

Urban Update

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OVERPOPULATED!



KNOWLEDGE LAB FOR LOCAL GOVERNANCE



ALL INDIA INSTITUTE OF LOCAL SELF-GOVERNMENT

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UrbanUpdate

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Cities in festive times

The air in our cities is full of celebration and gaiety. Yes, the festival season is already here and will continue for some months. It is a time everyone – children, families, trade and business - looks forward to. Accompanied with the usual celebrations, it is also time for new purchases – of food, clothing, home appliances, gadgets, automobiles, and so on. And therefore business and trade look to these times with great expectation. It is a time when the rich cultural tapestry and panorama of our country is on display, be it food, or clothing or the arts (dance, drama). So much so that some of the events in cities attract visitors from all over the country and even from overseas.

While these celebrations present a grand spectacle, they have also now become a source of concern and anxiety. These are times of high noise and elevated decibel levels. Loudspeakers playing recorded music, and processions with the beating of drums and lighting of firecrackers are common sources of noise. High noise levels during Indian festivals has resulted in authorities including the courts stepping in to regulate decibel levels and restrict timings of events. The ill-effects of extended, elevated decibel levels on humans and animals is often neglected or underestimated. Exposure to high decibel levels for extended periods at the workplace or other places may result in early-age impairment of hearing, disorders caused by disturbed sleep, annoyance, hypertension and even cardiac diseases. Often, a noisy environment is known to induce aggression and

anti-social behaviour among exposed persons.

These are times for all concerned to exercise caution and restraint. Citizens and participants in festivals need to observe and abide by regulations including respecting silence zones such as hospitals and schools. Local governments and authorities need to put in place appropriate regulations. In addition they could create greater awareness on the ill-effects of noise and thus induce responsible behaviour. Noise is a hazard not just during festive times but all through; it only gets elevated during festivals. City traffic characterised by incivility, disorder, chaos and lawlessness, causes high noise. Speeding vehicles, screeching tyres and indiscriminate honking can be heard everywhere. This festive season let us commit to spread joy and goodwill while creating less noisy and more tranquil cities.

This issue of Urban Update deals with Urban Demography. It makes an attempt to see how responsive our cities are to the needs of a cross section of citizens. How cities all over are working to address the aspirations of different age groups of its residents, citizens of different educational and literacy profiles; the special needs of elders and so on. While to start with, not all cities may be able to meet the needs of all citizen groups, cities cannot be designed for the average citizen either. Cities must work to meet the aspirations of as many groups and then keep improving. We hope to generate more interest and debate on these aspects in our quest towards 'Cities for All'. ■

“ “




The Sustainable Development Goals set by the United Nations are to be achieved by 2030. But, India is set to achieve cleanliness targets 11 years ahead, in 2019 itself. It is a matter of pride for us

” ”

Ram Nath Kovind
President, India

“ “




How can a country progress when close to half of its work-force is constantly pulled down? In most parts of the world, women do not have land rights. Without owning land, they have no access to finance and are thus left behind.

” ”

Ibrahim Thiaw
Executive Secretary, UNCCD

PIN POINT

“ “



Migration linked to desertification, land degradation is not a futuristic issue, it's a reality from Africa to Asia, through South America and the Pacific islands. We can't afford not to take immediate action otherwise the world will face an immense crisis

” ”

Mariam Traore Chazalnoel
Policy Officer, IOM, Environment and Climate Change

“ “



Based on the limited information we have, microplastics in drinking water don't appear to pose a health risk at current levels. But we need to find out more. We also need to stop the rise in plastic pollution worldwide

” ”

Dr Maria Neira
Director, Department of Health, Environment, WHO

BUZZ



Greta Thunberg
Swedish climate activist
@GretaThunberg

Everyone keeps saying climate change is an existential threat, and yet they just carry on like before. I don't understand that, because if the emissions have to stop, then we must stop the emissions. To me that is black or white.



United Nations Environment Programme
@UNEnvironment

The global share of electricity generation accounted for by #renewables reached 12.9%, in 2018, up from 11.6% in 2017. This avoided an estimated 2 billion tonnes of carbon dioxide emissions last year alone.



Dia Mirza
UN Environment
Goodwill Ambassador
@deespeak

If we can improve our management of land and water, we can shave off the worst impacts of climate change. We can build wealth for the poorest and improve livelihoods.



Kent Page
UNICEF Strategic
Communication Advisor
@KentPage

Girls are especially at risk due to limited access to water & sanitation. Clean water and private toilets are some of the things required to keep girls safe, healthy and in school

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36 Making cities work for one and all

SDG 11 is a call for Sustainable Cities and Communities. It calls to make cities and human settlements inclusive, safe, resilient and sustainable. In order to realize this goal and the targets there under, cities are working to become increasingly accessible to wider categories of citizens and thereby move towards greater inclusivity

38 Population isn't a major concern for India's urban story

Overpopulation has been a major issue for India and with the Prime Minister's address, the question is in focus again: Are we on track in resolving the issue? What are the challenges that we are facing presently and might face in the future and are we prepared to tackle them?

40 A Cape Town lesson for Chennai and other Indian cities facing 'Day Zero'

Recently, southern India, especially Chennai witnessed one of its severest water crises in history. But, shockingly no ads, hoardings, on saving water can be observed in the city. It seems as if the panic that grips our cities during summer evaporates from people's minds as soon as monsoon arrives. Such an approach can lead to a 'Day Zero' if stricter steps are not taken to make people water wise



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COVER STORY

30 OVERPOPULATED!

The growing population in cities is filling the towering skyscrapers and sprawling slums. We will not be overhyping if we say our cities are overpopulated. This holds true at least for the developing world. Cities in these countries are full to the brim, and are facing difficulties in keeping pace in providing services and infrastructure facilities to the increasing population. Urban agglomerations are undeniably facing humongous challenges. Congestion, urban poverty, traffic problems, lack of adequate housing, poor sanitation are just some of the resultants of change in urban demography worldwide. Should we be worried? A review of present situation based on urban demographic trends

LEADERSPEAK

32 Cities need to change as demography changes

India is among the few countries where more people are still living in villages than in cities. There are many countries which are 100 per cent urbanised or majority of the population live in cities. Undoubtedly, cities provide immense opportunities to nations for economic growth but there are certain fallouts of unplanned urban growth. This article tries to capture the demography trends in countries around the world and highlights the issues concerning the shift

Equi-City runs multiple campaigns to promote sustainable living

Team Equi-City

Awareness-raising and dissemination of information is critical to create an enabling environment for accountability, promote participatory and inclusive processes for follow-up and review. All people including marginalized and vulnerable groups should be aware and understand the cleaner environment and effective solid waste management practices. Raising public awareness is also essential to foster the political and social change needed to achieve the agenda. Awareness raising campaigns can be defined as organised communication activities which aim to create awareness on particular topics such as health, environment, and education

and bring about behavioural change among the general population and to improve the focus on better outcomes. Messages can be conveyed through many different channels, such as mass media (television, radio), social media, public relations, events, talks, demonstrations, tours and print media but awareness raising campaigns are recognised as the most efficient and effective means of communicating information especially to the general public.

Raising awareness about the city's municipal solid waste (MSW) management activities and the benefits of proper solid waste management can result in an increase in:

- ◆ Use of city waste collection services by the public and private sectors
- ◆ Funding for waste management from local elected officials
- ◆ Adoption and enforcement of local waste management policies by local elected officials
- ◆ Support for local-level activities from national governments

◆ Public participation in organic diversion and recycling programs. Each of these outcomes can contribute to a city's efforts to reduce the impacts of waste management on health, the economy, the environment, and the society.

Awareness raising is a two-way street, fostering communication and information exchange in order to improve mutual understanding as well as mobilising communities and the whole society to bring about the necessary change in attitudes and behaviour. With this objective in mind, the Equi-City Team conducted various campaigns for public awareness and advocacy for health and sanitation amongst marginal group of people.

Sanitation awareness and medical camp at Bhandewadi dumping site August 6, 2019

The Bhandewadi dumpsite is an open dumpsite in Nagpur, spread over 22 hectares or 54 acres of land. The dumpsite has been in operation since the year 1966. It is estimated that more than 18,00,000 MT of waste has been dumped on the dumpsite since its inception. However, no actual record of waste dumped at the dumpsite is available with the Nagpur Municipal Corporation (NMC). In the year 2011, a part of the waste from the dumpsite was shifted and capping was provided over an area of 40,630 sqm (4 ha). The balance area is currently being used for the disposal of waste. The NMC has earlier constructed a cell for the safe disposal of rejects from MSW processing on the existing dumpsite.

The sanitation awareness campaign and medical camp, organised by the Equi-City team started early in the



Waste Segregation Campaign conducted by Equi-City team

morning at Bhandwadi dumping site, Nagpur. The doctors from Pandit Deendayal Upadhyay Institute of Medical Science Research & Human Resources and Anusuya Kale from Swachh Association participated actively in the campaign. The Equi-City team, Nagpur introduced rag pickers and other workers at the dumpsite with the benefits of cleanliness and asked them to spread the message to the citizens also. Around 100 rag pickers took benefit of the medical camp amongst which 40 were females and 60 were males. The three major check-ups were conducted which were, dental check-up, breast examination, and blood pressure check-up. The objective of the campaign was to spread awareness about health related issues mainly targeting the rag pickers and workers at Bhandewadi dumping yard by organising health check-ups and sanitation awareness program.

Sensitisation campaign for rainwater harvesting August 14, 2019

The Equi-City team along with the All India Institute of Local Self-Government (AIILSG) organised an awareness and sensitisation campaign in the Gokulpeth area of the Nagpur city. The urban awareness campaign was based on the theme of rainwater harvesting and organised on August 14, 2018 covering around 1500 households in the locality of Valmiki Nagar, Gokulpeth Market and Coffee House Chowk.

Rainwater harvesting (RWH) is a simple method by which rainfall is collected for future usage. The collected rainwater may be stored, utilized in different ways or directly used for ground recharge purposes. With depleting groundwater levels and fluctuating climate conditions, RWH can go a long way to help mitigate these effects. The rainwater capture can help recharge local aquifers, reduce urban flooding and most importantly ensure water availability in water-scarce zones. Though the term seems to have picked up greater visibility in the last few years,



Dental Checkup and medical van at the camp in Bhandewadi Dumping Site

it was, and is even today, a traditional practice followed in rural India. Some ancient rainwater harvesting methods followed in India include madakas, aharpynes, surangas, taankas and many more. These water conservation methods can be easily practiced in individual homes, apartments, parks, offices and temples too, across the world.

Thus rainwater harvesting is a sustainable process which should be promoted and made compulsory in the future as it helps in preserving rain water for different purposes and for the future needs as well. Thus, citizens were sensitized by distributing pamphlets depicting importance and method of rainwater harvesting.

Sensitisation campaign for waste segregation August 7 and 28, 2019

The Equi-City team conducted sensitisation campaign in Satranjipura and Gandhibagh zones of Nagpur to make aware people about the importance of segregation of waste and its benefits. Shekhar Giradkar, research associate, Equi-City, and Anusaya Kale, President of Swachh Bharat Association addressed the sanitation workers and influenced them for segregating waste at source. The Equi-City team sensitised around 300 sanitation workers about importance of segregating waste.

A sanitation worker collects door-

to-door waste and removes waste and recyclables from residential, commercial, industrial or other collection site for further processing and waste disposal.

Thus, if a sanitation worker is influenced about importance of segregating waste, he can daily influence other citizens about the segregation. The sanitation workers were asked about the type of garbage they come across and were explained about classification of waste. They were informed about dry waste such as glass, metal, paper, plastic, etc. which they can sell for recycling and how compost can be produced from wet waste. Many were unaware about how to dispose medical waste like sanitary pads, bandages, medicines, etc. and e-waste like batteries, wires, etc. The methods of disposal of these kinds of waste were explained to them.

The sanitation campaign thus worked to bring about behavioral changes in people and to motivate health practices, spreading cleanliness awareness and waste segregation awareness. The campaign was a huge success considering the participation level of sanitation workers. The interaction with sanitation workers was helpful to understand their perspective and issues they are facing in segregation of waste. The campaign was appreciated by the people and encouraged them to segregate waste. ■



AIILSG Delhi centre celebrates Local Self-Government day on September 5. Dr Bharti, Principal, AIILSG with Shiv Kumar Arora, Director Admin inaugurated the function by lighting the lamp



Integrated Capacity Building Training Programme, orientation capsule-1 organised by AIILSG at its Delhi Centre



RPL training session organised by AIILSG at Adityapur, Jharkhand



AIILSG organised AMRUT training capsule for city officials in Chhattisgarh

Gol can designate Leh as Smart City



Indian government will soon launch development and infrastructure initiatives in newly declared UTs of Jammu & Kashmir and Ladakh. The biggest support will come from the government's leading schemes, like Pradhan Mantri Awas Yojana (PMAY) to make available affordable housing for everyone, self-help groups reachability, skill development programs and Smart Cities Mission. The Housing and Urban Affairs ministry is planning to declare Leh, as a smart city to quicken the growth and development in the tourist spot. Two smart cities have already been assigned in Jammu and Srinagar.

VMC aims a plastic-free city

The Vijayawada Municipal Corporation (VMC) is planning to give out appreciation certificates to traders, hoteliers and commercial establishments that have banned circulating single-use plastic in their premises in its objective to encourage the use of jute, cloth bags. In July, the VMC with Krishna district officials launched an anti-plastic campaign 'MANA VIJAYAWADA'. The campaign will be concluded on October 2. On the same day, an award ceremony will be organised, in which VMC special officer and A Mohammad Imtiaz, district collector, along with V Prasanna Venkatesh, Municipal Commissioner, will give away the appreciation certificates.

Delhi needs to reduce 65% pollution: CSE

NEW DELHI: An analysis report released by Centre for Science and Environment (CSE) on August 30, said that although pollution levels in Delhi have shown a declining trend, the capital still needs to reduce PM 2.5 levels by around 65 per cent to meet clean air standards mentioned under the National Clean Air Programme (NCAP).

The annual average of PM 2.5 levels in Delhi between 2016-18 has been $115 \mu\text{g}/\text{m}^3$ which is almost three times more than the permissible limit set by the National Ambient Air Quality Standard which is $40 \mu\text{g}/\text{m}^3$. However, in a report by Central Pollution Control Board (CPCB) submitted to the Parliament, the analysis highlighted that the annual average of PM 2.5 levels during the 2016-18 period was comparatively lower than the corresponding period of 2012-14.

The CSE released its analysis report in a roundtable session on the steps and measures to be taken under the NCAP. It recognised the stabilisation of pollution levels to implementation of initiatives such as the Graded Response Action Plan (GRAP) and Comprehensive Action Plan (CAP) in Delhi-NCR.

The report, highlighting the limited progress made, said that the number of severe-plus air quality days in the city between 2016-18 was less than 15, as compared to 20 to 40 days during the 2011-14 period.

The report further mentioned that during the winters of 2016-18, the daily pollution peak of PM 2.5 levels reduced to 7 to 10 folds the permissible limits from 13 to 14 times experienced during 2011-2014 period. The daily permissible limits of PM 2.5 levels are $60 \mu\text{g}/\text{m}^3$.

'Pollution increases risk of psychiatric disorders'

NEW DELHI: Researches from University of Chicago reveal that exposure to environmental pollution and an increase in the prevalence of neuropsychiatric disorders are associated.

Sample population for the research was from both the United States-151 million unique individuals and Denmark-1.4 million unique individuals. The study found pollution associated with increased rates of bipolar disorder and major depression in both countries.

Khan and Andrey Rzhetsky, PhD, Edna K Papazian Professor of Medicine and Human Genetics and the paper's senior author, used a US health insurance database of 151 million individuals with 11 years of inpatient and outpatient claims for neuropsychiatric diseases. They compared the geo-incidence of claims to measurements of 87 potential air pollutants from the United States Environmental Protection Agency (EPA).

The areas with the worst air quality had a 27 per cent increase in bipolar disorder and six per cent increase in

major depression when compared to those with the best air quality. The team also found a strong association between polluted soil and an increased risk of personality disorder. For the US regiment, the team studied four psychiatric and two neurological conditions: bipolar disorder, major depression, personality disorder, and schizophrenia, epilepsy, and Parkinson disease. For the Danish regiment, the team studied 4 psychiatric disorders: bipolar disorder, schizophrenia, personality disorder, and depression.

However, the researchers found pleasant weather days had a protective effect across all neuropsychiatric disorders, especially for bipolar disorder. They estimated that counties with the highest number of pleasant weather days were tied to a 21.8 per cent decreased rate of bipolar disorder. Our studies in the United States and Denmark show that living in polluted areas, especially early in life, is predictive of mental disorders," Khan said in a press release.



Gujarat allots land for India's first Railway University

The Gujarat government, on August 21, announced allotment of 31 hectares of land in Vadodara at half the market price for setting up of India's first Railway University. During a cabinet meeting chaired by Chief Minister Vijay Rupani, the decision was taken, said Nitin Patel, Deputy Chief Minister of the State. The National Rail and Transportation Institute (NRTI), popularly known as the Railway university currently operates from its temporary location in the premises of Pratap Vilas Palace in Vadodara city. "The land will be also utilised for construction of various academic buildings, a hostel and a training centre," added Patel.

Coimbatore municipal minister flags off wet waste collection vehicles



S P Velumani, Municipal Administration Minister, on August 24, flagged off the first batch of wet waste collection vehicles that will be used by the Corporation. The 102 wet waste collection vehicles were bought at a cost of ₹5.71 crore. The newly bought wet waste collection vehicles will only be used for collecting wet waste in the city which is to be used for compost preparation. The release also said that the corporation will start working on laying main drinking water pipeline on the Siruvani Road, between Telugupalayam and Selvapuram, at a cost of ₹1.69 crore.

Mumbai to get 24×7 helpline for debris collection

MUMBAI: The Brihanmumbai Municipal Corporation (BMC) has proposed a 24×7 toll-free helpline number, which will make sure of the proper disposal of construction debris. The helpline will also help contractors to manufacture saleable items such as paver blocks, road dividers and benches. 20 per cent of the recycled items will be handover to BMC while the contractor can sell the rest.

The civic body is planning to set up the plant for processing construction debris of the city at the old pumping station site near Kelkar College in Mulund and eastern suburbs. For western suburbs, the contractor has to make use of private land. The two construction debris plants will have a capacity of 600 tonnes per day. Mumbai generates 12,000 tonnes of construction debris on a daily basis.

Citizens can dial the toll-free number to register complaints regarding illegal or unclaimed debris. If the debris is more than one metric tonne, the generator has



to pay the requisite charges for collecting it. According to Ashok Khaire, deputy commissioner of BMC, "The contract will be given for 20 years and the last day for bidding is September 20. Three companies have shown interest till now and we plan to start the facility soon. The BMC will provide no funds to the contractor but will buy the 20 per cent of recycled items. The contractor should also ensure that 100 per cent of the construction debris is collected whether it's lying on roads, narrow lanes or any public places."

'Don't construct artificial islands on Begur'

BENGALURU: The Karnataka High Court (KHC) on August 30, directed the Bruhat Bengaluru Mahanagara Palike (BBMP) to stop the construction of artificial islands and related civil works. The directions came post observing that construction of artificial islands within Begur lake is prima facie violation of guidelines issued by the court for protection of lakes. The interim order was passed by a division bench comprising Chief Justice Abhay Shreeniwos Oka and Justice Mohammad Nawaz after observing an affidavit filed by Leo F Saldanha of Environment Support Group. The Environment Support Group has been allowed to be an intervener in a PIL filed by Citizens Action Group (CAG) about the plight of the city's lakes and stormwater drains, through which the court is monitoring actions for the protection of lakes in the city.

Saldanha said that the civil works were part the lake's rehabilitation plan prepared by the BBMP's lake wing. As per a survey by the Environmental Management Policy Research Institute, the Begur lake have an area of 137.24 acres is heavily contaminated due to industrial effluents and sewage. Saldanha claimed that a few artificial islands are being built to make it a tourist destination as part of a rehabilitation plan.





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One-time waiving of water arrears for Delhi



Arvind Kejriwal, Chief Minister of Delhi, announced, on August 27, that people residing in E, F, G, H colonies (lower class residential areas) would not have to pay water arrears. To avail the waiver, the consumer must be having functional domestic meters. Also, late payment surcharge would be waived off for all who get the meter installed by November 30, 2019. For A, B colonies, 100 per cent late payment will be waived while 25 per cent of principal arrear will also be waived. 'C' category colonies will also get a 50 per cent waiver on their principal arrear and 100 per cent on LPSC, he added. In 'D' colonies, people will get a waiver of 100 per cent LPSC and 75 per cent principal arrear.

MSRTC to soon install GPS tracking systems

In order to ease commuting for people in Maharashtra State Road Transport Corporation (MSRTC) buses, Diwakar Raote, State Transport Minister launched a live tracking system on August 20. Raote said, "With the Vehicle Tracking System (VTS), Passenger Information System (PIS), passengers will be able to understand where the bus has arrived. Also, the departure time will be determined by the LCD TV set at every bus station." The GPS machines have been installed in all Shivneri buses of Mumbai-Nashik route and that in the upcoming months, the VTS and PIS systems will be installed in all state buses.

'India generates 9.46 m tonnes plastic waste yearly'

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.

Speaking on the occasion, Jamshyed Godrej, former president of CII and chairman, Godrej, and President, WWF-India highlighted the externalities of plastic and the challenges it poses to the ecological balance. Jamshyed Godrej said, "UPC will bring together businesses, government, NGOs and civil society to focus efforts on collaborative approaches and maximise synergies to un-plastic in a time-bound manner." More than 8.3 billion tonnes of plastic has been

produced around the world since early 1950s and out of which 60 per cent on this plastic was dumped in landfills or in the natural environment. According to WWF, an average person ingests same amount of plastic in a week as found in one credit card.

Renata Lok-Dessallien, UN India's resident coordinator said, "The world has become infested with plastics, most of which is non-biodegradable. This is ruining our health, our planet and the flora and fauna we share it with." Ravi Singh, Secretary General & CEO, WWF India said, "Our oceans are choking under plastic pollution, which is rapidly becoming one of the largest threats to marine species and mankind. UPC seeks to prioritise concerted action on solutions that are ambitious and sustainable."

After Flipkart and Air India, Amazon India too bans single-use plastic

BENGALURU: Amazon India, on September 4, said that they will replace all single-use plastic product used in its product packaging by June 2020 with paper cushions. The decision by company came after Prime Minister Narendra's Modi's Independence day speech on banning single-use plastic products like bags, cups and straws.

After Air India, Amazon become the latest major company in the country to join the fight against plastic pollution. Air India has banned the use of single-use plastic in all of its flights. The ban would be implemented in a phased manner, beginning from October 2. The initial phase would see the ban being enforced on all Air India Express and Alliance flights. The second phase would see the ban getting extended to all Air India flights. The airline also added that for special meals, which are ordered in advance, the company will use eco-friendly birch wood cutlery instead of plastic.

Air India announced the above in an official statement after PM Modi's independence day address. The airline company said, "Plastic teacups and tumblers will be replaced with sturdy paper cups and tumblers and crew meal cutlery will be replaced with lightweight steel cutlery." According to Amazon, to combat pollution caused by single-use plastic, they will be using environmental friendly packaging materials which will



be entirely recyclable. Amazon has often been criticised for using too much plastic and thermocol to wrap its billions of packages of shipments.

Earlier this week, Flipkart also made the announcement of reducing its single-use plastic used in packaging by 25 per cent and plans to move entirely to recycled plastic consumption in its own supply chain by March 2021.

BETA.RAY

A leap in solar energy sector

Numerical aperture

1.0m Diameter

Electrical Data

135W (180W/m²) with
basic Silicon

Thermal Data

335W (450W/m²)

Combined Efficiency


57% (Hybrid)

Capacity per day

1.1 kWh max

Battery Capacity

0.5 kWh



RAWLEMON, A COMPANY dedicated to finding new and innovative solutions to energy problems has come up with an invention the 'beta.ray' or the 'Spherical Sun Power Generator'. The design is fully rotational and combines spherical geometry principles with a dual axis tracking system, allowing twice the yield of a conventional solar panel in a much smaller surface area. The beta.ray uses a water-filled ball lens that helps reduce the silicon cell area by 25 per cent and operates at efficiency levels of nearly 57 per cent in hybrid mode. It is also a multifunctional device as it turns into a high-power lamp at night by simply using a few LEDs.

Rajouri DC constitutes committees to check on single-use plastic

In a bid to curb the usage of single-use plastic, Mohammad Aijaz Asad, Deputy Commissioner, Rajouri, has established 22 committees at district and tehsil levels of Jammu. The anti-polythene drive was conducted at Rajouri, Sunderbani, Kalakot, Nowshera, Thanmamndi, Darhal and Kotranka towns under the supervision of Sher Singh, additional DC, and other sub divisional magistrates. The DC directed that plastic bottles, glasses, cups and other types of single-use plastic items shall not be used further in official meetings in the district. The officials during the drive instructed the shopkeepers to refrain from using polythene bags in day-to-day life and go for their eco-friendly alternatives.

Ward officers in Odisha to resolve public grievances at doorstep

The Odisha government decided to appoint ward officers in the municipal corporations and municipality areas to ensure better delivery of public service through its touted 5Ts – technology, transparency, teamwork, and time & transformation framework. The urban development department has written to all commissioners and executive officers for the appointment of ward officers in their respective civic bodies. The officers will consider people's complaints and will ensure that the concerned government service reaches them at their doorsteps. The officers will try to solve the grievances of residents. There will be special teams to address issues about drinking water, drainage, road repairs, and other essential services.

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. Indonesia has been tightening its surveillance of foreign trash in imports due to the unprecedented growth in the same. About 250 containers were seized across the archipelago in recent months have already been sent back and authorities are probing more than 1,000 other containers for the same, an Indonesian customs official said. Authorities are expecting to send back 150 out of these back. Out of the 250, 49 containers of waste seized on Batam Island near Singapore and have been shipped back to the United States, Germany, France, Hong Kong and Australia, said agency spokesman Deni Surjantoro. The shipments were found with a combination of garbage, plastic waste and hazardous materials which violated import rules. According to customs data, the remaining containers were shipped out of Surabaya, Indonesia's second-biggest city, to the US, Britain and Germany. Huge quantities of waste have been redirected to Southeast Asian nations after China, which used to receive the bulk of scrap plastic from around the world, closed its doors to foreign refuse last year in a bid to clean up its environment. According to the conservation organization WWF, around 300 million tonnes of plastic are produced every year, with much of it ending up in landfills or polluting the seas, which has become a growing international crisis. A particular environmental concern are microplastics, tiny pieces of degraded waste that absorb harmful chemicals and accumulate inside fish, birds and other animals.

'Unique IDs should be allotted to waterbodies'

NEW DELHI: A monitoring committee suggested the National Green Tribunal (NGT) that agencies owning land must ensure prevention of encroachments of waterbodies in the city and must be given unique ID numbers to them for identification.

The committee said that the water bodies should be secured by constructing boundary walls and relevant entries in the revenue records. The committee further suggested the NGT that the government agencies should start mapping of small waterbodies on GPS platform on a priority basis, monitoring the water quality, penalising the defaulters and pay proper attention for their protection. "The agencies shall have dedicated staff to take care of the waterbodies. DJB has recently designated Rakesh Sahni as SE (Waterbodies)," added the committee. The NGT panel said that "There is awareness among the people now and the monitoring committee is getting several requests to visit the neglected waterbodies for their revival. Recently, our attention was drawn towards waterbodies namely



Tihar Jheel [Hari Nagar], Prasad Nagar Lake and Tuglakabad Lake".

The tribunal informed that the committee has already visited a few of these waterbodies and the ones left will be visited shortly. The monitoring committee brought in light that the Delhi government's scheme of providing 20,000 liters of water free for a month each to every household is being misused by several housing societies. The committee complained that post collection of 20,000 liters of water, the societies start extracting groundwater using tube-wells and bore-wells. to avoid payment of water tariff, and said that the Delhi Jal Board (DJB) should to take necessary steps to prevent this.

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

NEW DELHI: Prakash Javadekar, Union Environment Minister, Government of India, speaking ahead of the impending global conference on land desertification on August 27, 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. India is set to host the Conference of Parties (COP) 14 of the United Nations Convention to Combat Desertification (UNCCD), with over 200 countries participating, from September 2-13 with India's Prime Minister Narendra Modi likely to be in attendance. The minister said, "One third of the world is facing the problem of land desertification. It is a challenge. Science

has given us many new opportunities to restore land. The main challenge is that India has 29 per cent of degraded land. This degradation happens because of many factors like over exploitation, over grazing, over water logging and wind. Floods also make a good land into a bad land. We have to restore it. Therefore, we have taken a target to restore 50 lakh hectares of land by 2030. We will convert degraded land into fertile land."

"India will lead in combating desertification for the next two years. We will lead the world in the right direction and seek cooperation of all countries. Nearly 200 countries have confirmed their participation. More than 3,000 delegates and 100 ministers are coming. All the UN officials will be there," the minister said.

DDA to build 'The Delhi Cyclewalk'

NEW DELHI: Soon, people of South Delhi would enjoy a 33-km dedicated corridor for exclusive use of pedestrians and cyclists. The proposal for "The Delhi Cyclewalk" project was presented to Anil Baijal, Delhi's Lieutenant Governor (LG) on September 4. The corridor will connect the residential areas in South Delhi such as Tughlaqabad, Greater Kailash, Saket and Nehru Place, and will pass through—Jahapanah forest --and other green spaces. "It will be a loop around the city and will connect metro stations, bus stands, high density residential areas, business districts, industrial areas, recreational areas and master plan greens to make Delhi a 'city of connected forests and lakes,'" read the release from Delhi LG office. According to a senior DDA official, the corridor will be mostly developed on the ground while elevated and underground sections would also come up. "The idea is to connect and provide people a safer and greener alternative for mobility. The corridor will be planned in such a way that people can just walk or cycle to the nearest metro stations or bus stands. It will pass through the green areas," said a senior DDA official, requesting anonymity.



Govt increases subsidy on rooftop solar plants



Indian Government has unveiled a revised scheme for subsidisation of rooftop solar plants. The previously set rate of 30 per cent has now been raised to 40 per cent for solar plants with a capacity of 3 kWp. The subsidy amount has been fixed at 20 per cent for 4 kWp to 10 kWp solar plants. The announcement was made by Arun Kumar Gupta, Home Secretary-cum-Principal Secretary (Science & Technology & Renewable Energy), Chandigarh, while addressing stakeholders for popularising rooftop solar power in Chandigarh on August 29. During his address, Gupta also presented the cost-benefit of availing the subsidy.

Hyderabad gets two new urban forest parks

Indrakaran Reddy, Environment & Forest minister inaugurated two new urban forest parks in Hyderabad's suburbs, Dammaiguda and Medipally. The forests are spread across an area of over 391 hectares. The park in Dammaiguda, named as Arogya Vanam and the one at Medipally named as Jatayu park. Both the urban forest parks come under the Medchal district, taking the number of such parks in the district to seven. The five urban forest parks in the district are at Dulapally, Kandlakoya, Medipally, Narepally and Shameerpet. These parks have already been visited by 5.27 lakh people and generated ₹1.09 crore already.

BMRCCL cuts trees to extend metro corridor

The new report released in a response to an RTI query by Bengaluru Metro Rail Corporation Limited (BMRCCL) shows that at least 1,253 trees have already been cut down for the construction of second phase of Namma Metro. Half of the trees were razed for the new line from RV Road to Bommasandra with 599 trees cut for construction of the 19km elevated line to Electronics City. 276 were bought down to construct extension of the Purple line from Baiyappanahalli to Whitefield. Under Phase 2A and 2B, the BMRCCL is building a line from Silk Board to KR Puram and from KR Puram to Kempegowda Airport.

KSPCB to install GPS on waste collection vehicles



K Sudhakar, chairperson, Karnataka State Pollution Control Board (KSPCB) directed the authorities to install GPS on all vehicles transporting hazardous waste in Karnataka. The directions came after a review meeting, about the status of compliance of pollution control and environmental protection regulations. Sudhakar issued directions for the method of collection, storage, transportation, treatment and disposal mechanism being followed. To improve this, KSPCB will explore the feasibility of fixing the service area and the per unit rate for waste treatment while senior officials are directed to inspect the facility to verify compliance.

MPCB data reveals Thane has highest polluting industries in Maharashtra

MUMBAI: Data released by the government's 'star rating' program to assess air pollution in areas of Maharashtra portrays that Thane has the highest number of polluting industries in the state that is 48 units, followed by Aurangabad with 20 units. The program that was launched in 2017 by the Maharashtra Pollution Control Board (MPCB), discloses information on industrial particulate matter (PM) emissions, a widespread air pollutant. PM 10 and PM 2.5 considered above safe limits include particles that are small enough to penetrate our windpipe and lungs.



The industries are rated on a scale of one to five stars. The least polluting industries are rated five stars and the most polluting get one star. Since June 2017, 414 industries spread over 32 districts were evaluated. 175 industries fall into the category of most polluting industries, 82 are the least polluting. Of the 82, the highest number of industries are found in Raigad at 23, followed by 13 in Kolhapur. The ratings are based on the average concentration of the emissions from the chimney. Textile sector tops the chart as the most polluting in the state with 41 industries. Sugar and distilleries found in Aurangabad, Kolhapur and Sangli, among others, are a close second with 40 units falling in the most polluting category. The MPCB, Energy Policy Institute at the University of Chicago and a few other institutes jointly run the program. Ishan Choudhary, Communications & Outreach Coordinator, EPIC-India said, "Every three months, the MPCB releases a report card for all the industries under its ambit. It also sends out notices to the most polluting industries and gives them three months to comply with pollution control norms".

Sea waves to be a new renewable energy source

NEW DELHI: R K Singh, Union Minister of State for Power and New and Renewable Energy (IC) and Skill Development and Entrepreneurship, has accepted a proposal to proclaim the use of tides and waves to generate electricity as a renewable energy.

The Ministry of New and Renewable Energy said that the recognition of the generation source will help boost the use of ocean energy in the country.

According to the ministry, tidal energy holds a potential to provide a capacity of as much as 12,455 MW in locations within the Khambat and Kutch regions. Wave

energy can potentially add 40,000 MW of capacity, and ocean thermal energy conversion (OTEC) is estimated to be 180,000 MW. The government mentions this as "technological evolution."

The Indian government has made increased efforts to build new renewable energy infrastructure in the country, and there have been mixed reports regarding the country achieving its 2030 climate change goals.

As per the statement released by the government, it is discovering all possible paths to stimulate innovation, boost job creation and economic growth and reduce the country's carbon emissions. The statement states, "Energy produced using various forms of ocean energy such as tidal, wave, ocean thermal energy conversion etc. shall be considered as renewable energy and shall be eligible for meeting the non-solar Renewable Purchase Obligation (RPO)."





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. The index ranks 60 cities on five continents, examining digital, health, infrastructure and personal security factors to assess overall urban safety. The cities that led the index offer easy access to high-quality health care, dedicated cybersecurity teams, disaster continuity planning and/or community-based police patrolling.

While the average score was 71.2 of overall index, Delhi and Mumbai scored 55.0 and 58.2 points respectively. In digital security category Tokyo, capital city of Japan tops the list with 94.4 points. 67.2 points being the average score, both Delhi and Mumbai scored poorly scoring 51.0 points. In health security category, another Japanese city, Osaka scored the best at 88.5 points. 68.0 being the average for the category, Mumbai scored 55.8 and Delhi rested just after Mumbai scoring 54.6 points. In both infrastructure security and personal security Singapore tops the list. Both the cities Delhi and Mumbai scored lower than the average in the aforementioned category.

Naka Kondo, senior editor, EIU also the editor of this year's report on the Safe Cities Index said, "Overall, while wealth is among the most important determinants of safety, the levels of transparency – and governance – correlate as closely as income with index scores. The research also highlights how different types of safety are thoroughly intertwined – that it is rare to find a city with very good results in one safety pillar and lagging in others."

According to the index, six of the top 10 safest cities are in the Asia-Pacific region – however, the EIU says that a city's region does not have any statistically significant relationship with its performance in the index.

Kondo said, "Although APAC cities such as Tokyo, Singapore and Osaka continue to be the top three cities in the Index, the region also hosts some of the lowest-scoring cities in the world, with Yangon, Karachi and Dhaka close to the bottom of the list."

APAC cities perform well across the categories of health security, infrastructure security and personal security, but their North American

counterparts generally far better in digital security, accounting for seven of the top 10 cities in this category, the report stated. The index also indicated that in coming years India and China are going to witness the fastest rise in the population, 1.4 per cent growth to be seen over the next decade.

Tokyo remains at the top position in the index for third consecutive year, while Singapore and Osaka take second and third places, respectively. Lagos in Nigeria and Caracas in Venezuela rank in the bottom two positions.

The index shows that obesity rates are still on lower side in south east Asian countries and Indian continent when compared to the cities of western nations. "In 2014 and 2018, the UN Population Division projected the likely increase in the number of urban residents between 2020 and 2030. During that four-year period, demographers increased their earlier estimates for China, India and Sub-Saharan Africa by 10 per cent to 15 per cent. For specific cities, this will mean the already very large challenges are now expected to be even bigger," the study said.

MMRCL to cut 2700 trees to build metro carshed



The Tree Authority of the Brihanmumbai Municipal Corporation (BMC), on August 29, approved the razing of 2700 trees in Bombay's Aarey Colony area to clear out land for building a Metro carshed. A senior civic official said that Mumbai Metro Rail Corporation (MMRCL) put up the proposal to cut 2,232 trees and promised to compensate by planting three times as many trees elsewhere in the city. Manoj Kotak, the group leader in the civic house told PTI, "Metro is extremely essential for the city and it is everybody's duty to support infrastructure-related work".

e-Upchar to host patient records online across all Haryana hospitals

Haryana's civil hospitals' officials have started a new facility, 'e-Upchar', which will help them access the health records of patients with chronic diseases via Unique Identification Numbers (UIN), which would be set up online. The initiative began in Panchkula in 2015 when the e-Upchar facility was implemented in government hospitals only and now, it has been extended to all hospitals of the state. "The patients have to either produce their Aadhaar cards or the mobile numbers for the UIN. After which the doctor will enter the details of the patient related to diseases and medicines, which can be accessed in any civil hospital in the state," said Virender Kumar Yadav, Principal Medical Officer.

Authorities to submit specific timelines for cleaning Yamuna

NEW DELHI: The National Green Tribunal (NGT), while analyzing that the timelines to take action against Yamuna pollution have not been adhered to in the past 30 years, directed all the stakeholders to give a specific schedule for cleaning of the river as the pollution was still continuing. An NGT bench headed by Justice Adarsh Kumar Goel, NGT Chairperson, clearly stated that the green panel will finalise new set of timelines



along with clear adverse consequences of violating revised schedules.

The green panel further directed Sanjay Jain, Additional Solicitor General, appearing for the Delhi government, to compile the information and put forth suggestions for extended timeline wherever it has expired.

The NGT had earlier said that the failure to stop activities polluting Yamuna by the authorities is not only affecting life and health of citizens, but also pose as a threat to the existence of a major river like the Yamuna. Earlier, the NGT expressed dissatisfaction over the cleaning of the river and directed the governments of Delhi, Haryana and Uttar Pradesh to submit a performance guarantee of ₹10 crore each within a month.

Andhra to launch Indo-Swiss tech for energy efficiency under ECBC-R

VIJAYWADA: Andhra Pradesh is set to introduce Indo-Swiss building energy efficiency technology in its affordable housing projects. The technology, which is a part of the Energy Conservation Building Code for residential buildings (ECBC-R), will be launched in Andhra Pradesh, Rajasthan and Gujarat as decided by the Central Government. The ECBC-R can be a great initiative for states like Andhra Pradesh where temperatures are as high as 48°C during summers. Due to this technology, even low-income group families can avail modern energy efficient houses with world class technology, said Nagulapalli Srikant, Energy Secretary.

He added that the ECBC-R design helps to reduce temperature by not less than 4 to 8 degree Celsius inside the house compared with the outside temperature. It also ensures adequate natural ventilation and daylight potential and will make sure that housing is cost effective with minimum 20 per cent energy savings. This would result in reduction in electricity bills and healthier environment in residential buildings.

The initiative has a potential to save 125 billion units of electricity or 100 million tonnes of carbon dioxide emissions per year by 2030, said Srikant. The state government is being requested by the Bureau of Energy Efficiency (BEE) to incorporate ECBC-R code in development control rules or building bylaws.

Explaining the necessity of the code, Srikant said the energy consumption in housing sector in India is expected to become a major future concern. According to BEE, the electricity consumption rose to about 260 Terra Watt hours (TWh) in 2016-17 from about 55 TWh in 1996-97 (more than four times) and it is expected to rise to anywhere between 630 and 940 TWh by 2032.

A two-day national conference on implementation of ECBC-R will be held at Vijaywada on August 29 and 30 to motivate stakeholders and the public.



'World's lungs' burn at an alarming rate

BRASILIA: Amazon rainforests, the world's biggest rainforests, are getting devoured by a rampant forest fire at an alarming rate. More than a soccer field's worth of Amazon forest is falling every minute, according to Brazil's National Institute for Space Research, known as INPE. Although rendering havoc amongst the native life of Brazil, the fires are also emitting copious amounts of carbon in the atmosphere.

The situation has escalated to an alarming level at a quick pace as now many states in Brazil are engulfed in copious amounts of smoke, even blocking out the sunlight in many regions. The devastating fires can be attributed to stubble burning or farmers clearing out forest land to set up farms. Most of the agricultural burn-offs are in deforested areas, but there are also fires in protected reserves, the number of which has increased drastically this year. Many scientists have said that this government's policy of encouraging deforestation has boosted the land clearance that helps fires rage, and has given people a license to burn the land. Scientists have also alluded to the ongoing climate crisis as being the primary

catalysts in escalating the situation. "In addition to increasing emissions, deforestation contributes directly to a change in rainfall patterns in the affected region, extending the length of the dry season, further affecting forests, biodiversity, agriculture and human health," Greenpeace said in a press release.

NASA released images on August 11 showing the spread of fires and reported that its satellites had detected heightened fire activity in July and August. This year, the number of fires in Brazil is the highest on record since 2013 and is up by 85 per cent from last year, according to several reports. The country's space research center has already detected more than 80,000 fires this year.

Amazon fires are so large that they are visible from space. Jumping into action, the Brazilian government has deployed over 44,000 troops to on August 23, to extinguish the blaze which has created a layer of smoke which now covers 1.2 million square miles. Warplanes have also been drafted in to dump water on the areas affected. The military used two C-130 Hercules aircraft capable of dumping

up to 12,000 liters of water on fires.

The damage to the 'Lungs of the Earth' has gained international attention, as many countries are now coming together to the aid of Brazil to fight the crisis. The fires' significance was realized and large scale discussions were held at the G-7 summit. Emmanuel Macron, French President said G7 countries would release \$22 million. The funding pledge was announced as the leaders of the G7 – Canada, France, Germany, Italy, Japan, the UK and the US – met in Biarritz, France for the 2019 edition of the summit. President Macron said that the funds would be made available "immediately" – primarily to pay for more fire-fighting planes – and that France would also "offer concrete support with military in the region within the next few hours". President Macron and President of Chile, Sebastián Piñera said that they also had reached an agreement in principle with the countries of the Amazon basin for a long-term program of forest protection and reforestation of cleared lands. The leaders said more details might be presented next month at the United Nations General Assembly.

16-member committee to monitor biomed waste disposal in Chennai

In a bid to monitor disposal of biomedical waste in Chennai, a 16-member committee including officers from different line departments like revenue, Chennai Corporation, PWD, fisheries, rural health services and animal husbandry has been constituted by Tamil Nadu government. It is headed by R Seethalakshmi, district collector, Chennai, and it has been given task to draft the District Environmental Plan so as to furnish monthly progress to Chief Secretary on the effective implementation of the Bio-Medical Waste Management Rules, 2016 in the city. After an order from the National Green Tribunal (NGT) passed on July 15, it gave two-month period to all states to form monitoring committee and make an inventory of biomedical waste generation and healthcare facilities.

SMC fines 18 people for open dumping under "Name & Shame" policy

Shimla Municipal Corporation's (SMC) flagship policy to deal with garbage dumping, "Name and Shame", has finally been brought into use as 18 people, who were caught dumping garbage on CCTV cameras installed at major "garbage hot spots" in the city, were booked under the scheme. As per SWM rules, any resident who is found dumping waste in the open can be fined ₹500. Shopkeepers, owner of a restaurant, hotel or a marriage hall is liable to be fined ₹1,000, ₹2,000, ₹5,000 each, respectively. Eight persons were caught violating the rules at a children's park in Sanjauli and six at Panchayat Bhawan near local bus stand on the Cart Road.

HSPCB to take measures against 14 CETPs violating EPA

GURUGRAM: The Central Pollution Control Board (CPCB) instructed the Haryana State Pollution Control Board (HSPCB) to implement some corrective measures against 14 common effluent treatment plants (CETPs) that have been flouting safety regulations.

Two of these plants are located in Faridabad and one is located in Gurugram and have been operating in violation of the Environment Protection Act, 1986. The plants were marked as defaulters in a survey conducted by the central body in various states (including Haryana) in March and May of 2019 on the orders



issued by the National Green Tribunal (NGT). The CPCB issued a report highlighting their discoveries and found that the corrective measures are required to be taken in all 14 CETPs in the state, to become fully compliant with the EPA (1986). The plants receive industrial effluents from textile, automobile, dairy, pharmaceutical, chemical processing, food processing and metal fabrication units, among others, the report mentions.

In Haryana, the CPCB found that nine CETPs were discharging industrial effluents, which do not meet safety standards. Five were found to be compliant, but lacking official certification, while one plant (in Rohtak), was not operational.

An HSPCB official said, "We are in the process of ensuring that all the CETPs have online continuous emission monitoring system (OCEMS) installed, and will be monitoring discharge standards regularly. The CPCB's instructions will be followed. As for compliant plants, we will expedite the authorisation formalities. They are not an environmental concern."

UNIDO approves ₹10 cr for various projects

MYSURU: United Nations Industrial Development Organisation (UNIDO) has approved a funding of ₹10 crore for the Mysuru City Corporation (MCC) for the implementation of waste management projects to curb pollution and greenhouse gas emissions. The projects to curb the pollution level in the city will be implemented under the UNIDO's Sustainable Cities Integrated Approach Pilot in India (SCIAP). Recently a team of senior officials from UNIDO visited the city and looked at the proposed projects by MCC to reduce greenhouse gas emissions, and has given their approval for project funding.

Under the SCIAP, the MCC will remodel the existing compost plant at Vidyanarayapuram, install a waste-to-energy plant with a capacity of 300 tonnes per day at Rayanakere, and a small-scale bio-gas plant for disposing of the market waste.

Dr G Nagaraju, Health Officer, MCC, said that the UNIDO team had sought information on various projects of the MCC which are in line with the objectives of SCIAP to reduce greenhouse gas emissions. Under the SCIAP, Mysuru is among the five selected cities for project implementation, other cities are Jaipur, Bhopal, Vijayawada, and Guntur. The five cities were selected based on the criteria linked to levels of urban development, city service delivery challenges, size and geographic spread etc. This is part of UNIDO's global project to fund 38 cities in different countries to reduce greenhouse gas emissions. Dr Nagaraju said that the machinery for handling the wastes will be procured by the UNIDO based on the MCC's specification and the project could get started within a month or two.

Heavy fines for neglecting traffic rules with new motor vehicle act

NEW DELHI: The new Motor Vehicle Amendment Act, 2019, which was tabled in the Lok Sabha on July 15 has been approved and is currently being implemented across India. With this amendment, it is clear that the government is taking negligence to traffic safety norms more seriously due to the growing number of accidents throughout the nation. According to the road transport and highways ministry, half a million accidents are reported in India every year, in which 150,000 people lose their lives.

The salient points of the new motor vehicles amendment act are:

- ◆ It is now mandatory to hold an Aadhar card in order to avail a driving license and vehicle registration card.
- ◆ The government will now be providing a compensation of ₹2 lakh to families of victims of hit-and-run cases. Currently, the amount is just ₹25,000.
- ◆ In traffic violations by juveniles, the guardians or owner of the vehicle would be held responsible unless they prove the offence was committed without their knowledge or they tried to prevent it. The registration of the motor vehicle in question will be cancelled. The juvenile will be tried under the Juvenile Justice Act.
- ◆ The bill will protect those who get caught up with accidents but come forward to help accident victims. They will be protected from civil or criminal liability. It will be optional for them to disclose their identity to the police or medical personnel.
- ◆ The fine for rash driving has been raised from ₹1,000 to ₹5,000.
- ◆ Driving without license would lead to a minimum fine of ₹5,000 against the presently set ₹500.
- ◆ You can be fined anywhere between ₹1,000 to ₹2,000 for over speeding against the present fine of ₹400.
- ◆ One can be fined ₹1000 for driving without wearing seat belts.
- ◆ Talking on a mobile phone while driving will attract a fine of ₹5,000, up from ₹1,000.
- ◆ A Motor Vehicle Accident Fund will provide compulsory insurance cover to all road users in India for certain types of accidents.
- ◆ Alteration of vehicles to incorporate specially-abled people has now become mandatory.
- ◆ Contractors, consultants and civic agencies will be accountable for faulty design, construction or poor maintenance of roads leading to accidents.
- ◆ A time limit of six months has been specified for an application of compensation to the Claims Tribunal with regard to road accidents.
- ◆ The cap on liability for third-party insurance which was set at ₹10 lakh in case of death and ₹5 lakh in case of serious injuries has now been dissolved.
- ◆ Driving license renewal time has been incremented from one month to one year.
- ◆ The government can decommission vehicles which do not meet the required environmental standards, attracting a fine of up to ₹500 crore for manufacturers in case of sub-standard components or engine.

Although no official data has been released as of yet, the results of the new, more stringent norms can be observed, at least on the roads of Delhi. Early cases of people getting fined copious amounts has triggered more serious attention to the traffic rules and regulation by people. Punjab, Telangana, Tamil Nadu amongst others have yet to impose the elevated fines as of September 6.





‘Indore needs to focus on moving people not cars’

All India Institute of Local Self-Government (AIILSG) in partnership with Indore Municipal Corporation (IMC) and Indore Smart City Limited organised a one-day conference ‘Urban Dialogues: Reimagining Indore’ on August 21, 2019, at Sayaji Hotel, Indore. The conference was aimed at understanding and analysing problems faced by Indore city and how in the opinion of the experts they could be resolved

Team Urban Update

Shankar Lalwani, Member of Parliament (Indore), was the chief guest. He inaugurated the conference by lighting the lamp. Anil Shrivastava, Mission Director NITI Aayog, Rajiv Agarwal (IAS Retd.), Director General of AIILSG, Ravi Ranjan Guru, Deputy Director General of AIILSG, Ashok Wankhade, Managing Editor of Urban Update, and Abhilash Khandekar, Senior Journalist, were present at the occasion. The inaugural session saw these eminent personalities putting forth their perspectives on the urban ecosystem of Indore.

Shankar Lalwani began his address by stating that developmental works in Indore are being done at a healthy pace. “Indore was ranked number 1 in Swachh Survekshan rankings thrice in a row”, Lalwani said while admiring the efforts of the city authorities and concerned departments in keeping the city clean and green. Lalwani informed that the master plan of Indore is now almost 100 years old. Although, the pre-existing master plan caters to almost every possible city problem, with time things have changed, scenarios have changed and even the problems. Therefore, a new master plan needs to be developed which could effectively address issues that the city is facing

today and can further strengthen the green and clean infrastructure of the city. He also stated a few concerns about mobility in Indore and said that the traffic situation in the city has huge scope of improvement.

Mentioning a few historical facts, Lalwani informed that the first concrete road in India was constructed in Indore and it was durable enough that the authorities only had to carry out a few repairs over the years. Indore was planned in such a brilliant manner that in early Indore poles were erected nearby residences and important buildings so that in case of any fire mishap, gases to extinguish the fire could be released easily. Talking about the city design and planning to make Indore better, he said that urban planners and city authorities need to plan ahead considering coming 50 years. He wrapped up his address by saying that he looks forward for positive outcomes from the conference that could help Indore in improving its urban ecosystem.

Rajiv Agarwal delivered the opening address of the conference. In brief, he welcomed everyone present and stated the objectives of the conference. “Urban Dialogues bring together various smart city officials, urban experts, municipal officials, and stakeholders to discuss upon initiatives that can be taken to enhance the development aspects and citizen services in the city”, said Agarwal.

Ravi Ranjan Guru discussed the role of AIILSG in empowering urban local bodies (ULBs). “We have more than 90 years of experience in supporting local governments”, said Guru. Further detailing the role of AIILSG in building a new urban India, Guru said the institute is working with Government of India on most of the ongoing development missions. “AIILSG not only focuses on providing training to various officials in order to improve the delivery of civic services but, we also work under missions like AMRUT, Smart Cities Mission, Skill India Mission and more”, AIILSG’s Deputy Director General added. Towards the

end of his address, he talked briefly about the previous 'Urban Dialogues' conducted in Bhopal in which state UD Minister had announced that the new master plan of Bhopal would be launched within a year.

Abhilash Khandekar highlighted the contribution of Sir Patrick Geddes in the development of present day Indore. Admiring the current master plan of Indore which was prepared around 100 years ago, he said the mastermind behind the effective planning was Sir Patrick Geddes. Geddes' work was highly appreciated and in 2016 architects and urban planners from Lucknow asked for details on works by Geddes, informed Khandekar. He said that Geddes was a man with foresight, as the Danish System of planning implemented in Indore gave the city underground sewage network and other drains connecting with the system. Khandekar further mentioned that Geddes was popularly known as 'Garden City Advocate' as his planning not only included space for buildings and streets but also open green spaces that made the city more livable unlike conventional cities of today.

Krishna Chaitanya, Additional Commissioner of IMC, spoke about the new initiatives of the corporation and its achievements in the recent past. He said that the delivery of civic services in the city is efficient and the corporation had taken serious steps supporting the center's scheme 'Jal Shakti Abhiyan' by using sewage treated water to water parks, lawns in government buildings, fountains owned by municipalities, and wherever else possible. The ongoing works for river rejuvenation are also progressing in an improved manner.

Chaitanya further mentioned about the plantation drive conducted by the corporation officials in which they planted 50,000 saplings and are planning to plant 25,000 more.

Moreover, the IMC is trying to devise solutions for more efficient utilization of energy and reduce the conventional energy usage by 60 per cent. Smart initiatives are being implemented in the city under the Smart City Mission to make Indore smarter and make citizens secure by implementing technological security measures for prompt action on any mishaps and prevention of illegal activities.

Session1 –Smart city and solutions for improving civic services

Pashim Tewari, Technical Director of AIILSG, chaired the first session that focused on smart solutions for addressing mobility and other urban issues of Indore city. Anil Shrivastava, Mission Director, NITI Aayog, was the first speaker. He began his address with a note of disappointment saying that architects and urban planners are even today discussing the same problems which were discussed years back. Indore is one of the most important cities of Madhya Pradesh and vehicular movement in the city needs special attention. Increasing vehicular density in the city, narrow streets, and lack of proper parking spaces makes smooth movement in the city difficult. Shrivastava raised a concern saying that the Indian vehicular density is still less than countries like United States of America, China and those of Europe but, we are suffering with traffic jams, vehicular congestion and related issues. Further, he talked about electric mobility and said that India is one of the largest manufacturers of two-wheelers and is the fastest growing automobile industry in the world. We have set a goal to convert all the two-wheelers electric by 2023 and all the four-wheelers by 2025. Towards the end of his address, he said that there should be policies to promote sharing

and pooling of two-wheelers for improving last mile connectivity.

Dr Kulwant Singh, CEO 3R WASTE Foundation and Former Asia Advisor, Urban Basic Services, UN-HABITAT, questioned the present transport infrastructure. He highlighted a few facts showing inability of Indore's transport infrastructure saying, "In 2015, roads in Indore were stated most fatal." He named traffic congestion the biggest challenge before Indore's city management. He emphasized on the need for safe roads and to decongested streets. "Safety issues are largely due to roads being overcrowded with vehicles", pointed out Singh. Congestion on streets leads to increase in greenhouse gas concentrations, pollution, energy consumption. Therefore, a paradigm shift is much needed to focus on "moving people not cars", Singh added. Singh mentioned four zeroes as a key for effective traffic planning – zero air pollution, zero accidents, zero congestion and zero fossil-fuel-propelled vehicles.

Umakant Choudhary, Deputy Superintendent of Police (Traffic), started his address with a short video clip on road accidents that have occurred in Indore and have been captured in CCTV cameras. Choudhary stated that drunk driving, reckless driving, over speeding and distracted driving are the four major reasons for road accidents in the city. He mentioned that Indore has more than 20 lakh vehicles plying on the streets. Choudhary said that Indore police along with Indian Institute of Management (IIM), Indore, are trying to implement corrective measures considering 5Es – Educating people on road safety, improving Engineering techniques, Enforcement for traffic regulation, prompt response in Emergency situations, and Environment friendly initiatives. He also said that soon smart traffic systems will be installed in the city under the Smart City Mission. Highlighting the achievements made by the police department, he said that earlier in 2015-16 the department used drone cameras, CCTVs and other



If we sustain our relationship with environment, we will see sustainable development in future

Janak Palta, Founder-director, Jimmy McGilligan Centre for Sustainable Development

technological measures and was able to reduce accidents and deaths due to accidents by 46 per cent.

CA Vinod Agrawal, Partner, Borkar and Muzumdar, focused his address on two financial aspects –enhancement of revenue and control of expenditure. He raised concerns about tax collection system in the Indore and stated that “ULBs either do not have a proper tax collection system in place or the existing mechanism do not work as expected”.

One of the probable solutions he brought forward was outsourcing. Agrawal said that a few ULBs in other cities have tried outsourcing their tax collection work on a fixed commission basis and were able to improve their situation significantly. “This makes the process efficient”, added Agrawal.

Pashim Tewari focused his entire address towards data driven mobility and data fetching mechanisms. He said that firstly there is a need to set up a mechanism to accumulate data and this was first realized when the Government of India implemented Smart Cities Mission.

Therefore, the government specifically appointed data officers to fetch data through research, surveys and other methods. Further talking about mobility, in reference to earlier talks during the session, Tewari said that “The problem is not only about passenger vehicles but all the vehicles including commercial, private, cargo, etc. plying on city roads, as each of them acquire space”. Supporting the fact, he said, “Cities work on logistics. Industries require resources which are daily pumped in the city.” Therefore, movement of every type of vehicle will be there, it is the matter of how things can be managed effectively. He ended by saying, “We can design better urban roads, and resolve issues in city without impacting its lifestyle.”

Session 2 –Sustainable Indore: Environment, water rejuvenation and development

The second session saw participation of eminent speakers – Janak Palta, Bhalu Mondhe, Raghav Chandra and Suryanarayan Krishna. VK Madhavan, CEO, Water Aid (India) chaired the session. It began with VK Madhavan questioning the current scenario and management of the Indore city. “Will Indore be able to manage its water demands without lakes? Is leaving only 10 per cent area for parks, and other open spaces is part of smart development?” Such were the concerns raised by Madhavan. He further mentioned a few facts before opening the session like 40 per cent of the Indore’s population lives in slum areas. About 50 per cent of the city does not have proper sewage connections.

Janak Palta, Founder-director of Jimmy McGilligan Centre for Sustainable Development, in her address urged that Indore with its rich heritage should not be reconstructed but developed in such a way that the heritage is preserved while the city turns smart. She urged that people should come together to conserve the environment. “People should make conscious efforts to reduce pollution, environment should not be taken for granted”, she added. Raising concerns about sustainable development and upcoming generations, she said that it is important to educate the children about the delicate condition of natural resources. Hence, the imparting of knowledge is essential to equip the next generation with capabilities to deal with future problems. Further commenting on implementation of smart solutions under Indore Smart City and data collection, Palta said that data should reflect the actuality of the situation as polished data misleads

citizens into averting from the severity of the situation that we actually face. She ended her address saying “If we sustain our relationship with environment, we will see sustainable development in future.”

Bhalu Mondhe, President, The Nature Volunteers, emphasized on conservation of waterbodies and flora and fauna. Mondhe said that water bodies are of utmost importance, these are not only essential for human existence but also for species like migratory birds and local fauna. Giving example of Sirpur Lake, he said that it can be an interesting seasonal destination as exotic birds find their way here. Earlier, this lake used to supply water to major parts of the city. However, since the 70s, illegal encroachments, dumping of waste and other such activities resulted in degradation of the water quality of the lake, added Mondhe. As per Mondhe, such activities have brought Indore to a state where out of eight only three lakes are left today. He further showed a documentary on his and his team’s efforts in reviving Sirpur lake which is today one of the healthiest natural ecosystems of the city with rich local flora and various migratory birds and reptiles residing at the spot. A jogging track had been built near the lake for people to experience the natural and scenic beauty and encourage preservation of waterbodies in the city.

Raghav Chandra, Former Principal Secretary, Urban Development & Housing, Government of Madhya Pradesh, said that urban development is the need of the hour, supporting his statement with the fact that more than 50 per cent of India’s population will live in cities in the near future. He further said that agriculture has a finite impact on economy and hence, efforts should be made to support cities as they are the economic hubs. A visible progress in urban development was seen after the launch of JnNURM scheme, Chandra added. Giving example of China, Chandra said, we must look forth to China who has invested huge sum of money on their



Indore should not rest on its waste management laurels as there are various other issues for the city authorities to deal with.

Raghav Chandra, Former Principal Secretary, Urban Development & Housing, MP

Urban Dialogues Indore Declaration

- ◆ The city & State (political and administrative) authorities need to be proactive in their approach towards city management. They must enhance the futuristic vision and plan for situations to come up in next 50 years.
- ◆ Indore Municipal Corporation implemented a new plan for recycle and reuse of treated sewage water where the water is utilised to water parks, utilised in fountains and other public areas for cleaning purposes.
- ◆ Central government has released a sum of Rs 475 crores for the augmentation of Indore Airport terminals in order to increase its capacity.
- ◆ Mobility is at the center stage of economic development of Indore.
- ◆ Safety of citizens on roads has seen a quantum jump in recent years by technological interventions and will be further strengthened to take care of pedestrians also.
- ◆ Engineering sections needs to be further bolstered for better street and other city works.
- ◆ User charges are a must for sustainable financial management.
- ◆ Data needs to be used for real implementation on ground.
- ◆ Food security is important for sustainable inclusive development of Indore.
- ◆ Kachra-free Indore and a kachra-free lifestyle for a Swachha and Sundar Indore.
- ◆ Indore needs to preserve its heritage while embracing the new urbanisation.
- ◆ Illegal encroachment, untreated sewage and dumping of garbage has polluted lakes and ponds of the Indore city. Earlier Indore had many lakes and today only few are left.
- ◆ Indore should not rest on waste management laurels and should continue its efforts to maintain its number 1 position and further improve the city's ecosystem and pollution.
- ◆ Rainwater harvesting on the lines of china for capturing 70% or more rainwater for recharging wetlands and ground water aquifers. Waste water recycling needs to be adopted as a healthy habit.
- ◆ The Master Plan is expiring soon and hence large scale, multi-sector consultations should begin now and citizens be involved prior to finalising the plan and NOT after publication of it.
- ◆ Efforts made by the authorities should not be restricted to only records and books but the changes must be visible to the citizens.
- ◆ Indian cities should look forward to off-grid solutions to cater requirements people who are unable to afford the services.

urban areas to push their economy. Also, a concept like sponge cities is an amazing concept displaying efficient process of water preservation and management. Further promoting the concept of sponge cities Chandra said, "Water storage is costing various cities across Madhya Pradesh crores annually". Laying out few suggestions he said, rainwater harvesting should be incorporated in residential buildings as well. Chandra further added that master plan should be modified time and again to incorporate housing for all. Closing his speech, he said that

"Indore should not rest on its waste management laurels as there are various other issues as well which the city authorities need to deal with".

Suryanarayan Krishnan, Market Practice Head, Piramal Water Pvt. Ltd., the last speaker of the session, focused his address on water related issues in the city. He said that urbanization will impede on natural resources especially on water resources. This may lead to insufficient supply or shortage of water supply for the citizens, he added. Suryanarayan further said, piped water is a responsive way to provide

water to people but, citizens residing in unauthorized colonies and slums do not have access to piped water. Hence alternates like off-grid water solutions should be implemented, added Suryanarayan. Further talking on technical aspects, he said that measurement and monitoring process can point out exactly how we can improve the situation of water in cities. Adopting solutions like rainwater harvesting even for residential buildings can help improve the situation. Treated water can be utilized for watering gardens, parks, washing and other domestic usage, said Suryanarayan while concluding his address.

Valedictory session

The valedictory saw participation of Ravi Ranjan Guru, Deputy Director General of AIILSG, Ashok Wankhade, Managing Editor, Urban Update, Abhilash Khandekar, Senior Journalist and Kumar Dhananjay, Consulting Editor, Urban Update.

Ravi Ranjan Guru put forth a summary of the discussions that took place during the day. He released the 'Indore Declaration' and thanked all the speakers and the participants for their presence at the conference. Ashok Wankhade in a few words described how Indore has done wonders in waste management sector but, it's time the city should think about resolving other issues like water supply, sanitation, implementation of smart initiatives for better management and security of the citizens.

He said that there was a time when he used to live in Indore, the city had seen a lot of changes since then. Kumar Dhananjay delivered his vote of thanks address thanking all the eminent speakers, guests and the audience for making the conference a success. 'Urban Dialogues: Reimagining Indore' ended on a high note putting forth experts' suggestions, probable solutions to address the present urban problems and an insight for the architects, city planners and authorities to plan with foresightedness, not only for present but for the coming 50 years. ■



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1. Dignitaries observing a moment of silence to pay homage to Late Babulal Gaur, Former Chief Minister of Madhya Pradesh
2. Rajiv Agarwal, DG, AILSG giving his opening remarks at the inaugural session of Urban Dialogues: Reimagining Indore
3. Shankar Lalwani, MP, Indore delivering his chief guest address
4. Kulwant Singh, CEO, 3R Waste Foundation, presenting his views on current transport infrastructure of Indore



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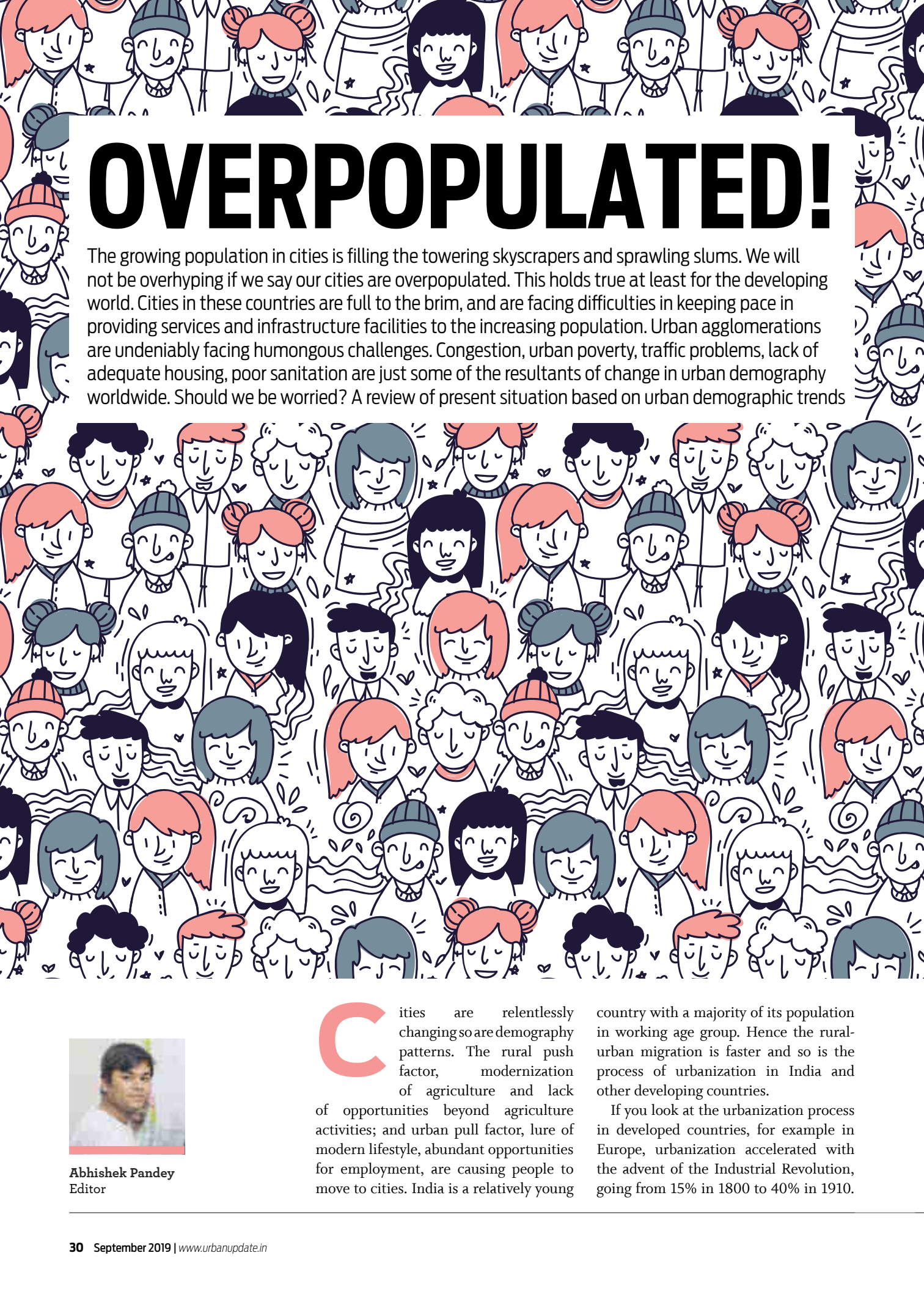


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5. VK Madhvan, CEO Water Aid, chairing session 2 of Urban Dialogues: Reimagining Indore
6. Ravi Ranjan Guru, DDG, AILSG releasing the Indore declaration during the valedictory session
7. Audience present during the conference.
8. Bhalu Mondhe explaining the exhibits at the exhibition gallery to Anil Srivastav
9. Rajiv Agarwal giving memento to Raghav Chandra, Former Principal Secretary, Urban Development & Housing, Government of Madhya Pradesh
10. Kishore Kodwani questioning the panel on urban development works in Indore
11. Organising team of Urban Dialogues



OVERPOPULATED!

The growing population in cities is filling the towering skyscrapers and sprawling slums. We will not be overhyping if we say our cities are overpopulated. This holds true at least for the developing world. Cities in these countries are full to the brim, and are facing difficulties in keeping pace in providing services and infrastructure facilities to the increasing population. Urban agglomerations are undeniably facing humongous challenges. Congestion, urban poverty, traffic problems, lack of adequate housing, poor sanitation are just some of the resultants of change in urban demography worldwide. Should we be worried? A review of present situation based on urban demographic trends

Cities are relentlessly changing so are demography patterns. The rural push factor, modernization of agriculture and lack of opportunities beyond agriculture activities; and urban pull factor, lure of modern lifestyle, abundant opportunities for employment, are causing people to move to cities. India is a relatively young country with a majority of its population in working age group. Hence the rural-urban migration is faster and so is the process of urbanization in India and other developing countries.

If you look at the urbanization process in developed countries, for example in Europe, urbanization accelerated with the advent of the Industrial Revolution, going from 15% in 1800 to 40% in 1910.



Abhishek Pandey
Editor

According to the report *Demography, Urbanization and Development* by Marron Institute of Urban Management, New York University, both Africa and Asia grew twice as fast, starting at similarly low levels of 15% in 1950 to reach around 40% in 2010. The overall population growth has also changed in the last 50 years. In 1963, there were 6 children per woman while in 2012 it has come down to just 2.5. Another interesting fact of population growth is that as life span of people went up, the number of children per woman has gone down.

Demographic shift

In India, the level of urbanization in the country as a whole increased from 25.7 percent in 1991 to 27.82 percent in 2001 and to 31.14 percent in 2011. The number of statutory towns in India increased from 3,799 to 4,041 during 2001-2011 whereas the number of census towns increased from 1,362 to 3,892 during the decade. Among the states, Uttar Pradesh had the largest number of towns – 648 statutory towns and 267 census towns in 2011.

Another distinct change in urban demography in developing countries is that the cities in these countries are much larger. New Delhi, Mumbai, Jakarta, Dhaka, Manila have large populations as New York, Paris and London. However, there is dissimilarity in income levels. It seems that the benefits of urbanization did not reach the last man in the queue.

It is well-known that municipal corporations in developing countries are not as financially strong as their counterparts in the developing world. Thus rapid growth in their cities has given rise to congestion, proliferation of slums and deteriorating delivery of services and overall community welfare. If cities cannot match the scale of population growth with new infrastructure and augmentation of services, then cities are bound to turn into 'urban mess'. Cities in developing countries are full to the brim, and are facing difficulty in keeping pace in providing services and infrastructure

facilities to the growing population. The number of urban poor is also on the rise. The portion of urban population lacking access to water and sanitation services, and affordable housing has also gone up radically. Access to basic amenities like drinking water, electricity, septic tank or flush and toilet facilities are the major determinants of quality of urbanization. This means that cities have to work on the basics to provide quality of life to their citizens keeping in mind equitable delivery of services.

The situation on the ground is upsetting. According to a study, there were around 232 million households in 2012 which did not have access to affordable housing and this number is expected to grow to 331 million by 2025. Similarly, the number of people not having access to toilet facilities has also gone up by 100 million to 667 million from 567 million in 2000. The number of people without access to potable water supply increased from 129 million to 181 million in the same period. Cities are also energy guzzlers. Around 70 per cent of energy consumption of the world comes from urban centers. As population and industries further grow in cities, the energy consumption will also grow and that is why there is need to adapt to green energy to meet growing power demands of cities. Local governments also pay large amounts towards electricity bills. It is very much required that city governments not only encourage citizens to opt for renewable energy but also optimize their own power consumption through technological tools. Cities in poor countries face shortage of electricity thus it impacts its economy.

Master Plan and cities

Theoretically, cities are planned by the governments to grow in an orderly manner and follow their development and master plans but many of the cities in the developing world including in India do not have such plans. And those that have such plans do not follow them because of the rigid nature of such plans and changing nature of cities' demography.

In the case of India, the 3rd Five Year Plan defined the term 'Master Plan' as a statutory instrument for controlling, directing and promoting sound and rational development and redevelopment of an urban area with a view to achieving maximum economic, social and aesthetic benefits. It is defined as the official statement of a municipal legislative body which sets forth its major policies concerning desirable future physical development and thus master plan approach came into being. It is defined as the long-term perspective plan for guiding the sustainable planned development of the city. The document lays down the planning guidelines, policies, development code, and space requirements for various socio-economic activities supporting the city population during the plan period. It is also the basis for all infrastructure requirements. All the master plans offer technical solutions to the potential problems that the city could face. With the swift changes in urban demography and other government policies, it is quite difficult to foresee the future of a city 20-25 years down the line. The policymakers need to understand the needs of the city and must have provision through which the master plans can be amended locally with citizen and expert consultation. This will indeed help cities in leveraging on their strengths which they create over a period of time.

No doubt city governments in developing countries are facing and will face even more complex challenges in the years to come. While they grapple with the surging in-migration of rural folk, they will need to come up with sustainable solutions to meet the aspirations of the migrants in a just and equitable manner. Thankfully, in their efforts they will have access to some cutting edge technologies for the first time in history. They must leverage these. While urban rejuvenation measures are being rolled out in big measure in many countries, how they succeed in meeting the challenges is anybody's guess. The outcomes will set apart the 'livable cities' from the rest. ■

Cities need to change as demography changes

India is among the few countries where more people are still living in villages than in cities. There are many countries which are 100 per cent urbanised or majority of the population live in cities. Undoubtedly, cities provide immense opportunities to nations for economic growth but there are certain fallouts of unplanned urban growth. This article tries to capture the demography trends in countries around the world and highlights the issues concerning the shift



Ranjit S Chavan
President, AIILSG

Urbanisation is the reality of today's world and it inevitably implies displacement of people. No city has grown into a metro or megacity with organic growth. So if the city has to grow, the influx of

people will certainly happen. Cities have to be ready else they will start crumbling in chaos. It is part of the process of urbanisation. The process can turn into a problem if the issue is not addressed and managed well by understanding the realities of migrants

and their relation with cities.

The last fifty years witnessed a phenomenal jump in urban population in the developed world. Now, the trend is catching up in developing and low-income countries. The global urban population has grown rapidly since 1950, having increased from 751 million to 4.2 billion in 2018. Asia, despite being less urbanized than most other regions today, is home to 54 per cent of the world's urban population, followed by Europe and Africa (13 per cent each).

Globally, more people live in urban areas than in rural areas, with 55 per cent of the world's population residing in urban areas in 2018. In 1950, 30 per cent of the world's population was urban, and by 2050, 68 per cent of the world's population is projected to be urban. If we look at urban population region-wise, today, the most urbanized regions include Northern America (with 82 % of its population living in urban areas in 2018), Latin America and the Caribbean (81 %), Europe (74 %) and Oceania (68%). The level of urbanization in Asia is now approximating 50 %. In contrast, Africa remains mostly rural, with 43 per cent of its population living in urban areas.

What is an urban area?

The definition of an urban area can vary from one country to another based on demographic and sociological criteria.



In a demographic sense, the urban areas are defined as per population and population density. While sociological criteria such as social connection, access to services are intangible and relative. According to United Nations criteria, a place with a population of 20,000 people or more is defined as an urban area. From this definition, Vatican City, Gibraltar, Singapore, Nauru, Bermuda, Hong Kong, and Monaco have achieved 100 per cent urbanization. Most of them are significantly small countries or a collection of small areas bounded by a single city. Their population is also far less than many global cities. Other countries with more than 90 per cent people living in cities are Qatar, Kuwait, Belgium, Malta and Uruguay.

However, this is not a universally accepted definition. For example, in India, a place which has a population of 5000 and over 75 per cent male population is engaged in non-agriculture activity is considered urban. According to the Census of India 2011, the definition of an urban area is as follows:

- ◆ All places with a municipality, corporation, cantonment board or notified town area committee, etc.
- ◆ All other places which satisfied the following criteria:
 1. A minimum population of 5,000
 2. At least 75 per cent of the male main working population engaged in non-agricultural pursuits;
 3. A density of population of at least 400 persons per sq. km.

From this definition, India has 4041 statutory towns and 3892 census towns. Among the states, Uttar Pradesh had the largest number of towns – 648 statutory towns and 267 census towns in 2011. According to Census 2011, If we look at the level of urbanization, defined as urban population as a proportion of total population, Goa was the most urbanized state with 62.17 percent urbanization in 2011 followed by Mizoram at 52.11 percent urban population. Among the Union Territories, Delhi had urbanization level of 97.50 percent followed by

AS SINGAPORE SHOWS, LASTING REFORMS ARE BEST ACHIEVED WITH GREATER COMMITMENTS OF PUBLIC AND PRIVATE RESOURCES TOWARDS NEW PROJECT PIPELINES AND STRICTER REGULATIONS TO ENSURE SUSTAINABLE INFRASTRUCTURE DEVELOPMENT. IN LAST 55 YEARS AFTER IT BECAME AN INDEPENDENT NATION, THE CITY ADMINISTRATION AND MANAGEMENT WERE IMPROVISED GRADUALLY AND THE CITY-STATE SET HIGH STANDARDS FOR DELIVERY OF PUBLIC SERVICES AND INFRASTRUCTURE. ALL CITIES MAY NOT BECOME SINGAPORE BECAUSE OF THEIR PHYSICAL AND FINANCIAL HEALTH CONDITIONS YET EVERY CITY CAN SET A PRECEDENT ON SOLVING CERTAIN ISSUES BASED ON THEIR STRENGTHS

Chandigarh with an urbanization level of 97.25 percent in 2011. Himachal Pradesh had the lowest urbanization with only 10.03 percent population living in urban areas in 2011, followed by Bihar (11.29 per cent).

Setting precedent

Cities have to solve the problems arising from the increase in population else they will face unprecedented challenges. Cities need to lay a concrete plan based on targets and indicators else cities will not be able to address specific issues. City leaders and citizens need to be open to updating these plans and sticking to them across successive governments. Mayors with different political affiliations may come and go but citizens have to take an important role in the process of policymaking at local level. Cities are already setting tough emissions targets, investing in greener infrastructure, providing subsidies for renewable energy, and building parks and municipal sinks to reduce their carbon footprint. However, this is still happening only in cities with greater financial and administrative independence.

A report published on the World

Economic Forum website details the model of Singapore and how the city utilizes its resources optimally and sustainably. It says Singapore, one of the densest cities in the world, is also a model of green planning. In the 1960s, Singapore was heavily congested, with open sewers and dense slums. Over the past two decades, the city set aside hundreds of acres and planted 3 million trees for an urban garden that acts as the lungs of the city.

It also created one of the largest freshwater nature reserves on the planet. As Singapore shows, lasting reforms are best achieved with greater commitments of public and private resources towards new project pipelines and stricter regulations to ensure sustainable infrastructure development. In last 55 years after it became an independent nation, the city administration and management were improvised gradually and the city-state set high standards for delivery of public services and infrastructure. All cities may not become Singapore because of their physical and financial health conditions yet every city can set a precedent on solving certain issues based on their strengths. ■

6.5 billion

people will live in urban centres by 2050

70 %

of worldwide energy consumption is in cities

35.11%

of total urban households lived in one room houses In 2001. The number decreased to 32.13% in 2011



Demographic TRENDS IN CITIES

Around the world, governments are facing new challenges with changing demography and growing cities. Each day, the number of migrants in cities increases which burden the civic authorities further. This is a problematic situation for Indian cities where the authorities are already trying to cope with the needs of the existent population. And, the growing demands of basic services due to migrants add to their difficulties. A statistical overview of the state of Indian cities is presented as under

Compiled By: Ashley Paul | Designed By: Meenakshi Rajput

Housholds in emerging economies without affordable housing

232 Million

2012

331 Million

2025

Urban Population in India

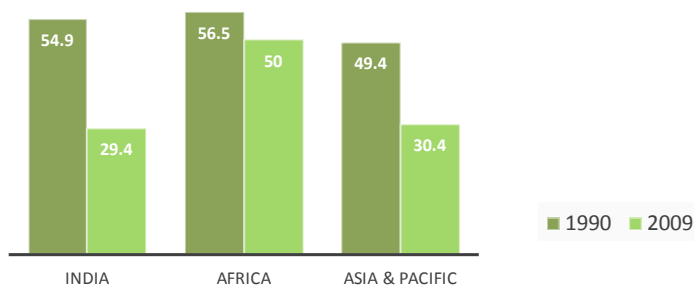
286,119,689

2001

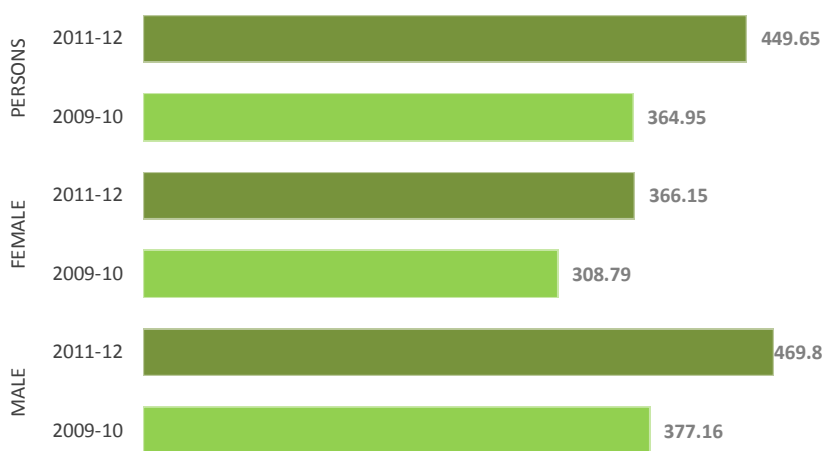
377,106,125

2011

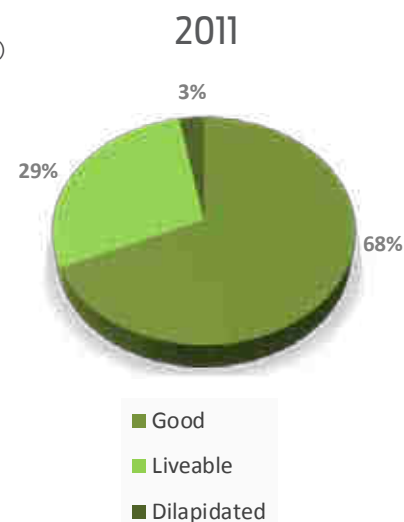
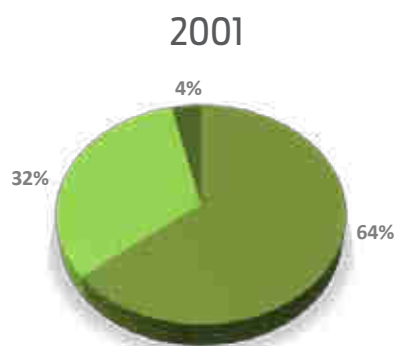
Slum Population(% of total population)



Average Wage/Salary earnings (₹/day) received by Regular Wage/Salaried Employees In Urban India



Distribution of population based on condition of houses



In the above graph, workers belonging to 15-59 years of age are taken into account and regular wage/salaried employees include persons with activity status of 31 (worked as regular wage/salaried employee), 71 (did not work owing to sickness but had regular salaried/wage employment) and 72 (did not work owing to other reasons but had regular salaried/wage employment)

Number of Urban Agglomerations

A town together with its outgrowth(s) is treated as an integrated urban area and is designated as "Urban agglomeration"



5 largest urban agglomerations ranked by population size

Rank	Country	Urban Agglomeration(UA)	Population (in millions)	UA Area(km ²)	Population Density (persons per km ²)
1	Japan	Tokyo	37.26	2188	6158
2	India	Delhi	25.87	783	7400
3	China	Shanghai	23.48	6340	2059
4	Mexico	Cuidad de Mexico	21.34	1485	6000
5	Brazil	Sao Paulo	20.88	1521	7216

SOURCE
Handbook of Urban Statistics
2019, Ministry of Housing and
Urban Affairs



Make cities and human settlements inclusive, safe, resilient and sustainable



Making cities work for

SDG 11 is a call for Sustainable Cities and Communities. It calls to make cities and human settlements inclusive, safe, resilient and sustainable. In order to realize this Goal and the Targets there under, cities are working to become increasingly accessible to wider categories of citizens and thereby move towards greater inclusivity



V Vijaykumar
Senior Advisor, AIILSG

In the quest to become livable and sustainable, cities will have to meet several challenges while addressing the needs of some of the following:

Older persons

As many countries around the world 'age', i.e. comprise growing numbers of older persons in their population, cities are understanding the special needs of such senior citizens and very senior citizens. Administrators and policy makers are realizing that these older persons are ones with a voice and importantly with a vote. These voices are increasingly coming to count. Efforts are on to craft cities that are friendly to the aged.

Several parameters may work to make cities preferred by the aged. Primary among them is a low crime rate. Safety, including outdoor safety becomes very important especially when such citizens are without the presence of younger family members or when these persons venture out alone. City security systems such as beat policing of vulnerable locations and

households can instill confidence and make such neighbourhoods preferred. While such arrangements are best provided in specially gated enclaves for the older persons, care is required to see that this does not result in 'locking in' the citizens and 'excluding' them from normal day-to-day life of the city such as can happen in old-age homes. Such homes also preclude access for senior citizens to the young and children and thus block out an important source of energy and vitality in their lives.

Other aspects that cities must look at is providing good healthcare options, namely doctors, paramedics, diagnostics facilities, care givers and assisting living facilities. These facilities are again best provided in closed gate communities – not the best option, and hence calls for innovative thinking and meticulous implementation.

Appropriate leisure opportunities are necessary for these aged, mostly retired citizens in order for them to live richer and fuller lives. Some communities are putting together skilling activities for seniors in order that these persons may remain relevant in a fast-changing



one & all

technology world, not necessarily to earn livelihood, but even to contribute to society in their own small ways and enable them 'talk the language' of their younger neighbours.

Short travel distances and convenient public transport can enable them move around and access places and activities of their interest.

Generally smaller cities and towns score well on above compared to large ones, therefore smaller towns are more suited for older persons.

One survey has found Chandigarh to be a suitable location for older citizens because of the fact that it is a planned city, has an airport and is close to Delhi offering even greater air and rail connectivity. The city reportedly has affordable real estate options. Coimbatore is another good destination. As alubrious climate, good infrastructure including medical benefits and nearby holiday destinations such as Ooty make it a good option. However its emergence as a preferred IT hub may lead to crowding and higher real estate prices. Pune, once a 'Pensioners' Paradise,

has in the last few decades become an industrial hub and an IT hotspot which has transformed its profile, but still remains a preferred location for the aged too because of its relatively good climate, affordable real estate prices, range of quality medical facilities, numerous eat-out options, and good air and rail connectivity. Bengaluru could be quite similar to Pune.

Differently abled

According to a World Bank assessment, one in every 12 households has a person living with a disability. Therefore it is essential for every city and town to work towards making itself a disabled-friendly one. Since the range of disabilities is wide, so also several measures need to be put in place to address the special needs of these citizens.

Visually impaired, hearing impaired and those with mobility constraints would all need different special measures. The need for measures is realised unanimously and therefore these aspects have been built into the statute books of city governments and others. Specific measures are outlined in the plans of various cities and towns. Dropped kerbs to provide wheelchair access and low-floor buses are almost universally acknowledged as necessary measures.

People with disabilities require ease of access to buildings – public and private, as well as to public spaces such as walkways, gardens and parks, other public utilities and transportation. Some other measures include toilets in buildings to have appropriate modifications, elevators with audio signals in addition to visual displays, street traffic signals with audio alerts, and so on.

These and several other measures are required to ensure inclusion and enable near-full participation of specially abled persons in society.

Some destinations have made a mark in terms of their disabled-friendliness for visitors.

Ernakulam's Kochi Fort in Kerala is a sought after heritage tourist destination. It can be considered among

the early disabled-friendly ones. This fort has been provided with suitably designed ramps and non-slip tiles for providing safe and convenient access for the elderly, the disabled and those who are wheel-chair bound. It also has facilities to address the needs of those who suffer from visual and hearing impairments.

One district in the State, Kannur, has a large number of government offices which offer barrier-free access for the specially-abled. Other locations in the state are working to become easily accessible to tourists with disabilities. The City of Delhi made special efforts nearly twenty years ago when the Late Stephen Hawking visited the city to participate in a conference and expressed the desire to visit Jantar Mantar, Qutb Minar and other tourist spots in 2001.

It is said that this event gave momentum to efforts to make the tourist spots more easily accessible to specially-abled tourists. Several hotels in Delhi and the Delhi Metro (ramps and elevators, braille inscribed buttons, tactile markings) are examples of spaces that are working on the 'Cities for All' principle. The Archeological Survey of India under its 'Accessible India' initiative is working to make many more tourism assets of the country accessible to specially-abled persons.

Cities for Youth

All successful cities would aim to meet the needs of the youth, a crucial segment of the city's population. So what makes a city good for the youth? Primarily it has to be job opportunities. Cities with low unemployment rates, high median wage levels and growing wages are obviously the preferred ones. In addition to employment opportunities, a city must offer affordability in order to be accessible to the youth. Affordability of rents for housing would be a crucial parameter. A city which offers good jobs and wages but with high rental costs may not be very youth-friendly. Other aspects could be access to entertainment, food options and so on. ■

Population isn't a major concern for India's urban story!

“Ever-rising population is a matter of concern and the small section of society which keeps their families small deserves respect. What they are doing is an act of patriotism,” PM Narendra Modi said in his Independence Day address. Overpopulation has been a major issue for India and with the Prime Minister's address, the question is in focus again: Are we on track in resolving the issue? What are the challenges that we are facing presently and might face in the future and are we prepared to tackle them?

Akshit Pushkarna
Editorial Assistant

One of the main highlights of the Prime Minister's speech at the 72nd Independence Day was the growing concern over the population explosion India has been facing. “There is one issue I want to highlight today: population explosion. We need to think; could we do justice to the aspirations of our children in future? There is a need to have greater discussion and awareness on population explosion,” PM Modi said. In essence, this has been an issue that Independent India has been constantly dealing with and with the rate at which the population continues to grow India would soon be the most populous country of the world, overtaking China by 2027, according to a report published by the United Nations.

India has failed in putting in its population growth in check thus it has resulted in abject poverty, with government welfare programs proving to be insufficient in catering to millions of people earning less than ₹200 per day.

“There are several factors for the high population. We have a large percentage of the population in the reproductive age group. Only 54 per cent of couples use contraceptives,” said Ram Vilas Paswan, Minister of Consumer Affairs, Food and Public Distribution to CNN.

Is population growth really worrisome?

We may see huge population everywhere we go whether it is railway stations, hospitals or shopping malls. But the recent trends suggest that the population growth is in control. Population growth rate and national fertility rate, which directly indicate the extent of population growth during a particular time period, have lowered significantly. Population Growth Rate has gone down from 1.77 per cent in 2011 to 1.20 per cent in 2019, while the fertility rate has declined to 2.2 in 2019 from 2.6 in 2011. This encouraging development can be attributed to the National Program for Family Planning's focus on establishing a proper system to impart knowledge regarding the benefits of family planning to less educated sections of society.

The program has incorporated various initiatives like home delivery of contraceptives by ASHAs at doorstep

of beneficiaries; Scheme for ASHAs to ensure spacing in births in rural areas; Easily accessible pregnancy testing kits; Placement of dedicated RMNCH counsellors (Reproductive, Maternal, Neonatal, and Child Health) in obscure regions of the nation in the past couple of decades. Such strategies have proven to be successful on paper.

The Government of India has increased domestic investment for family planning. In 2012 at the Family Planning Summit 2020, India committed to spend \$2 billion by 2020 for family planning program and, in July 2017, India renewed its commitment to invest \$3 billion by 2020. A more stringent proposal to prevent rapid population growth was brought by Rakesh Sinha, Member of Parliament, in the Rajya Sabha on July 12, 2019.

‘The Population Regulation Bill, 2019’ calls for punitive action against people with more than two living children, including disqualification from being an elected representative, denial of financial benefits and reduction in benefits under the public distribution system. If passed, the bill would make it mandatory for individuals to seek permission from officials if they want to have more than two children, permission that could be denied if sufficient cause was not met. In a first for Government of India, this bill introduces more stringent norms which makes it illegal to procreate more than twice, and hence, has been criticized and not implemented till now.

Expert's opinion

Even with the success of the various schemes which have been implemented by the government in the previous couple of decades or so, the rate with which the Indian population is expanding is double than that of China, which gets reflected in the population estimates as well as the cities, which



There is no population explosion as of now. We are pretty much on track. Resolving the issue would take time, but as of now, we are on track. 24 states have already achieved the targeted Total Fertility Rate (TFR) and developments in the remaining states to achieve the targeted 2.1 is on track as well

Alok Vajpayi, Joint Director/Head, Knowledge Management and Core Grants, Population Foundation of India

are projected to share the greatest of the load of this excessive population in the future and hence cities would bear the brunt of the issue.

If one studies the success of the more draconian population control policies implemented by the communist regime of China, it can be speculated how policies such as the controversial 'one-child policy' amongst others would fare in India. Speaking with Urban Update, Alok Vajpayi, Joint Director/Head, Knowledge Management and Core Grants, Population Foundation of India said that such policies have historically proven to have inverse effects for India. Even for China, the policy, although reducing the fertility rate to 1.5 by its dissolution in 2015, has produced one of the world's greatest gender imbalances as a desire for male children led to reported abortions and infanticides to ensure a couple's only child was a boy. In 2016, there were 1.15 males for every female in China.

Taking the example of the 'emergency' imposed in 1975 which saw the Government of India initiate a forced mass-sterilization campaign, Vajpayi said that the mentality of Indian men to adopt permanent contraceptive methods has changed. The effect of the campaign has been long lasting, creating a misconception in the minds of Indian men that procedures such as Vasectomy would somehow effect their virility. The government, in order to find a viable solution to the growing



A crowded market in an Indian city

population problem without meeting any resistance, has modelled the family planning missions as more women centric. In our discussion, Vajpayi expressed satisfaction with the pace with which the population growth level has been declining, "There is no population explosion as of now. We are pretty much on track. Like a car can't be brought to absolute halt, same is applicable here. Resolving the issue would take time, but as of now, we are on track. 24 states have already achieved the targeted Total Fertility Rate (TFR) and developments in the remaining states to achieve the targeted 2.1 is on track as well," he said. A more significant drop would be worrisome for us in the future, holding significant consequences for the demography dividend, similar to the problem that China is facing right now. "Population momentum is a consequence of the demographic transition. Population momentum explains why a population will continue to grow

even if the fertility rate, the number of children per woman, declines. We have comparatively younger population as of now and reproduction at the rate of one per family would be fruitful in the long run. If we lower that, we will be facing the similar issue as China's facing right now," Vajpayi added.

When asked if the economic slowdown would be a hindrance in the wide scale implementation of family planning awareness campaigns, he said, "Budget allocated to the National Health Mission is 3 per cent. Family planning should be prioritised irrespective of the financial crunch."

In conclusion, many experts share similar views to the population problem as Vajpayi and believe that Indian methodologies of introducing the benefits of family planning methods have been successful till now but awareness must be spread to all parts of India in order to bring down the population growth rate in the future. ■

A Cape Town lesson for Chennai and other Indian cities facing 'Day Zero'

Recently, southern India, especially Chennai witnessed one of its severest water crises in history. But, shockingly no advertisements, hoardings, announcements on saving water can be observed in the city. It seems as if the panic that grips our cities during summer evaporates from people's minds as soon as monsoon arrives. Such an approach can lead to a 'Day Zero' if stricter steps are not taken to make people water wise



Ranjan K Panda

Convenor, Combat Climate Change Network, India

On August 1, as I landed at Chennai airport, I was expecting some big billboards and multimedia messages running across the airport asking people to use water judiciously. Even though the city had just survived one of its severest water crisis seasons in its recorded history, there was no visible effort to raise ample awareness.

Monsoon had arrived but the city was still facing water crisis. Only small stickers near water taps, asking you to 'save water', were to be seen. That's certainly welcome but not enough. I was there to speak on the current water crisis our country faces and how climate change is going to aggravate the situation. It was just natural for me to expect at least a message like "Don't use shower, Chennai is nearing a Day Zero situation" in the bathroom of the accommodation I was provided. Hopefully, I find that next time I visit the facility. I was not aware of the current water supply situation in the city, nor had any idea of the health and current status of the source this facility uses. But the way Chennai people had struggled for water just a few days back, as I saw on television channels,

had sent chills down my spine. So, I decided to go for a voluntary cut in my water use when I was in this city. I went for a half-bucket bath, tried not to use the flush but throw a few mugs of water into the pan to clean the faeces up. The Day Zero in Cape Town was haunting my mind, as was the prediction of several reports in India that point to a Day Zero like situation in several cities including Chennai. And I was still wondering, why the Cape Town experience of shifting the Day Zero was yet to come to our city managers? Why a visitor arriving at Chennai or Bengaluru or any other city is still not greeted with loud and clear messages on the water crisis facing the city? Do we expect our people to behave water wise on their own? If that was the case, the governments would not be spending thousands of crores in creating awareness on 'Swachh Bharat Mission'. While it is important to prepare strategic documents and plans to fight water crisis, it is more important to keep constantly communicating with the people. The Cape Town lesson comes handy here, and our cities must learn.

Climate change induced drought can jeopardise city water systems

In this column in February 2018, I had written how the Day Zero was approaching and had already put the city planners and dwellers on their toes. In fact, the city of 4 million people, which is completely dependent for its water on the Theewaterskloof Dam and its five sister reservoirs, kept planning to meet a Day Zero like situation for more than a decade. The city had been enforcing restrictions in water use since 2000 when people were asked to use less



water owing to below average rainfall. Water restrictions were again enforced towards the end of 2004 following a severe drought in the winters of 2003 and 2004. These episodes, and the increasing immigration of people into the city, called for a fresh analysis of future water demand and supply scenarios. A Reconciliation Strategy Study published in 2007 did this job to project the supply and demand scenario from the water supply system through 2030. This study, besides recommending induction of more water into the system, acknowledged the fundamental risk of depending on reservoirs that makes it more vulnerable to climate change induced long droughts and reduction in rainfall.

The city authorities decided to reduce water demand through several measures. Some of the measures really helped and then rainfall also came to the rescue. However, things worsened. The consecutive drought of three years, considered to be a 300-year climate phenomenon, dried up the reservoirs to a scary level in late 2017. From being full in 2014, the city dams' water levels were down to 71 percent in November 2015, which then further reduced to 60 percent, and then to just 38 percent at the time of beginning of summer of 2017. By January 2018, it was found that the reservoirs had only three months' water supply left. This gave rise to the concept of Day Zero.

Day Zero: A perfect messaging effort

In fact, the term 'Day Zero' was coined by the city managers to communicate with the people the gravity of the situation and to prepare them for the drastic measures that were needed to be taken. Now the city authorities were desperately asking people to reduce their water consumption to below 50 litres per person per day. 'Day Zero' would have taken effect when dam levels reached 13.5 per cent. That would have meant the municipality would have taken control of municipal water supply in a phased approach in order to stretch this supply, until the dams were

WHY A VISITOR ARRIVING AT CHENNAI OR ANY OTHER INDIAN CITY IS STILL NOT GREETED WITH LOUD & CLEAR MESSAGES ON WATER CRISIS? DO WE EXPECT OUR PEOPLE TO BEHAVE WATER WISE ON THEIR OWN? WHILE IT IS IMPORTANT TO PREPARE STRATEGIC DOCUMENTS, PLANS TO FIGHT WATER CRISIS, IT IS MORE IMPORTANT TO KEEP CONSTANTLY COMMUNICATING IT WITH PEOPLE. THE CAPE TOWN LESSON COMES HANDY HERE, AND OUR CITIES MUST LEARN

at a sufficient level to allow water to be distributed via the reticulation system once again. Utility managers would have shut off water to homes in the suburbs and to businesses outside of the priority city centre area, families would have had to collect rationed quantity 25 litres of water per person per day from 200 collection points around the city. Household taps would have completely run dry, public taps would have been opened with heavy police & military protection; and, water would have gone costlier.

The city applied a lot of methods such as slowing down the pressure of water pipes, introducing water meters that would cut the supply after the allocated amount was discharged to a household, banning use of water for car wash and spraying in lawns, and so on and so forth. People largely cooperated and the 'Day Zero' was shifted from mid-April to mid-May, and finally it did not come. The arrival of winter rainfall in 2018, the help by nearby farmer associations to give away their share of water to the city, and a constant effort by all the stakeholders together helped Cape Town to avoid 'Day Zero'. But the danger looms large, as climate change is going to induce more such droughts. The city is now mulling several medium term and long term measures to fight future uncertainties. Communication played a major role in all these efforts. The city managers invested a lot in both coining the appropriate communication messages and also getting them spread to the entire population. The panic

that was created also affected the rich and water insensitive citizens who feared standing in long queues for a few litres of water. The people were updated on the situation of water use and scarcity on a day-to-day basis so that everybody was aware where they are heading to and how important it was to use less water. Electronic bill boards across the city were regularly displaying the situation and people were being repeatedly reminded of the situation, rules and measures being taken. The city adhered to an 'adaptive water management' practice where in the supply was regulated each day based on the availability of water that was being monitored with technological interventions and the information dissemination on the situation was transparently done to the city population.

I did not find any such emergency in Chennai. This city, as well as all our other cities, need to get the message right. 'Day Zero' is not necessarily the day when water availability will be zero. In reality, the kind of water crisis our cities are already in, the Cape Town kind of measures need to be adopted with immediate effect. We need to communicate with people and work with them for better water management. We also need to work towards water conservation through source augmentation, recharge and rejuvenation. ■

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

Floods in Indian Cities

Indian cities like Mumbai and Kochi experience floods annually during monsoons. And, every year loss of life and property is reported. Who is to be blamed? Is it lack of proper planning or faulty drainage systems? Or, lack of proper preparatory measures taken by the city authorities? Floods are considered as artificial disasters which happen because of the way cities are constructed. Therefore, we need to look for loopholes and take measure to address the problem effectively



Tikender Singh Panwar
Former Deputy Mayor, Shimla

Geetha a mother, aged 21 years, held her son, Dhruman, 1.5 years young, till her last to protect him, but in vain. When their bodies were discovered in Mallapuram district in Kerala, Geetha was holding on to her son with her protective hands. Two sisters, Anagha and Aleena who hugged each other every night before sleep, were buried together in a massive landslide in Nilambur town in Kerala. Similar heart rendering incidents of loved ones lost in the recent floods in the country have been reported incessantly. Just in three states, Maharashtra, Kerala and Karnataka, 227 people have died and the number may be higher as there are a large number of missing persons. More than 350 deaths are reported from across the country as severe flooding and landslides in Assam, Himachal Pradesh, Bihar and Punjab have claimed more lives. More than two lakh displaced people had to be shifted to shelters and hundreds of villages were left behind by the people because of inundation.

The economic loss is also colossal. It is estimated that every year there is a loss of over three per cent of the GDP. The central water commission has estimated that since 1957 to 2017, 1,07,457 people have died in floods and nearly ₹3,68,868 crore loss of infrastructure has taken place owing to loss of houses, roads, bridges etc. In the state of Maharashtra itself there is a reported loss of ₹50,000 crores due to the floods in the last two months. These

losses include damage to property, loss of animals and dairy business and crops.

Floods in cities

A large number of the cities in the country too were under water. Some of the cities like Mumbai and Kochi are reportedly experiencing regular flooding. Urban flooding is specific in the fact that the cause is lack of drainage in an urban area and faulty planning. The UNEP (United Nations Environment Programme) terms the flooding of cities as artificial and not natural. By artificial it means that floods in the cities happen because of the way the cities are constructed. The way infrastructure is designed in the cities compounds the problem of urban flooding. And, not to lose sight of absence of the way cities have been built, occupying the land mass and leaving little space for water sequestration, badly designed and constructed storm water drains, which instead of collecting the storm water spills it more on the roads and the localities. And not to miss the absence of rain water harvesting in the cities which also leads to flooding.

Let us consider the example of Delhi. In this city there were 611 natural water bodies that were responsible for collecting the rain water and acted like reservoirs. Not just that, these were also able to maintain the ecological balance of the region. Out of the 611 water bodies, 190 are completely lost; either occupied by the real estate or converted into a park. A big number of 274 water bodies have dried up. There

are various reasons for it. Either the water channels leading to these bodies have been infringed or there may be blockage of the drains that led water to these bodies. Interestingly, Delhi gets 580 million cubic litres of rainfall in the season, nearly 300 million cubic litres gets drained off and creates flooding in the city. Just a cursory look at the three decades of old satellite maps of the cities can explain how the city's water channels have been blocked. Gurgaon is an interesting example of it. In Gurgaon the water channels that led rain water to two major lakes have completely been blocked. One may recollect the shooting of a serial 'Fauji', which led to the projection of Shahrukh Khan as an actor. The lake around which the shoots were done and in which he had nearly drowned is not completely dry.

With the construction of flyovers, housing projects and the metro, the natural channels of water have been blocked thus leading to massive flooding in the city. There is a famous saying in Gurgaon that it is not just the rain that scares the population even the accumulation of clouds is enough to lead to such a fear. Gurgaon is an interesting example where the city has got constructed without a master plan. The city was developed initially by the private developer and then the master plan was created. In Delhi at least there is a master plan which is getting updated in the present year.

Project based approach

The initiatives of successive governments post 1990s have been to

achieve desired growth in the cities by developing projects instead of a policy shift in development, which should have been to integrate many agencies working on the ground. JNNURM (Jawahar Lal Nehru National Urban Renewal Mission), RAY (Rajeev Awas Yojana) followed by the SCM (Smart City Mission), AMRUT (Atal Mission for Rejuvenation and Urban Transformation) etc., all speak the same language of project driven urbanisation. There have been many instances when the sheer design of the project has dismantled the contouring of the region thus leading to blockage of water bodies and causing flooding. The new Andhra Pradesh capital in Amravati is another disaster in the offing as urban experts' term it. The capital is being constructed on the low-lying areas where there are large number of water bodies. Amravati will be the future Chennai they say, and, it was proven when recently, as reported in the press, water had entered the compound of the former chief minister, Chandrababu Naidu.

Multiplicity of agencies in the city

The urban flooding is not just a problem of planning but also of multiplicity of urban governance. Each city has a different governance structure. Some of the smaller cities are just left to manage garbage and infrastructure projects are done by some state government run parastatals. Whereas in some of the cities, there are many tiers of ownership and governance on infrastructure. Take for example in Delhi the water dropping from the top of the metro track, owned by the DMRC, falls on the road, taken care by the Delhi state government and eventually enters the storm water drains managed by the municipal corporation. None speaks to each other. One can find at many places that the water from the metro does not fall through the drain pipes rather falls directly on the road and damages it. A simple way of integration could have been to harvest the rain water directly from the metro track and use

it suitably. But without an integration of governance such a system cannot evolve. Apart from the multiplicity of agencies another major problem is the engineering which in which the storm water drains are constructed. Take the example of a mountain city, Shimla. Since British times, storm water drains were constructed with embankments of stone. This was done to ensure that the water does not gush in the drain and percolates slowly to avoid flooding and also to recharge a large number of water springs in the adjacent vicinity. Recently, the Asian Development Bank has funded a 'beautiful city' project in Shimla. The worst that could have happened in the beautification plan is the covering of the storm water drains with concrete and porcelain. This has made the main Mall Road cleaner, definitely, but has increased the velocity of the water in the larger drains that causes flooding. Similarly, in the 'level' cities the best method of constructing a drain is to concretise it, which then gets filled with muck and the water instead of moving ahead gets spilled over on the roads and various localities. In Delhi there are a large number of examples with such construction of drains.

What is to be done?

Suptendu Biswas, an urban planner points out that exactly 50 years ago a book titled "Design With Nature", authored by Ian McHarg was originally published in 1969, which emphasises on the multifunctional landscapes design paradigm. It focuses on the natural, social and cultural processes and sees design as an iterative process that is shaped by interactions between humans and ecosystems. Suptendu says that the planners have forgotten the essence of this approach of bringing the community of the people and the diverse aspects of the landscape planning together. Planning has become a mechanical process which is extremely dangerous. John Closs, the former executive director of UN Habitat III has reiterated several times that we have to go back to the basics of planning and need to get rid of

the Laissez faire, i.e., the market will dominate the planning process.

The role of the State in guaranteeing ample number of planners to the field cannot be ruled out. Romi Khosla, another city planner of the country with repute in South Asia says that we all know that there is a shortage of planners and architects in the cities, especially the smaller towns. He suggests that there should be a national service by the pass outs of the planning and architecture colleges and at least one year, as part of the internship programme, they should be sent to the smaller towns to prepare their land use and infrastructure plans. This will be a win-win situation for both the cities and the students. The interface shall help the students to understand more about the basics of planning.

There are also examples of the citizens partnerships which definitely break the darkness. One of the examples is the passion in which one million (10 lakh) wells are being dug in the city of Bangalore. These wells are dug by the traditional community of the region and the wells are in the backyard of the houses, which will be filled through rain water. This shall serve twin purpose, using the rain water effectively and reducing flooding of the streets. Another example is the five kilometres stretch of nullah converted into a cleaner water stream and a walking space in Gurgaon. The technology is simple; it uses the storm water to recharge the nullah and the earlier sewer water flowing in to the nullah has been blocked and treated. The place now become a walkers paradise in a city like Gurgaon. There are several such initiatives by the citizens groups but these are insufficient to meet the scale at which we are talking about.

The scale can only be filled by an effective integration of planning, execution, governance, transparency and accountability. And, the State has to act on it. ■

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

Appreciate Delhi's age-old identity!



Abhilash Khandekar

Sr Journalist

I have been dabbling in the slightly complex yet very enjoyable avian world for a few years. I mean one has been trying to watch birds, know more about the large number of species, their habits and migration pattern and learn more and more about it. Seriously, it's a very vast world. Interestingly, the more you know, the more you feel like knowing about these little colourful creatures. They are up there on the trees in your garden, in public parks, found near small or big waterbodies, and in mountains and jungles. But this book is largely about the urban birds.

Well, the problem with birds is that they are difficult to be identified at once, barring a few species such as pigeons, house sparrows, crows, bulbul, jungle babblers, kingfishers, eagles, mynas, parrots and of course our national bird peacock! Most of them are easily seen in

Indian cities. Peacocks are commonly seen in a large part of the posh Lutyens Delhi that houses spacious bungalows of the ministers and bureaucrats with lots of greenery all around. Some of the birds mentioned above have also been pet birds, as also the love birds and budgerigars-which essentially fall under the exotic bird category. Indian parakeet is among the most popularly kept birds at home in cages. Until about two decades ago, a caged parrot was a common sight in cities but with growing awareness, people do not want to keep birds in captivity. However, in rural India, we can still see caged parrots.

But to know regarding almost everything about birds of the national capital, famous birder of Delhi, Nikhil Devasar, has put together a beautiful handy book which I am reviewing for Urban Update because these chirping beauties have been an integral part of the otherwise problematic mega city that is known for its worst traffic, noise and air pollution and extreme weather conditions. Nikhil should be thanked for adding a colourful and encouraging dimension to Delhi and NCR.

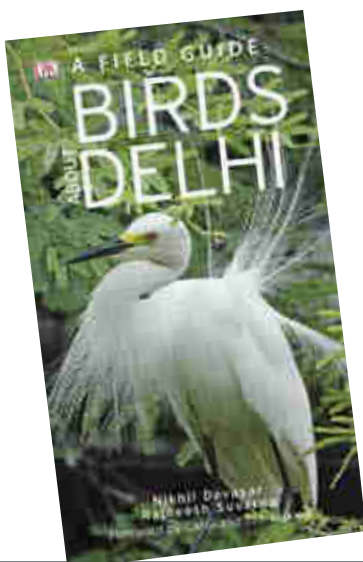
This field guide not only introduces us to the birds in and around Delhi but

also to those found in parts of Haryana, UP, Rajasthan, neighbouring Delhi. The author says these areas, covering some 34,144 sqkm of the NCR, have perhaps the most dynamic of habitats in northern India. The region possesses diverse geographical terrain that ranges from wetlands, scrub forests, and open grasslands, to fallow fields.

The authors-Devasar and Suvarna in their opening remarks to *Birds About Delhi* tell us that various avian species have made this place (Delhi/NCR) their home while trying to adjust to changing city landscapes and expanding concrete jungles. The NCR is also situated on the migration path of many birds, providing sightings of many passage migrants, authors inform us. Incidentally, the migration paths of birds coming into India from Siberia, Russia, Mongolia, African countries, etc. have all been clearly marked and efforts have been globally to secure these paths. The Indian environment ministry has also released a document on these pathways last year.

Devasar writes: "An abundant ecosystem, the wetlands form a transition zone between aquatic and terrestrial terrain and support a variety of birds-breeding, resident and winter visitors. The Delhi Climate Action Plan lists 621 wetlands across the NCR including Yamuna River, Okhla Bird Sanctuary and Yamuna Biodiversity Park. The Okhla Barrage, as the book tells us, hosts over 20,000 water birds in winter. Yamuna River remains the largest home to waterfowl species which seasonally augment the resident population."

Ducks and geese, Shoveler, Garganey, and Wigeon are very common. Shanks, stints and sandpipers are also easy to find. Two species of crane also visit Delhi wetlands in the winter so do several types of storks, herons, egrets and plovers. The Basai swampland is one of the prime places to see the waders.



Book

Birds About Delhi

Author

Nikhil Devasar & Rajneesh Suvarna

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Pages

312

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₹799/-



History of bird watching in Delhi

Since the Mughal times, mention of a variety of birds is easily found in the old literature on Delhi. But ornithology as an advanced science was not as developed during Mughal times as in the way we see and understand it today. So the first mention in independent India is found in this book. One Horace Gundry Alexander had founded the Delhi Bird Watching Society along with Lt General Harold Williams, in 1950. Young Indira Gandhi was one of its earliest members. Interestingly, the first bird-talk was held on August 7, 1950 at the then Prime Minister Jawaharlal Nehru's official residence where Dr Dillion Ripley delivered a talk on birds of Nepal. Delhi Birds was later revived by Nikhil Devasar in the year 2000 and now it has as many as 50,000 members and they are in contact through e-group. I must mention here that the hobby of bird watching is fast catching up among young and old alike, in India. Many cities have their own bird watching clubs. The advantage of this activity is that people keep looking for newer and newer habitats in search of birds and such amateurs and professionals indirectly help in conservation of nature. Repeated visits to a wetland or a city forest or a garden may perhaps reduce the possibilities of them being encroached upon or damaged but only if the birdwatchers' group is vigilant enough.

The book is slightly technical in nature as it provides the average size of a bird, its anatomical details, habits, nesting peculiarities, diet alongside the family names and scientific names.

While furnishing finer details of all the bird species that have found place in this book (450 bird species) is neither possible here nor intended by me because this is an attempt to introduce the beautifully written and edited volume to those who have not been into bird watching activities ever before, as also, for those who would like to revisit Delhi from a bird watcher's point of view. I am quite sure that he or she will rediscover a 'new' Delhi after such visits to places like Sultanpur Bird



Sanctuary, Aravallis, Lodhi Gardens, Najafgarh Jheel, Dighal Village or Asola Bhatti Wildlife Sanctuary. All these hotspots have been detailed in the book with specific bird species to look for there through your binoculars.

Possibly, flipping through the pages of the book, new readers may understand and appreciate the variety of birds and their important role as pollinators in our ecosystem and of course with that the help they render to our vast environment. My experience has been that the new bird watchers are quite puzzled to see birds which have been around them before they took to their cameras or a set of binoculars but they never ever noticed the winged beauties before 'turning' into a bird watcher.

The book covers 450 bird species and for a lay reader the authors have included as many as 800 photographs giving minutest details of the winged

wonders. "Written by one of India's remarkable ornithologists illustrating bird species recorded in Delhi NCR, this book encourages an exploration of readings of the subject and discovery of locales through the season. In its time, this book and its concept sets an example for many to follow" writes Ravi Singh, Secretary General of the WWF-India while endorsing the book for readers.

There are exclusive chapters on warblers (25 species of this little bird are found in Delhi) and pipits (there are 11 species found in Delhi) written by renowned ornithologists Dr Martin Kelsey and Bill Harvey, respectively, to add tremendous value to this well-researched book. ■

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Overpopulation in Delhi

Can Delhi serve 40m people?



Ashok Wankhade
Managing Editor

Population of a city plays an important role in driving its economy. A city like Delhi, the second most populous city in the world after Tokyo, needs more efficient policies to balance its outgrowing population. As per a report published by the United Nations in mid-2018, the population in the city is expected to surpass Tokyo in 2028 that is in a decade's time. This raises concern whether Delhi is well-prepared to sustain such growth. Is the city capable enough to fulfill the growing demands?

The population of Delhi and its immediate neighbourhood is presently estimated to be 29 million. Delhi could be the world's most populous city by 2028 with 37.2 million people residing in the city. That is eight million more in just a period of 10 years, stated 'World Urbanisation Prospects 2018' report released by the Population Division of the United Nations Department of Economic and Social Affairs (UN DESA).

The geographical area of Delhi is 1483 sqkm and according to the Census of 2011, it had a population of 16.8 million, only a decade ago the Census 2001 had reported 13.8 million population. And, as per the estimates of the Master Plan of Delhi 2021, the National Capital Territory (NCT) of Delhi will have 21 million people by 2021. But, racing ahead of the estimated figure, the population of the capital city has already touched 29 million mark in 2019. John Wilmoth, Director of the Population Division, said in a news conference, "When urban growth is rapid, insuring access to housing, water, sanitation, electricity, public transport, education and healthcare for all is especially challenging".

The report data and the population prospects of the city put the preparedness of the civic authorities in question and raise concerns about the ability of the capital to handle the growing numbers. The population trends show an alarming rate of growth in the city which could possibly impact the resources, infrastructure, basic facilities and more, making it hard for the city authorities to cater to the growing demands.

Preparatory measures Delhi needs

It can be inferred easily that the approach towards addressing the population issue should be multi-pronged as the problems in themselves

are multifold.

The Government of India came up with a few probable solutions, focused on bringing down the fertility rate to 2.1, like spreading awareness on policies like 'hum do humare do', a nation-wide scheme promoting 'two-child family', actually helped to control the population to an extent. Also, promotion of contraceptive methods through various social media platforms, radio, television, pamphlets, hoardings and advertisements played an important role in making people aware about the overpopulation issue.

Various academicians and experts with their different perspectives come up with solutions accordingly. A major chunk of them are of the opinion that migration plays a very crucial role when population of a metropolitan like Delhi is discussed. And therefore, a possible solution, though a long-term one, is to develop country side areas. Developing the villages, especially in neighbouring states, and making the life nearly as easy as in Delhi can reduce the flow of people significantly. Also, developing the outskirts of the city and making the essential facilities like water supply, electricity, and sewage network more available for the residents can be helpful in distributing the population. With all these, there is also a need to create scattered employment centres to distribute the population and address housing and mobility issues.

Another perspective talks about the management of the informal settlements in the city. The government needs to stop further setting up of slums and unauthorised colonies as these provide an easier way for migrants to move and settle in the city. Therefore, prohibiting further setting up of illegal colonies can benefit the city to prevent a scenario where it struggles to facilitate its people. ■

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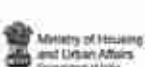


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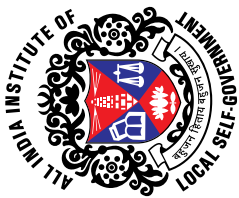
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