"Look at the sky. We are not alone. The whole universe is friendly to us and conspires only to give the best to those who dream and work. —A P J Abdul Kalam"

EDITORIAL

COMPREHENSIVE APPROACH

Illegal encroachments have emerged as a significant challenge in urban and semi-urban areas, affecting the orderly development of cities, obstructing public spaces, and creating safety hazards. Encroachments refer to unauthorized occupation or use of public land, roads, sidewalks, water bodies, or government properties by individuals or businesses. If left unchecked, these activities not only disrupt civic amenities but also contribute to environmental degradation, traffic congestion, and legal disputes. Therefore, a systematic and coordinated approach to identifying and removing illegal encroachments is essential for ensuring sustainable urban development.

The first step in tackling illegal encroachments is accurate identification. Authorities must conduct regular surveys using modern tools such as geographic information systems (GIS), satellite imagery, and drone surveillance to map encroached areas. Community reporting mechanisms can also play a pivotal role, allowing residents to notify authorities about unauthorized structures or activities. It is crucial that these identification methods are transparent, consistent, and documented to minimize disputes and ensure that action is legally defensible.

Once encroachments are identified, legal action and enforcement become necessary. Local government bodies, municipal corporations, and urban development authorities should issue notices to encroachers, giving them an opportunity to respond or relocate. Laws governing public land, municipal regulations, and environmental guidelines provide a framework for enforcement. However, authorities must ensure that enforcement is fair, humane, and consistent to avoid allegations of bias or harassment. In cases where encroachments involve vulnerable populations, rehabilitation or relocation plans should be provided to prevent social injustice.

Public awareness and community engagement are equally important in preventing future encroachments. Citizens should be educated about the negative impacts of unauthorized occupation, such as obstruction of traffic, reduction of public amenities, and environmental hazards. Campaigns, workshops, and media outreach can foster a sense of civic responsibility and encourage voluntary compliance with land-use regulations. Moreover, engaging resident welfare associations, neighborhood committees, and local NGOs can create a network of vigilant citizens who help monitor and report encroachments effectively.

Technological interventions can also enhance the efficiency of checking illegal encroachments. Mobile applications, online grievance portals, and real-time monitoring dashboards enable authorities to track violations, assign field inspections, and update the public on remedial actions. Integration of technology with legal frameworks ensures that encroachments are addressed swiftly, transparently, and with minimal human error.

Another critical aspect is coordination among government departments. Urban planning, law enforcement, environmental management, and municipal services must work together to implement a comprehensive strategy. Interdepartmental coordination prevents overlap, reduces bureaucratic delays, and ensures that encroachment removal aligns with broader urban development plans. Additionally, periodic reviews and audits of encroachment removal operations help authorities identify gaps, streamline procedures, and improve accountability.

Finally, long-term urban planning must focus on preventing illegal encroachments rather than merely reacting to them. Provision of adequate housing, commercial spaces, and public amenities reduces the incentive for unauthorized occupation. Clear demarcation of property boundaries, well-maintained public infrastructure, and strict enforcement of zoning regulations create a transparent environment where citizens understand the legal limits of land use.

Tributes to Baba Saheb Dr. Ambedkar: From Laborleader to Nation Builder

■ ARJUN RAM MEGHWAL

Today, we commemorate the 70th Mahaparinirvan Day of Baba Saheb Dr. Bhimrao Ambedkar, a larger-than-life figure and a champion of progressive measures that have shaped the course of modern human society. As a jurist, economist, philosopher, reformer, and above all, a nation-builder, his tireless efforts laid the foundation of modern India. He did not merely draft a Constitution; he provided a blueprint for an inclusive and empowered nation, where every citizen enjoys dignity and opportunity. Inspired by these foundational values, the Modi government has undertaken numerous initiatives promoting welfare and good governance.

On November 27, 2025, at UNESCO Headquarters in Paris, the world paused to witness the unveiling of a bust of Dr. Bhimrao Ramji Ambedkar, commemorating the 75th anniversary of the Indian Constitution. Among global dignitaries, the statue stood not merely as a tribute to an Indian leader but as a universal symbol of justice. The plaque reads "Architect of the Indian Constitution," yet these words barely capture the legacy of a man who not only drafted laws but helped shape an entire nation in totality.

During his entire lifetimr, Baba Saheb Dr Ambedkar carried forward the struggle for justice, championing for labour rights and welfare. As the representative of the Depressed Classes in the Round Table Conference, he strongly advocated for living wages, decent working conditions, freedom for peasants from oppressive landlords, and the eradication of social evils affecting the downtrodden.He had personally witnessed the suffering of workers and the downtrodden. In Bombay, he lived for over 10 years in one-room tenements of the Bombay Development Department alongside mill workers, where there were no modern facilities and each floor had only one lavatory and one tap for all purposes. These conditions gave him firsthand knowledge of workers' lives. He mobilized the masses and founded the Independent Labour Party (ILP) in 1936 with a comprehensive program for landless people, poor tenants, agriculturists, and workers. On September 17, 1937, during the Poona session of the Bombay Assembly, he introduced a bill to abolish the Khoti land tenure system in Konkan. In 1938, he led a peasants' march to the Council Hall in Bombay, becoming a popular leader of peasants, workers, and the landless. He was the first Indian legislator to introduce a bill to end the serfdom of agricultural tenants. He also strongly opposed the Industrial Disputes Bill, 1937, because it curtailed workers' right to strike.

When the world order was in uncertainty during the 2nd world war, Dr. Ambedkar as aabour Member of the Viceroy's Executive Council was guiding the path for the labourer in India. As economies transformed and industries expanded, entrepreneurs gained opportunities for prosperity, but labour was not given its fair share. Dr. Ambedkar introduced key measures for labour welfare, laying the foundation of the Government's labour policy. He handled complex labour issues with great efficiency and earned the respect of both employees and employers.

In his 1943 All India Radio address from Bombay, Dr. Ambedkar urged securing a "fair condition of life" for labour, grounded in liberty, equality, and fraternity. His efforts helped bring workers under social security. He made lasting contributions through key labour legislation, including the

War Injuries (Compensation Insurance) Bill, the Indian Boilers (Amendment) Bill, 1943-addressing unsafe inspections that caused many mill deaths-the Indian Mines and Trade Unions Amendment Bills, the Miners Maternity Benefit Amendment, the Coal Mines Safety (Stowing) Amendment, and the Workmen's Compensation Amendment.

On 9 December 1943, Dr. B.R. Ambedkar visited the Dhanbad coalfields, going 400 feet underground to inspect operations and labour conditions. This visit led to the Coal Mine Labour Welfare Ordinance of January 1944, creating a fund for workers' welfare. He strengthened this fund by doubling the tax on extracted coal, ensuring better health and safety measures for miners. On 8 November 1943, he also introduced the Indian Trade Union (Amendment) Bill, requiring employers to recognise trade unions.

On 8 February 1944, during the Legislative Assembly debate on lifting the ban on women's underground work in coal mines, Dr. B.R. Ambedkar stated, "It is for the first time that I think in any industry the principle has been established of equal pay for equal work irrespective of the sex." This marked a historic moment for the nation. Through the Mines Maternity Benefit (Amendment) Bill, 1943, he strengthened maternity benefits and addressed absenteeism. In 1945, he further amended the Act to prohibit women from underground work for ten weeks before childbirth and ensured fourteen weeks of maternity leave-ten weeks before and four weeks after confinement.

Addressing the Indian Labour Conference in New Delhi on 26 November 1945, he reviewed the State's obligations to labour and urged laws to raise Indian labour standards to international levels. Emphasizing the need for progressive labour welfare legislation, he said:-

"Labour may well say that the fact that the British took

100 years to have a proper code of labour legislation is no argument that we should also in India take 100 years. History is not to be studied merely with a view to know how well to imitate the mistakes of other countries.We study history with a view to know the errors people have made and how they could be avoided. History is not always an example. More often it is a warning."

The next day at the same conference, he proposed legislation to reduce working hours to a 48-hour week in factories, introduce statutory industrial canteens, and amend the Workmen's Compensation Act, 1934. He also announced plans to draft laws for minimum wages and for amending the Indian Trade Union Act, 1926. On 21 February 1946, Dr. B.R. Ambedkar moved the Factories (Amendment) Bill to reduce weekly working hours to 48, fix overtime rates, and provide paid leave. After review by the select committee, this landmark legislation-championed by Ambedkar-was passed on 4 April 1946.

The Mica Mines Labour Welfare Fund Bill, introduced by him to create a fund for welfare activities in the mica mining industry, was passed on 15 April 1946. It improved amenities and working conditions for child and women labourers, including hours and wage issues. Dr. Ambedkar also moved a Minimum Wages Bill on 11 April 1946, proposing advisory committees and boards with equal employer-labour representation. This bill was later enacted into law on 9 February 1948.

Dr. Ambedkar opposed the labour movement led by communists, rejecting Marx's totalitarian approach of controlling all means of production. He disagreed with Marx's view that abolishing private property would end poverty and suffering. In his essay Buddha or Karl Marx, he writes:-

"Can the Communists say that in achieving their valuable end they have not destroyed other valuable ends? They have destroyed private property. Assuming that this is a valuable end can the Communists say that they have not destroyed other valuable end in the process of achieving it? How many people have they killed for achieving their end. Has human life no value ? Could they not have taken property without taking the life of the owner?"

While drafting the Constitution, Dr. Ambedkar placed labour in the Concurrent List to ensure uniform legislation and alignment with international standards. His foresight also eliminated bonded labour by declaring it illegal in the Constitution.

Guided by the Mantra of "Reform, Perform, Transform," and taking inspiration of Dr. Ambedkar's values, the government has implemented four comprehensive labour codes-the Codes on Wages, Industrial Relations, Social Security & Welfare, and Occupational Safety, Health & Working Conditions. These reforms aim to ensure universal social security, protect workers' rights, boost productivity, create jobs, and strengthen India's economic growth toward a Viksit Bharat by 2047. The Pradhan Mantri Shram Yogi Maan-Dhan Yojana, launched in February 2019, provides old-age protection for unorganised workers, while the Maternity Amendment Act, 2017, extends maternity leave from 12 to 26 weeks and mandates crèche facilities.

As we honor the countless contributions of laborers in nation-building, guided by the enduring spirit of Shramev Jayate, Dr. Ambedkar's Mahaparinirvan Diwas offers a fitting moment to reflect on the vision and actions of this great nation-builder. His ideals remain a guiding light, inspiring us to achieve the goal of a Viksit Bharat by 2047.

(The Author is Union Minister of State for Law & Justice (I/c) and Parliamentary Affairs, Govt of India)

Robots in the Park: How AI is Protecting City Wildlife

■ ROHIT GUPTA

Mostpeople don't think of cities as ecosystems that are thriving. High-rise buildings made of glass, streets covered with asphalt, and sidewalks filled with people seem to be very far away from the quiet places which are the natural habitats of the majority of the wild animals. However, animals have found refuges in parks, along rivers, on the land that was used for industries but has now been reclaimed, and even on the green rooftops, which have all turned out to be very essential habitats for animals that are trying to live together with human developments. Artificial intelligence is one of the surprising things that in recent times has become the biggest supporter of the urban biodiversity protection endeavor. AI is a technology that is revolutionizing the way ecologists are dealing with the challenges of the busiest cities of the world, where they deploy camera-equipped robots, and intelligent sensors concealed under the tree canopies to monitor, figure out, and preserve wildlife.

A New Kind of Park Ranger

It has always been difficult to monitor traditional wildlife in cities. Wild animals are active at times which are not predictable and they usually do so at night, and hundreds of species, in particular, those which are very sensitive to human beings, get frightened and run far away even before a biologist has a chance to observe them. Scientists collect data manually which is both extremely demanding in terms of human resources and it can also be a source of disturbance to the very species that the scientists want to protect.

The introduction of AI-powered robots together with automated sensors has a positive effect on this situation. These tools are capable of staying in any park for a whole day and night, they can collect data continuously without making the animals afraid of them and there is no need for the presence of a human. After that, the park workers can study the data that they have gotten from the place, without breaking the continuity and with less interference, they get a clearer picture of the ecological patterns.For instance, in Singapore, automated robots on the ground are doing the rounds in nature reserves in order to locate instances where animals are fed illegally and to follow the species without causing any disturbance. Their high pixel cameras together with machine-learning algorithms are capable of recognizing animals in an instant, be it a long-tailed macaque or a pangolin that is moving among the area and is a part of the protected species. Similar kinds of innovations can be found in the cities such as London, Los Angeles, and Tokyo where surveillance of wildlife is now considered a part of wider "smart city" schemes.

Eyes and Ears Hidden in the Greenery

The majority of the most potent AI instruments are almost non-existent. Tree-dwelling small acoustic sensors are capable of recording numerous hours of sounds and the AI algorithms that they utilize can do the work of analyzing them to find and identifying the animal sounds that have been recorded. These tools are able to distinguish a sparrow's call from an endangered bat species' alarm call, something that is very difficult even for humans, let alone on such a large scale.These AI listening systems have become especially valuable for monitoring bird migration. In New York City, researchers use bioacoustic AI to map nocturnal migration patterns, allowing the city to dim specific skyscrapers on heavy migration nights. This simple adjustment has significantly reduced fatal collisions between birds and buildings.

In a similar vein, motion-activated camera traps that are enhanced with AI are capable of instantly interpreting the images and signaling that there has been some unusual activity, such as the appearance of a rare species or a predator that is coming to live in a new area. By making the process of identification automatic, these devices remove the necessity of the researchers who would otherwise have to be engaged in the task of manually going through thousands of pictures, which in turn accelerates the conservation work to a very large extent.

Mapping Wildlife Corridors in Concrete Jungles

One of the major problems that animals have to face in urban areas is fragmentation (green spaces which are separated from each other by roads, buildings, and noise of human activity). The lives of animals depend on safe corridors in order to find food, water, and mates. When they do not have these, their populations may become genetically isolated or even decreased due to lack of resources.

City planners are using AI to do this mapping.

AI models can determine animal movement routes across urban areas that are least risky as well as most animals' frequently used ways by scrutinizing not only satellite imagery, but also traffic patterns, vegetation density, and thereby, decided with the help of the models using decades of wildlife sighting data. The officials of a city are thus guided in constructing green bridges (vegetated overpasses that provide a safe crossing for animals over a highway) and in planning interconnected parks that birds and insects can use to move.

For example, AI-supported research in Vancouver and Melbourne has resulted in the creation of pollinator pathways: series of small gardens, rooftops, and green walls that provide bees and butterflies with the means to move through tightly-built areas of the city. This kind of work not only keeps wildlife safe but also promotes the participation of the community by turning residents into active contributors to ecological connectivity.

Autonomous Drones: Guardians of the Skies

The introduction of AI has made drones one of the multifaceted tools for the protection of urban wildlife. The drones can do the job of flying over parks, wetlands, and riverbanks for data collection which previously was not feasible on a large scale.With the help of thermal cameras, drones can recognize the source of heat of animals hidden in thick trees or those who are nighttime active. AI algorithms perform the task of analyz-

ing these signatures, separating them into different species, and also, if the species is facing any kind of distress or is injured. Besides this, drones have been involved in counting the nests of endangered birds located in the cliffs which are not easily accessible and keeping a check on the seal population along city shorelines without interfering with them.Besides that, a few cities also use these machines to solve problems between humans and wildlife. Take, for instance, breeding times when the drones can inform about the occurrence of staff in parks via alerts providing the locations where animals such as ground-nesting birds may require temporary barriers for reducing the unintentional disturbance caused by visitors.

Predicting Problems Before They Happen

AI's one major transformational feature is its capacity to foresee ecological difficulties, barely humans can notice them.

Disease Detection

Machine learning models that are trained on audio patterns, movement data, and sensor logs are capable of identifying the very first signs of disease outbreaks among animal populations living in the urban areas. Any changes in sounds of birds, sudden shifts in squirrel movement, or even clusters of abnormal mortality can be the reason for calling the wildlife doctors.

Invasive Species Tracking

AI algorithms can very fast recognize the features and attributes of the already introduced species (e.g. certain plants, insects, or rodents) in the area, through the analysis of environmental sensor data or photos. Early detection gives room for the city response before the problem gets out of control and affects the native wildlife that they live with.

Climate Stress Forecasting

Extreme changes in temperature and a lack of water characterize urban microclimates. AI models can integrate weather data, readings of soil moisture, and the movement patterns of animals to identify species that are most at risk of heatwaves or drought. Park managers then can use such information to take the conservation measures that best meet the needs of the local environment, for example, the creation of shade or provision of water.

Ethical Considerations and Privacy in "Smart" Parks

The integration of AI in urban wildlife conservation that leads to impressive results also poses some ethical questions. Sensors that observe animals in parks, may record images or sounds of people, as parks are common areas. Therefore, cities that decide to use such technologies should ensure transparency, data protection, and interaction with the community.In a similar way, it is very important to take care that the usage of robots and drones does not cause disturbances in

the lives of animals without intention. Observance of ethics regulations e.g., not flying drones during the breeding season or that robots are quiet and slow, assists in lessening the possible effects.Moreover, the use of AI should be seen as a supplement to human knowledge and not a replacement of it. Ecologists point out that AI instruments have to be used in conjunction with the information that comes from on-site work and long-term field experience.As AI keeps on progressing, the range of its possible uses in the realm of wildlife protection is becoming wider and quicker than ever. Robot pollinators may help survive the bee populations that are under siege in rudimentary natural areas in cities, thus, paving the way for their conservation in urban spaces.

AI-driven planting systems can create environmentally friendly parks by choosing the plant species that provide food and shelter for the maximization of the animal species that can live there.Instant ecological dashboards may give the public an opportunity to watch the movements of the wild ones in their localities thus, creating a firm bond between the residents of urban areas and nature.AI-interpreted microhabitat models might even help understand the hidden ecosystem patterns, for example, the diversity of insects in tiny patches of soil or the microbial activity underneath park benches.All of these are just the beginning of a bigger change. Cities are transforming from mere places where nature is conserved into active laboratories where technology and ecology collaborate for the restoration and conservation of biodiversity.

Conclusion

Urban parks were, from the very beginning, the green oases in the desert of concrete, offering people relief from the fast-paced city life. Presently, with the assistance of AI, they turn into lively, well-guarded ecosystems where both humans and animals can cohabitate in a balanced way. AI instruments (robots, drones, covert sensors, and the like) are changing the city wildlife scenario by providing the means to carry out non-stop monitoring, problem detection at an early stage, and intelligent planning. The implementation of such technology does not nullify the role of human conservationists; on the contrary, it empowers them and brings forth new opportunities for the protection of biodiversity in some of the most difficult environments on our planet. With the continuous expansion of cities, the connection between urban development and wildlife conservation is going to be a decisive factor that will determine the fate of these two aspects. AI is a potent instrument to reconcile the two sides, thus enabling the coexistence of nature and the busiest metropolis even in the very center of it.

(The writer is PGT Physics, Cambridge International School Jammu)