhi Metro reduced by over 3 lakh post fares hiked in 2017. The daily average of ridership dropped from over 26 lakhs in 2017 to 22.85 and 23.20 lakh in January and February of 2019. DMRC projected an increment in the ridership to 40 lakhs per month post the inauguration of new metro routes like the Pink and Magenta lines.

### Union Cabinet approves metro project in Agra, Kanpur

AGRA: The Union Cabinet cleared two corridors for the Agra Metro Rail Project on March 1, 2019. The project costs ₹8,379.62 crore and is estimated to be completed

### GST makes solar power generation costlier by 6%: Study

NEW DELHI: The generation of power through photovoltaic cells has become costlier by almost six per cent due to the introduction of Goods and Services Tax (GST), revealed

an independent study conducted by the Council on Energy, Environment and Water (CEEW) and the International Institute for Sustainable Development (IISD) on March 7, 2019.

### SC criticises Haryana for permitting construction in Aravallis

NEW DELHI: The Supreme Court criticised the Government of Haryana for passing amendments to Punjab Land Preservation (Haryana Amendment) Act, 2019, which allows construction in Aravalli hills. The court said that this will destroy the forest and hence shall not be permitted. However, the CM of Haryana protested the court's decision, saying that the amendments were the "need of the hour" as the act was "very old".

### Construction for Delhi-Mumbai Expressway begins

NEW DELHI: On March 1, 2019, Nitin Gadkari, Union Minister for Road Transport and Highways laid the foundation stone for a 59-km six-lane national highway connecting New Delhi's Ring Road with the under-construction Delhi-Mumbai Expressway. The project worth ₹3,580 crore is part of nine other central government projects to decongest Delhi-NCR region.



### SWACHH SURVEKSHAN 2019

NEW DELHI: Three cities of Madhya Pradesh Indore, Bhopal and Ujjain secured top three ranks in the Swachh Survekshan 2019, released on March 6, 2019. The winners were announced by the Government of India at a function in New Delhi. The municipal bodies of Delhi have failed to maintain their rankings in the annual cleanliness survey. The three of the five municipalities in the Capital were rated much worse than their previous ranks in the Swachh Survekshan conducted last year.

### Environment damage causing a quarter of premature deaths: United Nations

NAIROBI: One-fourth of all the premature deaths and diseases worldwide are caused due to manmade pollution and environmental damage, said the United Nations (UN). In a report released by the UN, it warned that deadly emissions, chemicals polluting drinking water and the accelerating destruction of ecosystems is driving a worldwide epidemic that hampers the global economy. Climate change poses a future risk to billions as GHG emissions continue to rise amid a preponderance of droughts, floods, and superstorms that are made worse by climbing sea levels.



### 'Indian thermal power plants "unhealthiest" worldwide'

GENEVA: Researchers from Eidgenössische Technische Hochschule Zürich (ETH Zurich) in Switzerland found out that power plants in India were the "unhealthiest" in the world. The coal fired power plants produce harmful toxics like particulate matter, sulphur dioxide, nitrogen oxide and mercury.





### IIT Delhi builds 'DotBook' for visually impaired

NEW DELHI: IIT-Delhi researchers have developed 'DotBook' that has a Braille display aiming at creating independent access to digital content for the visually impaired. 'DotBook', will enable visually impaired people to compete and succeed independently in an office or educational environment like colleges.

### India's first 'Intelligent Traffic System' launched in Gurgaon

GURGAON: The pilot project for the India's first 'Intelligent Traffic System' (ITS) was launched in Gurgaon on February 13, 2019, which will be evaluated for 6 months. Smart traffic signals are installed at four places along the HUDA City Centre to Bakhtawar Chowk stretch—Kanhai Chowk, the Sector 30/31 dividing road, Sector 31/45 traffic light, and Bakhtawar Chowk.

### Bike ambulance service begins in Delhi

NEW DELHI: The Delhi government launched bike ambulance services on February 7, 2019 to ensure timely health assistance in traffic-congested areas. These bikes will be known as First Responder Vehicles. These bikes will be equipped with a portable oxygen cylinder, first aid kit and dressing material, air-splints, GPS and communication device.



### Four lakh houses gain approval under PMAYU

NEW DELHI: The Central Government has approved four lakh houses under Pradhan Mantri Awas Yojana-Urban (PMAYU). As per the Ministry of Housing and Urban Affairs (MoHUA), this approval takes the total number of houses under the scheme to more than 72.5 lakh. The houses were given approval in the 42<sup>nd</sup> meeting of Central Sanctioning and Monitoring Committee.

### New MSMEs policies to boost development in Haryana

CHANDIGARH: The Haryana government approved new policies for MSMEs and pharmaceutical sectors, on February 4, to boost the industrial growth and attract investment in the state. The policy aims to promote development through geographical dispersal of industry, growth of the MSMEs through cluster development and adoption of quality manufacturing practices.

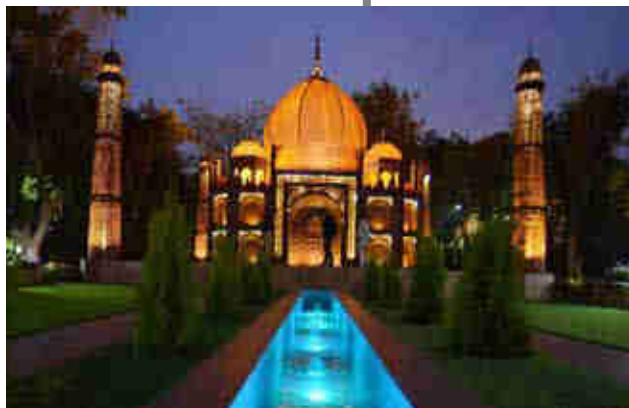
### "Smart-dustbins" to reverse vend coupons for plastic waste

CHENNAI: Edappadi K Palaniswami, Chief Minister of Tamil Nadu, launched the 'reverse vending machine' also called as "smart dustbins" promoted by Golden Star Innovations at his Greenways Road residence in Chennai on January 31. These smart dustbins will generate coupons based on the quantity of the plastic waste dropped in it. The information about redeeming the coupon will be given on it.



### Prime Minister flags off Vande Bharat Express

NEW DELHI: The Vande Bharat Express was flagged off on February 15, 2019 by PM Narendra Modi. The train has maximum speed of 160 kmph. The Vande Bharat Express is equipped with automatic doors, onboard WiFi hotspot; GPS based Audio Visual Passenger Information system, and more advance facilities.



### Delhi's Waste to Wonder Park

#### MCG develops app to track encroachments

GURUGRAM: The Municipal Corporation of Gurugram now use mobile app to check unauthorised constructions, encroachments and illegal colonisation. Yashpal Yadav, Commissioner, MCG released phone number for residents to lodge complaints about the same.

#### WB provides \$40 million loan to end water crisis in Shimla

SHIMLA: The Himachal Pradesh government and the World Bank signed a \$40 million loan agreement on February 15, 2019 to help bring clean and reliable drinking water to the residents of the Greater Shimla area. Shimla has been facing severe water shortages and water-borne epidemics over the last few years.

NEW DELHI: Rajnath Singh, former Union Home Minister on February 21, 2019 inaugurated a new park which houses the replicas of the seven wonders of the world at Sarai Kale Khan, Delhi. The replicas are built using metallic scrap. The park is spread across seven acres and was built by the South Delhi Municipal Corporation (SDMC).

## Renewables, Germany's major power source

FRANKFURT: Renewable energy took over coal as Germany's main source of energy for the first time last year, as per a research report released by Fraunhofer Organisation of Applied Science. The leap from fossil fuel to renewable energy marks the progress of Germany as it aims for renewables to provide 65 per cent of its energy by 2030.



### Prime Minister inaugurates India's first paperless hospital

AHMEDABAD: Narendra Modi, Prime Minister of India, inaugurated India's first digital paperless hospital 'Sardar Vallabhbhai Patel Medical and Research Institute' in Ellis Bridge, Ahmedabad on January 17, 2019. Under the Ayushman Bharat Program, the hospital will provide free treatment to the poor. The facility is an 18 storeyed state of the art super-specialty hospital that was built at a cost of ₹750 crore with a helipad for the air ambulance.

### US University, Indian experts to study Delhi's pollutants

NEW DELHI: The Delhi Government and Washington University signed an MoU to study the source of Delhi's pollutants with special reference to PM2.5 levels. The main target of the project is to monitor the real time air quality and identification of pollution sources in Delhi.



### India, Norway signs MoU to work together on SDGs

NEW DELHI: India and Norway on January 8, 2019 agreed to closely collaborate on ocean economy and achieving the Sustainable Development Goals, after Narendra Modi, Prime Minister of India held talks with his Norwegian counterpart Erna Solberg. The two leaders expressed desire to work together for realising SDGs, including poverty, health, education, women empowerment, clean energy and sustainable use of ocean resources.

### Government launches NCAP against pollution

NEW DELHI: Dr Harsh Vardhan, former Union Minister of Environment, Forest and Climate Change launched the National Clean Air Programme (NCAP) on January 10, 2019, aimed at reducing toxic particulate matter (PM) pollution by 20-30 per cent in at least 102 affected cities by 2024. It aims to cut in industrial emissions and vehicular exhaust fumes and reduce dust pollution.

### 'Bengaluru may see 74% more pollution'

BENGALURU: A study by Urbanemissions.info along with researchers from the Center for Study of Science, Technology and Policy (CSTEP) reveals that the pollution in Bengaluru may see an increase of 74 per cent by 2030, primarily due to vehicles, construction activities and on-road dust which cause the increase in rise of PM10 pollutants in the air.



### JLL CMI-2019 ranks Hyderabad 2<sup>nd</sup> in short term growth category

HYDERABAD: The Telangana capital ranked second among the top 20 most dynamic cities in short term growth category. The JLL City Momentum Index Short-Term Momentum rankings identify and rates the urban economies and real estate markets which are currently undergoing the most rapid growth. As per the WEF, "The rankings track a range of socioeconomic and commercial real-estate indicators to identify attributes for success over the short term".



### AMC signs MoU with WB's IFC to fight climate change

AHMEDABAD: The Ahmedabad Municipal Corporation (AMC) and International Finance Corporation (IFC) of the World Bank Group signed ₹7000 crore MoU to manage Climate Change for environment conservation for a period of five years. The MoU will also help in finding a solution for the Pirana dumpsite as well.

### 'Recycle and reuse to keep climate change in check'

KUALA LUMPUR: The world needs to recycle and reuse more of the billions of tonnes of materials each year to keep climate change in check, a research report by Amsterdam-based social enterprise Circle Economy, said on January 22, 2019. The report said that only about a tenth of the nearly 93 billion tonnes of materials is utilised annually. These include minerals, metals, fossil fuels and biomass.

# Noida Metro to develop 'Pink Stations' to empower women

In a bid to encourage gender equality and create safe environment for women, Noida Metro Rail Corporation (NMRC) has decided to transform two stations into 'Pink Stations'. These stations will be operated by female staff and also be equipped with special facilities for them

NEW DELHI: Women empowerment in India has seen some of the most encouraging trends. From economic liberty allowing women to stand against stereotyping to the internet and information revolution helping them voice their concerns and demand rights as equal citizens, there is a positive shift from the conventional patriarchal thinking to gender equality. NMRC's concept of 'Pink Stations' is a contribution towards empowering women. On the occasion of NMRC's 5<sup>th</sup> Foundation Day celebrated on November 5 at the Indira Gandhi Kala Kendra Noida Sector-6, PD Upadhyaya, Executive Director of NMRC announced the Pink Station initiative. The metro line connecting Noida to Greater Noida known as the Aqua Line is 29.7 km long and has 21 metro stations. Of the 21, the Pari Chowk station and the Sector-76 station will be turned into 'Pink Stations' as a pilot initiative.

To explore about the kind of facilities available at the pink stations which make them different from the regular ones and to know more about the initiative, Upadhyaya told Urban Update, "The idea is to dedicate a few stations of the metro line to women so that they should know that they are no longer being left behind and importance is being given to their specific needs, safety and employment. With the exception of security personnel, employees working at these stations would be women."

Regarding the status of the project, he said, "As the project is a pilot so we have decided to turn Pari Chowk station and Sector-76 station into pink stations as there are many residential complexes

nearby and we have a good number of ridership from these stations."

The Noida Metro has planned to equip the stations with a few female-specific facilities. Diaper dispensing machines, sanitary pad dispensers, baby feeding room, make-up room, selfie point are a few of such facilities that Upadhyaya mentioned.

Detailing about the facilities, he further said, "There are a lot of schemes that the Government of India has launched in the recent years and which are being monitored every now and then but are not known to many people. A kiosk will be setup by the metro corporation which will provide information about schemes like Ujwala Yojana, Dainya Suraksha Yojana, Saubhagya Yojana, and more. Also, for security, the kiosk will be connected with Government of Uttar Pradesh established 'Women Power Cell'."

1090 is the helpline number which will provide immediate police assistance to any woman in need, Upadhyaya added. Ambulance facility will also be available at the station and assistance for the same will be provided from the kiosk. When asked about the remodeling of the stations, he said, "We will not remodel the stations but we have kept a color code 'pink' and that will be implemented. If you talk about facilities, we will be building and renovating certain parts at the station so that all the facilities planned can be installed. But, complete remodeling will not be done."

Although, the concept of 'Pink Stations' seems to be quite optimistic about empowering women but what about their security, especially for



A coach of NMRC's Aqua Line metro

the staff leaving late in the evening after work? Security would be a major concern for every woman trying to be a part of this initiative. However, Upadhyaya, addressing this concern, said, "We have our NMRC's depot in Sector-Delta, Greater Noida and we have cabs available for staff personnel. Every woman leaving late can use the cab facility and it will drop them at their doorstep." From their respective stations women can travel by metro to the depot and can avail the cab facility. Metro travel is completely safe as we have security cameras, and security staff deputed at every station, he added.

Further, he said that NMRC also has staff quarters in Sector-Delta near their depot and staff personnel, including women, are staying there and there are no complaints regarding safety as of yet.

Hence, NMRC is working on implementing this plan of dedicating two of its stations to women and the work of these stations would be completed by December end. The extension of the project to other stations would depend on the success of this pilot and response from women passengers.



# Defence Minister flags off 'Swachhta Pakhwada'

NEW DELHI: Ministry of Defence has launched a two-week campaign against single use plastic in Delhi Cantt as a part of the Swachhta Pakhwada campaign. The awareness campaign is conducted in all the cantonment



regions of the nation between December 1st to 15<sup>th</sup>. Rajnath Singh, Union Minister of Defence, Shripad Yesso Naik, Minister of State for Defence and several top ranked defense officers from Indian Navy, Air Force, Army and Coast Guard were present during the flag off event for a plogging drive which was held in Delhi Cantt on December 7. Shripad Naik addressed the gathering of approximately 500, "Reducing single-use plastic is the need of the hour for India. We need to preserve the environment for our future generation and single-use plastic is one of the biggest malice to it."

The inaugural event also hosted nukkad natak, art work displays through which students of Cantonment Board regions expressed their opinions on the issue. Rajnath Singh appreciated the initiative. In his speech, he highlighted how such campaigns would benefit other urban areas of India as well. He said that children should be the ambassadors for cleanliness drives as their messages hold more weight given that they are the next generation. "Such initiatives highlight one of the biggest malice that Indian cities face, that is, of plastic pollution. It also affects Indian land as the fertility of the soil decreases when the non-bio degradable waste mixes

with it. I believe that such initiatives can go a long way in educating the citizens about the malice of plastic and hence, discourage them to use it." Following this, he administered a 'Swachhta Pledge' to the people attending the event and flagged off the march. The defence minister also took to cleaning plastic waste from the surrounding areas himself as a part of the plogging march.

The event saw a contingent of NCC and school students from Delhi Cantt who undertook the long plogging march in which they retrieved plastic waste dumped on the street.

Throughout the two-week period of the campaign, various awareness programs like nukkad natak, debates, quizzes, painting competitions among students would be organized and would also see participation from all the forces. On December 7, similar events were held in 400 locations throughout India and were organised by all the three defense services (Army, Navy, Air Force), Indian Coast Guard, Defence Public Sector Undertakings, Ordnance Factory Board (OFB), Cantonment boards, National Cadet Corps (NCC), Boarder Road Organisation (BRO). Similar events were held in cantt areas across many parts of the nation like Hyderabad and Jammu among 400 other locations.

# Major Delhi roads to temporarily be one way

NEW DELHI: In a bid to ease traffic problems in the ring road area of Delhi, three routes in the surrounding areas have been made one way during the peak hours from 5 to 8 PM. The three routes that have been selected for the policy change are Purana Qila Road from C-Hexagon (India Gate roundabout) to Mathura Road, Abai Marg from San Martin Marg to Sardar Patel Marg, and Kushak Road from Teen Murti to Rajaji Marg. Delhi Traffic Police has signed memorandum of understanding (MoU) with World Resources Institute (WRI), India to implement the rerouting plan. Amit Bhatt, Executive Director, Integrated transport, WRI India told Urban Update, "Delhi Police, through its outsourcing of data, had identified 17 stretches which could be viable for one-way movement. We looked at the stretches from a technical perspective for one-way mobility and how will the implementation of this project impact the safety of pedestrians in these stretches. We deduced that only these three stretches would benefit from one-way traffic movement as of now." Considering that these stretches connect with the ring road and take some traffic load from that stretch, we asked him if the implementation of one-way traffic movement would burden the ring road even further. But, the director was positive that rerouting on these roads won't cause a longer detour for the passengers and hence they have shortlisted these three of the proposed 17 for the implementation of the plan. The initiative is in its pilot phase as of now.

When asked about the phase of the project, the Director assured us that this is in the pilot phase. "Based on the success of this, the project would be extended in the near future," he added.

However, traffic planners have been critical of this new initiative. "The rerouting of traffic to one road, which is the ring road in this case, makes no sense. It is against the principle of traffic planning. This will also effect the public transit. Also, some of these stretches that would now be one way are often closed due to VIP movement, hence contributing more to the traffic woes," Dr Sewa Ram, Professor at School of Planning and Architecture told Urban Update.

# Strengthen villages to solve urban issues

All India Institute of Local Self-Government (AIILSG) along with Raipur Municipal Corporation (RMC) and Raipur Smart City Development Ltd organised 'Urban Dialogues: Mor Raipur' on November 20, 2019, at Sayaji Hotel, Raipur. The conference brought into light developments under 'Smart Cities Mission' in Raipur and advancement made by the city in the fields of environment, water and overall sustainable development

## Team Urban Update

**D**r Charan Das Mahant, Speaker of the Chhattisgarh Legislative Assembly, was the chief guest of the conference and began the dialogues by lighting the lamp. Pramod Dubey, Mayor of Raipur Municipal Corporation (RMC), Lokeshwar Sahu, Additional Commissioner, RMC, Ravi Ranjan Guru, Deputy Director General, AIILSG, DP Tiwari (Retd IAS), Former Deputy Commissioner, Raipur, SK Mishra, Former Chief Secretary, Chhattisgarh, Abhilash Khandekar, Senior Journalist, and Ashok Wankhade, Managing Editor, Urban Update were also present at the occasion.

The dignitaries then proceeded to share their opinions on the developments in Raipur and the issues faced by the city. Ravi Ranjan Guru welcomed everyone on behalf of the AIILSG and briefed the conference about the objective of Urban Dialogues. "We visit various cities across India and try to understand and bring forth the various issues of that particular city to the various stakeholders of the city. The aim behind this is to ensure an all-inclusive future for the city." He highlighted that AIILSG has been doing extensive work in capacity building

in the state of Chhattisgarh. The organisation has launched 220 training programs which have seen participation from over 10,000 municipal officials of the state. Along with this, AIILSG has also developed the smart city plans for Bilaspur, Raipur and two other smart cities of the state.

Dr Mahant began his address by pointing out, "By seeing Raipur, we "Chhattisgarhis" expect to see glimpses of the traditions of the state encompassed in the city. This is the city of dreams for every resident of Chhattisgarh and the city authorities are bringing it close to reality."

He expressed that although issues of pollution and sanitation amongst many others have been adequately addressed, there is still room for improvement in the inculcation of civic sense in the people of Raipur. More discussions should take place on this in such conferences. Expressing the hope of a productive discussion, he concluded his speech.

Pramod Dubey began his speech by thanking AIILSG for exceptional designing of the Raipur Smart city. He then highlighted some of the initiatives taken by the city authorities to improve Raipur's ranking from 127<sup>th</sup> to the 7<sup>th</sup> cleanest city in the Swachh Survekshan of 2019. He spoke briefly about the initiatives taken by the authorities to conserve the small waterbodies, which were also lauded by the National Green Tribunal (NGT). He also told delegates

that oxi-zones, spanning a total area of 200 acres were established in the city. The authorities are also working to ensure a better life for the citizens of Raipur. "We have installed tap water systems in each house of Raipur", ensured Dubey. The city also treats 800-950 tonnes of its daily waste itself. Yet, the rehabilitation of Sarona trenching ground is a major challenge for the city and various government houses need to come together under a single roof for smooth and efficient work.

He also detailed the bus stand project where the authorities have positioned stands at the outskirts of the city to minimise traffic congestion within the city. Yet, he further said, the city faces considerable traffic problems as stray animals often disrupt free flow of the traffic.

Lokeshwar Sahu briefly spoke about how he began his career in municipal governance after undergoing training for the same under AIILSG in Bhopal. According to him, the major problem that the city faces is the inefficient utilisation of land resources in the city. "Optimal land utilisation is quintessential for the progress of Raipur. We won't become 'smart' without bettering our land use," he said. He encouraged town planners to implement a development plan for Raipur that accommodates small-scale businesses in such a way that they flourish at a good pace. He further outlined the program of saving the



*Bhupesh Baghel, CM, Chhattisgarh delivering his Chief Guest address in the Valedictory Session during the Urban Dialogues: Mor Raipur*

river Kharun. He said that the city authorities are currently working on the installation of four sewage treatment plants for the proper correction of waste water that is being released in to the river.

### Session 1: Municipal Governance, Cleanliness and Solid Waste Management

The first session of the conference focused on devising solutions for the betterment of municipal governance, sanitation and ecological system of Raipur. Pashim Tewari, Technical Director, AILSG chaired the session and briefed about the bullet points around which the discussion would be centered. He also brought forth some of the key issues impeding the further development of the city. One such issue, according to Tewari, is the problem of duality between Old and New Raipur. Both cities compete with each other for development projects and this, to an extent, slows down the progress for both. With this, he invited SK Mishra, former Chief Secretary of Chhattisgarh.

Speaking from an administrative perspective, the former CS felt that growth management is a major challenge that Raipur city authorities face today, as the city is expanding rapidly. “It is upon us to ensure adequate infrastructure to incorporate this influx of population,” Mishra said. He also highlighted that there is a need of developing a new masterplan for the capital city as the current plan has been modified so many times that it has become less effective for the current scenario. He further said that empowering of RMC is a must as currently the authority faces budget constraints, and lack of bureaucratic independence mars its efficiency. He also proposed the establishment of a system for citizen feedback which will make it ‘Mor Raipur Corporation’.

Amit Shrivastava, a senior town planner, followed him and highlighted the changing sanitation standards in Indian cities. He highlighted the importance of sanitation, “If Water is life then Sanitation is dignity.” He pointed out that 6.4 per cent of the GDP is lost annually due to the lack of a proper sanitation system. In order

to improve the situation, dialogues on open defecation are necessary. He suggested public awareness campaigns to be launched in Raipur to change the attitude of citizens towards the issue.

Biraja Kabi Satapathy, WASH Officer, UNICEF, Chhattisgarh discussed on how a smart city could be planned keeping in mind the needs of various demographics of the population that inhabits it. She said that the water supply system needs an upgradation in Raipur to make it more clean. “Intermittent water supply and unregularised water distribution systems are two of the major problems in developing cities like Raipur,” she said.

Alok Katiyar, CEO, Chhattisgarh Renewable Energy Development Agency, addressed the importance of implementation of energy efficient methods in the formulation of smart city plans. He expressed that incorporation of clean energy alternatives, specifically solar, must be incorporated in smart city development of Raipur. “Energy conversion of waste must be prioritised,” he said.

Ranjan Panda, Convener, Combat





*Dr Charan Das Mahant, Speaker, Chhattisgarh Legislative Assembly, lighting the inaugural lamp at the conference*

Climate Change Network, India, said smartness for cities lies within the development of sustainable green and blue infrastructure. “Green spaces must be provided in cities as ensuring this would somewhat reduce the extent of effects of climate change,” Panda said. He also pointed out that villages and cities need to work together for a sustainable future of the entire nation.

‘Bunch of fools’, an organisation which independently conducts cleanliness drives in Raipur, co-founder of the organisation Prashant Kochhar spoke about improving people’s interaction with their city. He said that the implementation of the concept of smart cities would be somewhat futile if the citizens are not sensitised about basic civic sense. “The main motive behind Bunch of Fools is to instill civic sense in the people,” Kochhar said.

## Session 2: Intelligent solutions to Urban woes

The second technical session of the conference was aimed at identifying problems of Raipur and devising probable solutions to them for the consideration of city stakeholders.

The session was chaired by Abhilash Khandekar, who remarked that a liveable city can only be developed if the basic amenities in the city are ensured. He questioned “Can technological means be used to rid cities of problems like traffic, energy, green services etc.?” And opened the discussion for the eminent panel of experts.

The first speaker of the session was Dr Sewa Ram, Professor at School of Planning and Architecture (SPA), New Delhi.

He outlined the mobility needs of a

smart city as simplifying the transit of a city makes it more accessible.

He emphasised that city planners must take lessons from the mistakes made in the development of road networks in other major metropolitans of India and then develop a transit network which ensures smooth and clean mobility in Raipur. Local bodies must also be heavily involved in the process of developing Raipur’s transit model.

DP Tiwari, the former collector of the city, mentioned that Raipur is now the fastest developing city in India and expects further rapid development and better life for Raipur’s citizens. He then further elaborated the pace at which the city is developing essentially puts forth a roadmap for the coming 50 years of Raipur.

Mansee Bal Bhargav, Founder, Environmental Design Consultants, said that the conversation, in the case of most Indian cities, should not be centered around building more unnecessary infrastructure for the city, but on re-development. Construction of excessive infrastructure, which is not essentially required, ends up damaging the city’s environment and hence, degrades the progress of a city.

Dr Sanjay Sharma, a senior Neurologist based in Raipur, highlighted the most common diseases plaguing the regional population of Raipur in his address. Diseases like Malaria, Diarrhea and Leprosy were found to be the most common in the city of Raipur.

“The spread of the diseases can be massively owed to contaminated water, lack of sanitation and proper hygiene and alcoholism,” he said. He further suggested that conversion of dense forestation, which are mostly untouched, could be converted to air pockets for Chhattisgarh.

Zahid Ali, Chairman, Institute of Town Planners India, Chhattisgarh gave a presentation on local area based and town planning schemes and policies and how they could be used in the better development of growing cities like Raipur.

## Raipur Declaration

- ◆ We aspire to see the village in our city and the city in a village.
- ◆ All the tiers and departments should be on the same page while planning for the city.
- ◆ The city faces transportation problems much of which could be owed to the mismanagement of stray animals roaming on major roads. Better plan to manage these could improve the traffic flow of the city.
- ◆ Civic sense among citizens and public participation is important for successful implementation of government initiatives. Individual Social Responsibility should also be enforced.
- ◆ Efficient land utilisation is a big hurdle in the development of Naya Raipur. Land hoarding should end in order to make the city truly 'Smart'.
- ◆ The town planners of Raipur must move forward keeping in mind the interest of small time businesses as all sections must progress uniformly in order for the city to flourish as a whole.
- ◆ The Municipal Corporation must be empowered adequately. The Corporation must be given more bureaucratic independence and financial stability to improve its functioning.
- ◆ The original masterplan of Raipur has been modified several times over the years, making it ineffective. Various stakeholders of the city need to work together and redesign a more consolidated masterplan for the city.
- ◆ The developmental tussle between Naya Raipur and Old Raipur ultimately hinders the growth of both. An integrated developmental approach for both the cities must be undertaken.
- ◆ The cities surrounding the capital must also come up in order to ensure sustainable growth across Chhattisgarh.
- ◆ Authorities must look into the faults made in the designing of transit networks of other Indian metropolises and avoid them to ensure a smooth, clean and safe mobility network in Raipur.
- ◆ Developing green and blue infrastructure and implementation of clean energy alternatives in Raipur could reduce the pollution levels of the city.
- ◆ In order to preserve the depleting water bodies of the city, sewage should not be routed into them. Other than this, more efficient water preserving steps like rain water harvesting and water recycling should be enforced.
- ◆ Chhattisgarh has a considerable tribal population in India. They must be represented at every level of discussions and deliberation for planning of the smart cities. We should focus on making our cities inclusive with representation of all sections of society.
- ◆ From a medical standpoint, issues like air pollution, lack of sanitation and water contamination end up costing the citizens of Raipur the most. Working on these problems is necessary to better the quality of life of Raipur's residents.
- ◆ Unused land could be reused to develop green areas, which would serve as lungs of the city and hence, effectively bring down the air pollution problem of Raipur.

## Valedictory Session

Bhupesh Baghel, Chief Minister of Chhattisgarh, graced the valedictory session of the conference. Baghel said, "There are host of problems our cities are facing today.

The major reasons of urban issues are uncontrolled growth of urban population and lack of employment opportunities in villages. If we can provide better job opportunities in rural areas, then people will not migrate to cities and it will help in deburdening urban centres." He then stated that over 1.5 lakh people have made the move back to their villages to pursue farming due to the state government waiving their agricultural loans.

The Chief Minister also said that society needs to go to basics and learn from our ancestors how they developed ponds for water recharging and planned habitats accordingly. He added that many cities are facing water problems and these problems can be solved if we respect our natural ecosystem and do not pollute our rivers, lakes, ponds and other water bodies.

He further criticised the concretisation of cities as it depletes the groundwater tables of the region. He then announced that Chhattisgarh government will be implementing a water rejuvenation plan in the state and has selected 1028 of over 3000 waterbodies for the program. Ravi Ranjan Guru, Deputy Director General of AIILSG, released Raipur Declaration in front of the Chief Minister. The declaration highlighted the key points discussed during the conference and the way forward.

Sunil Namdeo, senior journalist, thanked all the dignitaries, stakeholders of the city and speakers for their valuable inputs during the conference and a fruitful discussion. On this high note, he concluded Urban Dialogues with a hope that the points raised during the conference would be considered by the city stakeholders and would contribute towards a better future for the city. ■



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# Glimpses

1. Delegates registering for Urban Dialogues: Mor Raipur;
2. Dr Charan Das Mahant, Speaker of Chhattisgarh Legislative Assembly, discussing the agenda of the conference with Pramod Dubey, Mayor of Raipur;
3. The audience was all ears during the technical sessions;
4. Dr Sewa Ram, Professor, SPA, Delhi speaking on the mobility issues in cities
- 5 & 6. Bhupesh Baghel, CM, Chhattisgarh delivering concluding address. Baghel highlighted that developing rural sector is must for solving urban issues;
7. Ravi Ranjan Guru, Deputy Director General, AILSG, presenting memento to Dr Charan Das Mahant;
8. Raipur Mayor Pramod Dubey addressing the audience;
9. SK Mishra, Former Chief Secretary, Chhattisgarh, discussing about the need for a new master plan for Raipur city
10. Alok Katiyar, CEO, CREDA speaking on building energy efficient smart cities
11. Biraja Kabi Satapathy, WASH Officer, UNICEF spoke on sanitation standards in urban areas
12. Pashim Tewari, Technical Director, AILSG; Kumar Dhananjay, Consulting Editor, Urban Update; DP Tiwari, Former Collector, Raipur; Mamta Kalwani, social activist; Dr Sanjay Sharma, Sr Neurologist were given saplings
13. One of the delegates participating in open discussion with the speakers
14. Team Urban Update and organising members with CM of Chhattisgarh Bhupesh Baghel





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# CITIES MUST BECOME INCLUSIVE, address needs of specially-abled

Urban centres give hopes and aspirations of a good life to people by providing better living conditions and access to advanced civic services. But odds are stacked against the specially-abled population in our cities. The built environment is not disabled-friendly in most of our cities. Making cities inclusive by including persons with disabilities in the agenda of urban planning and design is a must





**Abhishek Pandey**  
Editor

**E**very year, we celebrate the World Disability Day on December 3, to make people aware about the difficulties people with disability face in going about their day-to-day lives and demand for better facilities in public places for them. There are over

a billion people in the world with some kind of disability. The World Health Organisation (WHO) says that 15% of the world's population lives with an impairment or disability. In India, according to Census 2011, there are over 21 million people with disability.

Traditionally, societies world over have supported them through special residential arrangements and special schools. These initiatives did provide them with some kind of facilities but actually secluded them instead of mainstreaming them. Persons with disability experience difficulties arising from their health conditions but if the society does not build a supportive

ecosystem then they do not get adequate access to education, jobs and public facilities and remain stuck in the vicious cycle of deprivation and poverty. Cities will have to create an environment where the disabled population becomes self-dependent.

A majority of people with disability belong to the economically weaker sections of society. A report on disability by the World Bank says, across the world, people with disabilities have poorer health outcomes, lower education achievements, less economic participation and higher rates of poverty than people without disabilities. This is partly because people with





disabilities experience barriers in accessing services that many of us take for granted, including health, education, employment, and transport as well as information. These difficulties are exacerbated in less advantaged communities because of having meagre resources.

For example, a poor person with a hearing disability will not be able to buy expensive hearing aid or any assistive technologic gadget. Many of them are not given equal opportunities in academic institutions and in jobs. They cannot even walk freely on footpaths because speeding vehicles on urban streets could hit them since cities failed to build disabled-friendly infrastructure.

The public transport system in

our cities does not provide adequate facilities to specially-abled population. The lack of facilities increases the cost of living for a disabled person in a city because he or she either becomes dependent on a family member to take him/her around or has to use taxis or private vehicles.

When we travel by train and suddenly the railway announcer tells us about the change in the platform of our train, we run helter-skelter. Think about the person with a disability who will have to wade through the crowd to reach another platform using stairs or miss the train. In case of any emergency situation or accident, they become the most vulnerable. Such pattern of public facilities follows them everywhere.

Many of the government buildings and even corporation buildings are also not accessible to them in the absence of simple ramp. One of the most talked-about government missions on cleanliness-Swachh Bharat Mission has talked about building toilets at public places. You can get toilets for the disabled at airports, cinema multiplexes and swanky malls but you will not get toilets for the disabled at railway stations, bus stops and other public places.

Cities have been built without thinking about how social, economic and physical barriers impact the lives of the disabled population. These social exclusions mean fewer opportunities for them. There is a need for them to be represented at meetings deciding policies and planning of cities. The initiative will surely enable us to think from their perspective and requirements. Cities need to rethink their planning pattern.

The new modes of transport like metro systems are designing their platforms to provide access to differently-abled. Such learning and a study on the experiences of disabled people while travelling in metro rail and other modes should be taken into account while planning of a public transit system elsewhere. Such initiatives would help in building more inclusive cities.

Disability-Inclusive and Accessible Urban Development Network with support from Changepeople.org published an illustrative charter to help cities become inclusive. Some of the points highlighted are; Allow people to move around the way they want to e.g. walking, biking, and wheelchairs; Reduce the use of cars and promote public transport; Design cities with all users in mind – all ages and abilities; Provide houses close to everyday destinations e.g. shops, schools, and workplaces; Provide public spaces and facilities that are safe and accessible to users of all ages and abilities e.g. libraries and sports centres; Make sure older and new buildings are made accessible and easy to evacuate in the event of an emergency; Make sure the planning process engages a wide

## Salient features of Rights of Persons with Disabilities Bill - 2016

The Lok Sabha passed “The Rights of Persons with Disabilities Bill - 2016” on December 16, 2017. The Bill replaced the existing PwD Act, 1995, which was enacted 21 years back. According to the government, the New Act brought our law in line with the United National Convention on the Rights of Persons with Disabilities (UNCRPD), to which India is a signatory. This will fulfill the obligations on the part of India in terms of UNCRPD. Further, the new law will not only enhance the Rights and Entitlements of Divyangjan but also provide effective mechanism for ensuring their empowerment and true inclusion into the Society in a satisfactory manner.

- ◆ Disability has been defined based on an evolving and dynamic concept. The types of disabilities have been increased from existing 7 to 21 and the Central Government will have the power to add more types of disabilities.
- ◆ Speech and Language Disability and Specific Learning Disability have been added for the first time. Acid Attack Victims have been included. Dwarfism, muscular dystrophy have been indicated as separate class of specified disability. The New categories of disabilities also included three blood disorders, Thalassemia, Hemophilia and Sickle Cell disease.
- ◆ Responsibility has been cast upon the appropriate governments to take effective measures to ensure that the persons with disabilities enjoy their rights equally with others.
- ◆ For strengthening the Prime Minister’s Accessible India Campaign, stress has been given to ensure accessibility in public buildings (both Government and private) in a prescribed time-frame.
- ◆ National and State Fund will be created to provide financial support to the persons with disabilities. The existing National Fund for Persons with Disabilities and the Trust Fund for Empowerment of Persons with Disabilities will be subsumed with the National Fund.

Source: PIB

range of people across generations, age, ethnicity, gender and disability; Provide information in multiple, easily accessible formats and languages. Cities need to go back and check how they perform on these criteria.

The United Nations General Assembly adopted its Convention on the Rights of Persons with Disabilities on December 13, 2006. India is a signatory to the Convention that was ratified on October 1, 2007.

- ◆ respect for inherent dignity, individual autonomy including the freedom to make one's own choices, and independence of persons;
- ◆ non-discrimination;
- ◆ full and effective participation and inclusion in society;
- ◆ respect for difference and acceptance of persons with disabilities as part of human diversity and humanity;
- ◆ equality of opportunity;
- ◆ accessibility;
- ◆ equality between men and women;
- ◆ respect for the evolving capacities of children with disabilities and respect for the right of children with disabilities to preserve their identities.

India has also introduced the Rights of Persons with Disabilities Act, 2016 under which the rights and entitlements of the disabled population have been underlined. Responsibility has been cast upon the appropriate governments to take effective measures to ensure that the persons with disabilities enjoy their rights equally with others. Most of the local governments have not been able to do so. Only the introduction of an act will do no good unless strict compliance is ensured.

## Universal Design

Singapore may not yet be known as the best city for the differently-abled population but the city has started working to become inclusive for all by implementing 'Universal Design' in its built environment. Studies suggest that by 2030, 20 per cent of Singapore's population will be over 60 and to cater to the needs of the ageing population, the city has to make its built

environment accessible to all including senior citizens and specially-abled.

The Building Construction Authority has incorporated the concept of universal design, or "design for all," into its mission to address the needs of people of all ages and abilities. With this goal, a key challenge was upgrading the large existing stock of buildings built before the 1990 Accessibility Code came into force. There was also a need to go beyond providing barrier-free accessibility within buildings and ensure that the surroundings of buildings are similarly barrier-free.

What is Universal Design? According to the Centre for Excellence in Universal Design (CEUD) of Ireland, which was established by the country's National Disability Authority (NDA) in January 2007 under the Disability Act 2005, Universal Design places human diversity at the heart of the design process so that buildings and environments can be designed to meet the needs of all users. It, therefore, covers all persons regardless of their age or size and those who have any particular physical, sensory, mental health or intellectual ability or disability. It is about achieving good design so that people can access, use, and understand the environment to the greatest extent and in the most independent and natural manner possible, without the need for adaptations or specialized solutions.

In India, the government is initiating several new development plans and this is a right opportunity to make sure every new construction follows the principles of Universal Design or Barrier-free Design components for buildings, government offices, playgrounds, academic institutions, hospitals, recreational areas, public toilets, shopping complexes, etc.

## Innovation for accessibility

Breda, a city in the Netherlands, won the 2019 Access City Award for continuously making improvements to make life easier for people with disabilities. This is not just the victory of a city authority but also of its people who have helped it make the city accessible

to all. In a news report published in the British newspaper The Guardian about the accessibility in Breda City, Karel Dollekens, a civil servant working on accessibility in Breda, says he believes a willingness to collaborate is what won the award. "We have a wide network of university professionals, city staff and disabled people working together," he says. "Sometimes we have heart-to-hearts, sometimes we get angry about the reality of projects and the limitations we face, but the conversation always continues. The network has now become a movement." In the same article, he says, "People aren't disabled, the environment they live in is."

The local authority has focused on various components of the built environment to improve access for the disabled population. The local authority has visited public facilities, hotels and restaurants to check if they have adequate accessibility for all. Online research on accessibility for all in Breda shows that the city council also made their website fully accessible for all, including those with sensory impairments; accessibility improvements were made to another 25 websites that aid residents and tourists. Mastbosch, Breda's forest, is fully wheelchair-accessible, and every two years the city hosts the Para Games, a large European sporting event for disabled people.

Social groups in the city along with local governments are now improving digital communication and resources to include those with sensory and learning impairments. According to the reports, the city council is introducing easy-read regulations for all documents and, if an organization wishes to run an event in the city, it now receives an accessibility checklist that must be complied with. The example of Breda, the small town with a population of a mere 200,000, is an inspiration for many cities in India and elsewhere. Our cities not only need to focus on bringing changes in policy, built environment and design but also attitudinal change in society where people are treated with dignity and get equal opportunity to grow and prosper. ■

# Every nation needs to address 'CLIMATE URGENCY'

Inspired by Swedish young girl Greta Thunberg (16), youngsters around the globe are campaigning and demanding their governments address the climate crisis. We cannot delay our actions further. We need to act now...



**Ranjit S Chavan**  
President, AIILSG

**G**reta Thunberg has been named the Person of The Year by the Time magazine for 2019. This award is given to the most influential person, group, movement or idea of the previous 12 months. She has gained international attention for starting a global movement 'School Strike for Climate' in August last year. She was a lone protestor a few months ago but her intense and consistent advocacy for addressing climate change issues has inspired millions of school and college-going students in more than 150 countries to demand action from their governments on climate change.

Since the last 16 months, she spent her days camping in front of the Swedish Parliament, protested at the World Economic Forum, addressed heads of state at the United Nations in September this year, met with the Pope, and sparred with the President of the United States of America (USA). Her campaigning inspired four million people to join the global climate strike on September 20, 2019. According to news reports, it was the largest climate demonstration in human history. The issue of climate change is complex and needs attention not just from one government but from everyone around the world. Greta has no magical solution to the problem but she has brought about an attitudinal shift in looking at the issue. She represents the coming generation that is asking for our sincere

efforts to save the environment. She has also gained prominence because of her direct, to the point, blunt speeches. Her statements may be harsh but she speaks the truth. Her speech at the UN titled 'How Dare You' went viral on the internet. Addressing the world leaders, she said, "You love your children above all else. And yet you are stealing their future in front of their very eyes."

Our coming generation will hold us responsible if we do not act now on the climate crisis. From forest fires and floods to ocean pollution and coastal erosion, people world over are living the impact of climate change every day.

## Science underlines the urgency

The United Nations Environment Programme (UNEP) launched the Emission Gap Report-2019 in the last week of November in Geneva. The report underlined, "The summary findings are bleak. Countries collectively failed to stop the growth in global [greenhouse gas] emissions, meaning that deeper and faster cuts are now required." If the countries do not reduce emission, it is very unlikely that the world will be able to handle the negative impacts of climate change. The report also states that only on the

- THE WMO DECLARED THAT 2019 CONCLUDED A "DECADE OF EXCEPTIONAL HEAT";
- THE UN ENVIRONMENT PROGRAMME'S EMISSIONS GAP REPORT STATED THAT THE WORLD NEEDS TO REDUCE EMISSIONS BY 7.6 PER CENT EVERY YEAR FOR THE NEXT DECADE TO LIMIT GLOBAL WARMING TO 1.5 DEGREES CELSIUS;
- THE NEW UNDP HUMAN DEVELOPMENT REPORT ON INEQUALITY, LAUNCHED RECENTLY, SETS OUT THAT CLIMATE CHANGE PRESENTS A SEISMIC SHIFT THAT, UNCHECKED, COULD TRIGGER A 'NEW GREAT DIVERGENCE' IN SOCIETY OF THE KIND NOT SEEN SINCE THE INDUSTRIAL REVOLUTION





*Greta Thunberg, 16 year old Climate Change Activist, addressing the gathering on Climate Change*

current climate commitments of the Paris Agreement, temperatures can be expected to rise 3.2°C this century. Temperatures have already increased 1.1°C, leaving families, homes and communities devastated. Scientists agree that to get on track to limit global temperature rise to 1.5°C, emissions must drop rapidly to 25 gigatons by 2030 but based on today's commitments, emissions are on track to reach 56 Gt CO<sub>2</sub>e by 2030, over twice what they should be. The report further says that collectively, if commitments, policies and action can deliver a 7.6% emissions reduction every year between 2020 and 2030, we can limit global warming to 1.5°C. It is important to note that 10 years ago if countries had acted on this science, governments would have needed to reduce emissions by 3.3% each year.

All of us have witnessed that climate change-induced disasters are affecting human lives. The World Meteorological Organization (WMO), 2019 concluded a “decade of exceptional heat”. Even many European countries faced heat waves this year. In July 2019, all-time

heat records were broken in Germany, Belgium, France and the Netherlands. Wildfires raged in the Arctic, and Greenland's ice sheet melted at a record rate. Globally, July was the hottest month ever recorded.

This is evident now that we cannot accept the status quo else we will be doing irreversible damage to the future of our coming generations. Global warming is not just melting glaciers and affecting polar bear but also its impact can be seen in our daily lives. Our food production is also getting affected as we are facing higher temperatures, increased rain, floods and droughts. Studies have suggested that every year we continue to emit Green House Gases into the atmosphere and fail to curb emissions as targeted in the Paris Agreement, the Earth is inching closer to a point of no return. This will alter life on earth and cannot be undone.

### **Time for action**

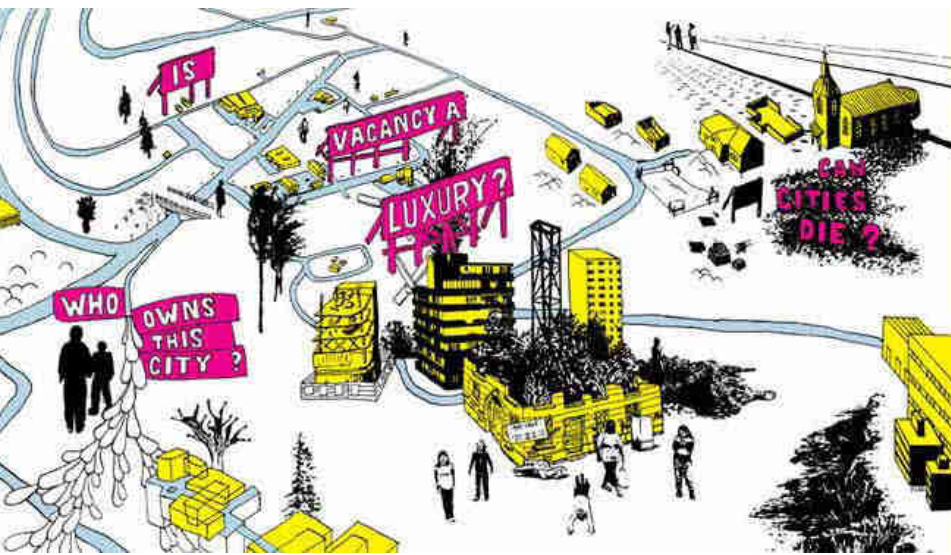
UN Climate talks in Madrid remained focused on the issue of the carbon market and its rules. If it passes through hurdles, it will enable major

carbon emitter countries to buy carbon credits from the countries that haven't exceeded their emission targets under the Paris Agreement. India is on track vis-à-vis its commitment by introducing a host of schemes for promoting renewable energy and meeting its target of generating renewable energy through solar, wind, biogas and other renewable sources. Indian cities are transforming themselves into smart cities and this is a great opportunity for them to expedite their efforts to build a sustainable environment. Many of these initiatives are aligned to reduce carbon emissions but there is still a need to capacitate officials for better implementation and monitoring at ground level.

I'm hopeful that culmination of the decade and our learning in this period will guide us to a new path of development. All stakeholders-nations, citizens, cities and everyone-will act responsibly because the issues such as climate change know no boundaries. I'm sure that no challenge is too big if each one of us decides to act together and coherently. ■

# SHRINKING CITIES

Rapid and relentless urbanisation has been a key pillar of human progress and development during the last several decades. But, as we go into the next decade, can all cities participate and draw benefits of the phenomenon equitably? While the past has seen cities growing both in terms of population and spread, will the trend continue? Will the 'Leader' cities of today continue to grow and prosper? Or will new cities take up the leadership?



**V Vijaykumar**  
Sr Advisor, AIILSG

**D**ifficult to say, it seems. According to a report by McKinsey Global Institute, 17 percent of large cities in the developing world are likely to see declining populations between 2015 and 2025. For the world as a whole, 8 percent of cities will experience decline. In the past, population growth has largely driven economic prosperity in large cities. 58 percent of the GDP growth among large cities

between 2000 and 2012 happened due to population growth according to the McKinsey report *Urban World: Meeting the demographic challenges*. The remaining 42 percent was caused by rising per capita income.

While this trend of declining populations in cities is likely to remain pronounced in the case of the developed regions of the world, it may affect developing region cities only in later years. In the meanwhile, these cities will continue to experience growth. Take for example the case of Delhi and Tokyo. As per UN's *World Cities in 2018* report, between 2018 and 2030, the population of Delhi is expected to increase by over 10 million while that of Tokyo would go down by about 0.9 million. The two cities would interchange places at the top of the world's most populated cities. Another Japanese city Osaka,

now in the top ten will drop off the list in 2030 with its population dropping by about 0.6 million. The same UN report also states that world urbanisation is projected to go up from 55.3 % in 2018 to 60 % in 2030. So while the urban population as a whole is growing and set to grow further, the pace of growth has been and is likely to vary across regions. Between 2000 and 2018, the population of cities with population 500,000 or more grew at 2.4%. However 36 of these cities grew more than twice as fast, at average 6%. Of these 36 cities, 35 were in Asia and Africa (28 and 7 respectively) and only one in North America. The Report notes that a great majority of the world's cities have fewer than 5 million inhabitants. 467 cities between 1 and 5 million in 2018 will grow to 597 cities by 2030. 598 cities with between 0.5 and 1 million in 2018 will grow to 710 in 2030.

Interestingly the report noted that between 2000 and 2018, 52 cities saw declining populations. Most of these are in Europe. Therefore while urbanisation across the globe will keep marching ahead, cities of some regions (notably Europe) are already seeing declining populations.

## Why cities could shrink?

Among the foremost reasons could be the decline in the overall population itself. This could be the result of rapidly falling fertility rates below replacement level of 2.1 in the more developed countries. Fertility rates in South Korea are now 1.17 and in Japan 1.44. If current trends continue, by some projections, Japan's population is expected to decline from 126.5 million at present to 88 million in 2065, 51 million by 2115, and to just 500 by the year 3000! A frightening prospect indeed! But the issue of falling fertility rates is not a stray occurrence as in the above cases. In India too there is evidence of slowing population growth. As per Census 2011, 11 states had fertility rates higher than the replacement rate of 2.1. In two years from now,

DECLINING ECONOMIC ACTIVITY CAN ALSO BE THE RESULT OF POPULATION REDUCTION. AS FERTILITY RATES FALL, AGEING OF THE POPULATION SETS IN. IN OTHER WORDS, THERE ARE MORE AND MORE OF OLDER PEOPLE BEYOND WORKING AGE AND FEWER PEOPLE IN THE WORK FORCE AND LIMITED TALENT. ADDITIONALLY THE LARGE NUMBER OF OLDER PEOPLE CREATES A LARGER 'DEPENDENT' POPULATION AND SMALLER 'SUPPORTER' POPULATION

## What happens when cities shrink?

There could be several more reasons for shrinking cities.

Among serious fallouts of shrinking cities is declining economic activity. Such economic contraction can be both the cause and effect of declining populations in cities. As we saw earlier, limiting certain economic activity due to environmental considerations or structural changes can drive out populations engaged in this and related activities. Like in the case of the jute (Kolkata) or textile (Mumbai) industries.

Therefore, declining economic activity can be the cause of population reduction. Declining economic activity can also be the result of population reduction. As fertility rates fall, ageing of the population sets in. In other words, there are more and more of older people beyond working age and fewer people in the work force and limited talent. Additionally the large number of older people creates a larger 'dependent' population and smaller 'supporter' population. All these can limit the growth of economic activity, undermine entrepreneurship, suppress incomes, and become a drag on prosperity.

Another outcome is potential under-utilization of assets such as housing, public buildings and infrastructure assets such as transport (metro, BRTS) which in turn can affect the viability of these assets. This aspect can become pronounced when it damages the prospects of commercial assets such as hotels, restaurants, and malls.

### We still have time

As we have seen, this phenomenon of shrinking cities may be relevant for planners in the more developed economies as they craft cities for the future. For us in Asia as also in Africa, we are likely to see some more years of growing cities, not declining ones. However our largest cities may not grow at the same pace and intensity as in the past. The growth of cities in our case could be tempered by the emergence of larger numbers of small and mid-sized cities and towns. As the metropolises and larger cities struggle to create new infrastructure and service delivery capabilities, populations may prefer smaller cities and towns in their search for better livability. It appears in any case, that in times to come, Indian cities will engage in a race to attract population including working age talent in order to enrich life in their cities; not view growing in-migration as a burden, even a disaster that strains the city.

only Bihar will have a rate higher than 2.1. (An interesting insight into this number is the fact that 2.1 is a global figure. For India it could be higher because we have a lower sex ratio (women per 1000 males) than the world average). As fertility rates drop throughout the country to below replacement level, population will grow only due to steady increase in life expectancy. As per the latest Economic Survey, population growth will be less than 1% p.a. during 2021-31 and under 0.5% during 2031-41. In other words slowing population growth in cities could be the result of slowing population growth of the country as a whole. In several countries, in-migration to cities has slowed down too and even reversed.

Among other reasons could be economic changes. Restricted manufacturing due to pollution concerns (textile printing and dyeing, for example) may lead to closing down of many units thus reducing the labour force by pushing workers out in search of livelihoods. It could adversely impact the ancillary units, transportation business and supporting ecosystem. These would undermine livelihoods and cause out-migration. Sometimes structural changes in industry like the decline of the jute industry in India may cause movement of labour force.

Often, existing cities may become unviable or unsuitable for businesses to grow further. Take the software industry in Bengaluru for example. After several decades of fantastic growth of the industry and the city, businesses could be looking for newer, smaller cities due to limitations of infrastructure (road congestion, water supply) and cost of living in Bengaluru.

In other cases, natural disasters also bring about population declines. The UN Report *The World's Cities in 2018* quotes the examples of New Orleans, United States (due to Hurricane Katrina in 2005) and Sendai, Japan (due to earthquake and tsunami of 2011) as examples. ■



# Is toxic Yamuna beyond revival?

Once the lifeline of the National Capital – Yamuna is today at a stage where efforts are being made to revive the river. Release of unchecked chemical effluents, waste dumping, release of untreated sewage, etc. have been major reasons behind the present state of the river. Toxicity levels have grown to an extent that the river witnesses seasonal foaming, especially during festivals. To know more on the issue team Urban Update spoke to Ravi Agarwal, Co-Director and Founder of Toxics Link

**Akshit Pushkarna**  
Editorial Assistant

**Adarsh Som**  
Senior Reporter

**T**he status of the water content of the Yamuna, which was once the primary water source for Delhi, has delved down to such disastrous proportions that a 3 to 4-foot tall, thick foam frothed near KalindiKunj for a chunk of the month of November this year. This alarming scene is only indicative of the dire condition of the river yet, this is not the first time such a scene has been observed. “The froth generation in the river occurs every year around this time. It arises due to the presence of phosphate and dissolved detergents. When interacting with air, these pollutants precipitate such foam. It has been noticed by the public this time due to the magnitude of the toxic foam that arose this year, but I have observed such an occurrence even 15 years back,” said Ravi Agarwal, Co-Director and Founder of Toxics Link, an environmental NGO dedicated to bring toxics-related information into the public domain. In a discussion with us, he told that even though the froth had brought out the public attention to the KalindiKunj stretch of the river, the problem’s extent is far greater than that. “The foam is one particular kind of toxicity. High toxic levels of the river are not area specific but is an omnipresent problem in the Delhi portion of the river,” observed Agarwal.

As the toxic foaming in Yamuna

and severe air pollution in Delhi were concurrent, it is not unfair to speculate that there was some correlation between the two. Speaking from a chemical perspective, Ravi Agarwal pointed out that there was no hard evidence of this. “However, it is possible that the increase in some particular pollutant might have been the catalyst in the increase of the foam this year,” he added.

According to their research the major issue of the growing toxic levels of the river lie elsewhere. The sewage treatment and discharge system in Delhi is not efficient in dealing with the water waste generated by the city.

“Firstly, the STPs are not operating at their full capacity. They have maintenance issues, some of them are even defunct. Secondly, not all water that flows in the river is from the drainages. Waste water without any proper prior treatment directly flows in the river too. Another thing is that the STPs are not designed to effectively treat the heavily contaminated sewage of the industries. They are basically designed to remove sludge flowing with the water. Heavy metals get dissolved in the water and hence other measures of segregation must be in place,” he added. Here, he made it apparent that citizens’ negligence



*Foaming in the Yamuna due to high levels of toxicity*

is making the government machinery weak. "The Sewage Treatment Plants have certain parameters under which they could treat the water. If the plants operate on sewage that does not fit their specification, they would incur mechanism losses and get defunct shortly after. The point, however, is why is such heavily contaminated water even entering the STPs? See, in principle, the STPs are supposed to act as a tertiary treatment for sewerage in a three-step treatment plan. Where Delhi lacks is the primary and secondary steps of the sewage treatment. To properly treat our waste water before it enters the Yamuna we need to enforce a strong, decentralized model

of treatment where the role of the citizens (who generate the untreatable water) comes into play. Installation of individual effluent treatment plants to pre-treat their sewage before further pushing it to the STPs is a must."

Idol immersion is another major issue. Despite the NGT order which banned idol immersion in Yamuna, the authorities were not able to keep compliance with the order. Substances used in the making of the idols harm the river and hence better preemptive enforcement measures which discourage the people from the practice should have been there. People should come up with and follow alternatives to the mass flowing of idols in the river as

the negligence to the river's health will ultimately deter our health too.

Toxins link conducted a multi season check of the pollutants in the river's sand bed. During monsoon the toxins flush out as a result of an increased current. But during the non-monsoon seasons, most of the pollutants that sediment at the river bed are heavy metals which come mostly from pesticide drainage. This is deposited due to unchecked irrigation water being flown into the river. Along with industrial and domestic sewage, irrigation waste water is another polluting factor for the river. Regulation of the irrigation is also somewhat ignored to an extent, but its effects are also detrimental to the river.

The laid back approach towards the river has deteriorated its condition to such an extent that it has become incompetent to sustain aquatic life. The million-dollar question, which researches have been trying to find answer for many years, is whether the river could be revived or not. We asked the expert about what the approach to accomplish this should be. "In order to revive the river, there are two things that are needed, technically. Firstly, the sewage that drains in to the Yamuna should be adequately treated. Secondly, adequate flow must be ensured. We are failing in both these departments. During monsoon the current of the river is enough to flush out majority of the toxins from the river's Delhi stretch. But post monsoon the river water gets sluggish and we are left to deal with the toxins, which turns out to be too much for us to handle."

In conclusion, it is important that the industries, restaurants, factories and other sources generating waste must install primary waste treatment facility and secondary treatment facility to ensure the waste flowing can be treated by the STPs effectively.

Water is a vital resource and managing it in a sustainable fashion is one of our major responsibilities. Therefore, it is high time that we enforce a better, more citizen inclusive sewage management system to save the dying river. ■

IN ORDER TO REVIVE THE RIVER, THERE ARE TWO THINGS THAT ARE NEEDED, TECHNICALLY. FIRSTLY, THE SEWAGE THAT DRAINS IN TO THE YAMUNA SHOULD BE ADEQUATELY TREATED. SECONDLY, ADEQUATE FLOW MUST BE ENSURED. WE ARE FAILING IN BOTH THESE DEPARTMENTS



# Just blue sky cannot be THE ROOF

Almost one per cent of urban population in India is homeless. As winter has already arrived, what are governments at all levels doing to provide them adequate facilities in cities



**Tikender Singh Panwar**  
Former Deputy Mayor, Shimla

October 10 marked World Homelessness day. This is the day to reaffirm the commitment to build consistent struggles against growing homelessness in the world. Various social groups and civil society organisations are championing the cause of the homeless and have even given a call to spend 24 hours with the homeless on the streets or wherever they stay. We shall have to wait for the outcome of such a radical protest demonstration spread across various cities in India.

Homelessness is more than mere rooflessness, Homelessness is a symptom of grave economic, social and political disorder, writes Indu Prakash in his book "City Makers". The disorder in all the three sectors has in fact worsened in the period of last three decades in India. The cities have been turned into enterprises and the mantra to run these cities has been akin to running a business unit.

Profit and burdening the people with a number of user charges is the direction of city governance. The poor especially the most marginalised groups have been the worst hit. The homeless did not even figure in the city scape. It was only after the intervention of the Supreme Court that the homeless were targeted and night shelters were constructed.

One of the reasons for growing homelessness is the way economic vulnerability has increased in the cities. The access to material uses in the cities has shrunk over the years. Since housing was privatised homelessness was bound to increase. Another feature of the last three decades of development is large scale migration from the rural to urban areas. This is predominantly distress migration. The city development has been inversed and the city plan transformed more for the middle classes and the rich.

In any given city the standard of housing should be that 25 per cent of the houses must come from public housing domain. However, in Indian cities the public housing which was limited to a fairly small extent fell from six per cent to just three per cent. Who will construct houses for the rest 97 per cent. The obvious answer is the market forces. But as we know the market forces work on the principle of profit. And, the poor migrating to the cities do not have access to such housing schemes. The resultant is large scale spike in the growth of slums and homelessness.

According to the 2011 census there are over 20 lakh homeless in India. However, experts point out that of the total urban population nearly one per cent are homeless. These homeless live on pavements, across the roads or at many other places.

## Who are these homeless?

There is a general misnomer that the homeless are beggars. This is not true. A study conducted by the IGSSS (Indo Global Social Service Society) in Delhi slums showed that 5 per cent of the homeless are workers and under 40 years of age implying that most of the homeless in the city migrate for work and are compelled to leave the city once age related conditions develop post 40 years of age. The second important highlight of the study is that some of the homeless are staying for more than 10 years and hence it is not a transitory phase. Majority of the homeless tend to live in groups and form communities in the same area. The study also brought in the linkage between growing informality in the cities and correspondingly growing homelessness. A majority of the homeless workers are daily wage labourers (male) and domestic workers (female). Interestingly, in one of the homeless shelters where I had the opportunity to visit it was intriguing to note that a majority of them worked part time workers in marriage ceremonies as waiters and helpers. As pointed out, it was at the intervention of the Supreme Court that the night shelters for the homeless were got constructed. Except in Delhi where the DUSIB (Delhi Urban Shelter Improvement Board) was given the charge, in other cities the spaces for night shelter have been occupied for some other purpose of the city municipality on one pretext or the other. In Delhi the DUSIB have constructed and run these shelters which are better than other shelters in the country. However, there is a pressing demand that conditions must be improved and the capacity of these shelters must be increased.





Representative image

**IT IS SURPRISING THAT A LARGE CITY LIKE DELHI DOES NOT EVEN HAVE A SINGLE LABOUR HOSTEL. WHAT IS REQUIRED IS TO CONSTRUCT LARGE NUMBER OF LABOUR HOSTELS TO ENSURE THAT THE MIGRANT WORKERS ENTERING THE CITIES ARE ACCOMMODATED IN THESE HOSTELS. LESSONS MUST BE LEARNT FROM THE LABOUR HOSTELS CONSTRUCTED MORE THAN 100 YEARS AGO IN A SMALL TOWN- SHIMLA, WHICH WAS THEN THE SUMMER CAPITAL OF COLONIAL INDIA**

### **Construct labour hostels**

It is surprising that a large city like Delhi does not even have a single labour hostel. What is required is to construct large number of labour hostels to ensure that the migrant workers entering the cities are accommodated in these hostels.

Lessons must be learnt from the labour hostels constructed more than 100 years ago in a small town- Shimla, which was then the summer capital of colonial India. These labour hostels still function and accommodate a large number of migrant workers. There are even family labour hostels.

These labour hostels are run by the city municipality with a nominal fee of not more than Rs 30 a month.

Another vibrant example is the labour hostels constructed by the Kerala state government in some of its cities. These labour hostels are not only modern but even cater to some of the minimum needs of the migrant workers like food and bathing. It is believed that the Delhi government is contemplating a move to copy the Kerala model of labour hostels which would definitely be very encouraging.

On this World Homelessness Day, let us resolve that the struggle to provide homes must continue along with struggle for decent living, which in fact are intricately linked. ■

*[The views expressed are the author's own. They do not purport to reflect the views of Urban Update.]*

# Public Transport Planning for Small, Medium and Large Cities



Apurva Sethia | Simran Purswani | Sukanksha Agrawal  
TERI SAS Scholars

**B**angkok Declaration 2020, which was released during the Fifth Regional EST Forum in 2010 at Bangkok, Thailand, helped in realising a promising decade with Avoid-Shift-Improve strategies to achieve safe, secure, quick, reliable, affordable, efficient, people-centric and environment friendly transport. As stated in SDG 11.2, mobility and transport are crucial for the achievement of sustainable cities and communities. There is a need to encourage public transport as it has low carbon footprint, reduces emissions and travel time, provides alternate mobility options. It also helps in integrating the sub-urban areas that support population growth and hence provides accessibility to all the sections of the society. A report on mobility and SDGs by UCLG says, it enables the provision of efficient multi-modal public transport systems that are well integrated, safe, affordable, accessible and inclusive to address rapidly growing demand for mobility in cities.

Impelled by several global mega trends, public transport is witnessing transformational changes across the world. In the past decade, Asia has witnessed deep penetration of metro rail, bus-based public transport system, ride hailing services, and many other innovations. Although there is more focus on adopting innovative solutions to meet the growing mobility needs, there is a surge in transport and travel related challenges. This includes increasing number of motor vehicles, road related fatalities and travel distances propelled by increase in population and the economy.

A report by KPMG 'Reimagining Public Transport in India' says, 42 per cent of the urban population lives in 53 cities (with populations of more than 1 million) while the balance 58 per cent lives in 7,88,204 urban centres with population ranging from 50,000 to 1 million people. Most of these (7,882) smaller urban centres are dependent on intermediate public transport (IPT) modes to satisfy their mobility needs, viz. shared auto rickshaw, jeeps, vans.

## Challenges faced by Indian Cities

It has been estimated that in India approximately 88 million trips (70.04 million by buses, 18.04 million by railways and 0.2305 million by air) are made on public transport on a daily basis which translates to 6-9 per cent of total trips being catered by public transport as against 30-35 per cent in most countries worldwide. The mobility concerns and the state of public transport in India was discussed during the recently held pre event of EST Forum held in Delhi recently.

Samir Sharma, Head – Transport Planning, Delhi Integrated Multi-Modal Transit System Ltd. (DIMTS), Delhi, underlines that 55 lakh people made trips by bus-based system in 2017-18 and this is expected to rise to 165 lakh people by 2041-42. He even pointed out various challenges, which need to be addressed to make these mass urban transportation systems work effectively and efficiently. He stated that "With 25 per cent of deviation from time-table only 23 per cent of routes are found to be operating with some reliability, due to which there is high headway variation resulting in



## SOME PUBLIC TRANSIT SYSTEMS LIKE BRTS, LRTS, MONORAIL, TROLLEY BUS, HEAVY RAIL, METRO (LIGHT) AND METRO NEO, ALL HAVE DIFFERENT SPECIFICATIONS AND REQUIREMENTS FOR IMPLEMENTATION OF PROJECT. THE PROJECT SELECTION SHOULD BE BASED ON THE EXISTING INFRASTRUCTURE OF THE CITY AND TRAVEL DEMAND

overcrowding leading to dissatisfaction among passengers”.

RS Minhas, Deputy Chief GM, Delhi Transport Corporation (DTC), stated that 3781 buses with a daily ridership of 31.01 lakhs are controlled by DTC. He said, “DTC was the backbone for transportation in Delhi since 1948, but fleet has now reduced to 3781 buses from 7000 buses due to problems associated with procurement of the buses.” Secondly, due to lack of planning and integration there is low load factor, i.e. some areas experience overcrowding whereas some buses run empty. Thirdly, due to complex route structure, high overlapping along with long routes again make the buses to run empty. The absence of first mile and last mile connectivity, the institutional gaps and lack of integrated ticketing system are some additional issues at the users’ end depriving them of consistent and seamless experience.

Rail based public transport infrastructure such as metro rail transport system is proposed in all large and medium size cities, irrespective of travel demand. Professor Sanjay Gupta, HOD, Department of Transport Planning, SPA Delhi said, “Every citizen

wants a metro system, whether the city needs the system or not.” The rail-based system is costly and is beyond the financial capacity of the local bodies. Metro rail is preferred for long distance trips. Since, many Indian cities have majority of the population travelling shorter distances, the investments in metro-based system in such cities are unnecessary. As an example, Lucknow metro is running in losses due to low ridership and lack of system integration with the existing modes of transport.

### Preparatory measures to improve public transport

The vision of Master Plan Delhi (MPD) 2041 as per Sarika Chakravarty, Urban Transport expert, NIUA, the preliminary objective is to draft various policies for electric vehicle, parking, and walkability policy providing the scale of walkability and Transit Oriented Development (TOD) policy where integration of land use and transportation system will be considered with node-based approach. The vision will enable shift towards use of sustainable modes of transport, providing alternative choice for travel demand for all the sections of the society, having unified institutional body and strategies for making high risk unsafe areas safe for movement of vulnerable population like pedestrians, cyclists, children, and elderly.

Some public transit systems like Bus Rapid Transit System (BRTS), Light Rail Transit System (LRTS), Monorail, Trolley Bus, Heavy Rail, Metro (light) and Metro Neo, all have different specifications and requirements for implementation of project. The project selection should be based on the city’s existing infrastructure and travel demand. This can be identified by calculating average trip length, per capita trip rate, average ridership, modal share of existing public transport, population, and the urban form of the city.

To enhance public transport there is a need to revise the existing mass transit system identification guidelines that shall include rational system development and funding mechanism.

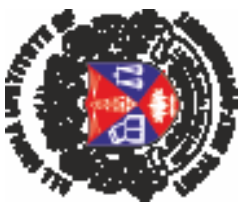
Last mile connectivity is an essential component to enhance the utility of public transport system. Integrated multimodal transport networks need to be established that shall include unified institutional system for the governance of all types of public transport systems and integrated ticketing systems. Specific policies are required to discourage private vehicle ownership. Since, public transport system is a public goods and service, innovative non-fare box revenue resources need to be established.

The bus system as public transport can be improved through electronic ticket data and balancing the fleet through benchmark. The frequency can be enhanced through route extension and curtailment where transfers are heavy. Along with network-based bus hierarchy system that is direction oriented, dynamic timetable could be prepared by considering the actual speed of bus rather than average speed through GPS data as suggested by Sharma from DIMTS.

### Achieving 2030 Agenda

Agenda 2030 is a roadmap to achieve common good but is also a call to action. Despite the issues of inadequate integration, multiplicity of departments in planning, managing and implementing, which leads to discouraged use of public transport and financial planning at the same time, BI Singhal, Former Director General, Institute of Urban Transport (IUT) mentioned six key points to enhance the public transport effectively. The city wide planning of public transport with first and last mile connectivity, seamless connection of all modes, route interchanging with minimal time penalty, financial plan as part of project plan and public image of bus service shall be improved to achieve the idea of sustainable urban transport. The role of integration for smart, resilient and sustainable cities can only be accomplished holistically if planning, policy, design, finance, regulatory framework and institutionalisation is focused on being system oriented rather than infrastructure oriented. ■





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### SCAN WEBSITE



# Make citizens smart first



**Ashok Wankhade**  
Managing Editor

Despite the popularity that the smart city concept gained through the years, one thing where the 'smartness' is seriously lacking is in participation of citizens. Authorities have always preferred technological approach rather than citizen-centric approach while developing urban infra. The very essence of urban development is individual action; therefore if citizens are made aware of their responsibility towards their city then the city can actually be made smart

**T**he new development plans including implementation of the so called 'smart initiatives' are being carried out for selected 100 cities in India. The development in technology ranging from sensors to big data to artificial intelligence and more has made this smart city, an ambitious concept, a reality. But, we need to understand if the growing tech, Information and Communication Technology (ICT) and Internet of Things (IoT) is actually helping the cause of making cities smarter. Citizens are an integral and the most significant part of a city. And, it is quite evident that amid all the hype and enthusiasm of developing smart cities, it is forgotten that citizens also need to get smarter to achieve 'Smart City' in its true sense.

'Smartness' for citizens can be referred to in terms of behavioral changes. Smartest cities can be made using cutting-edge tech but what will still be needed is the people's outreach. And to make citizens truly smart, awareness campaigns can play a crucial role. Although the civic authorities are investing in smart initiatives, they also need to invest in sensitizing citizens on efficient usage of the smart services. A simple example could be the installation of smart meters. But, in order to reduce energy consumption and efficiently use electricity, mere installation of smart meters will not work. Energy efficient lifestyles must be propagated to the citizens by the authorities beforehand.

Hence, it will not be wrong to advocate that citizens' participation and awareness can be beneficial for making a city smarter. In order to make citizens more responsible towards the city, they need to be made more aware about the entire concept of building smart cities. Citizen participation must be ensured in every aspect, from sanitation to safety measures, from

## 'SMARTNESS' FOR CITIZENS CAN BE REFERRED TO IN TERMS OF BEHAVIORAL CHANGES. SMARTEST CITIES CAN BE MADE USING CUTTING-EDGE TECH BUT WHAT WILL STILL BE NEEDED IS THE PEOPLE'S OUTREACH

integrated transport system to sustainable use of resources. Involvement of citizens or taking citizen-centric approach is a sign of better governance.

### Amsterdam: A lighthouse example

The authorities in Amsterdam has devised a 'smart citizen kit' for better involvement and participation of its citizens. One of the salient features of the project is that the people are involved in the measurement of air quality levels. The kit enables people to not only measure the air quality but also humidity, noise, pollution, temperature, carbon dioxide levels and density of oxides of nitrogen. Such a move involves every citizen in Amsterdam to know the ground reality about their environment and pollution level. This also helps them to relate with steps the government takes against pollution whenever needed.

### Need of the hour

In the Indian scenario, smart cities concept has always been an infrastructural and technologically driven initiative. One of the major reasons why the city governance in India is not at a desired level is the lack of citizen participation. The need of the hour is to make people aware about the ground reality of urban issues that a city faces and judicious usage of urban resources like electricity, water, roads, education, and more. ■