PLUTUS IAS

CURRENT AFFAIRS

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URBAN FORESTS AT RISK: LEGAL, ENVIRONMENTAL, AND DEVELOPMENTAL PERSPECTIVES

WHY IN THE NEWS?

One of Hyderabad's last remaining urban forests, Kancha Gachibowli, faced the threat of extinction when the Telangana government decided to give away 400 acres of its land for industrial development. Justifying its move by claiming ownership over the forest, the government alleged that protesting students were misled by real estate interests. However, the Supreme Court took cognisance of the felling of 100 acres of trees and reprimanded the State government. This issue highlighted the vulnerability of urban forests and environmentally insensitive models of urban development.

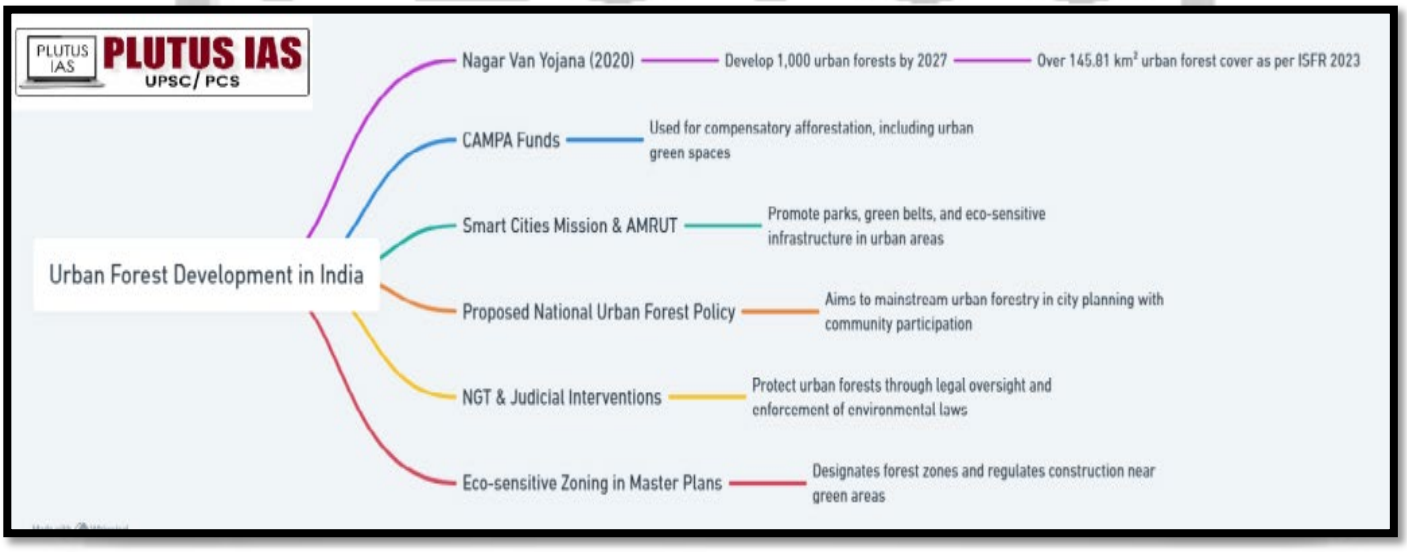
WHY URBAN FORESTS MATTER

Category	Key Benefits
Environmental	– Improve air quality by filtering pollutants (PM2.5, NOx, CO_2)
	– Mitigate urban heat island effect
	– Sequester carbon, reducing greenhouse gases
	– Absorb rainwater, reduce urban flooding
Health & Well-being	– Lower respiratory and cardiovascular diseases
	– Provide spaces for recreation and mental wellness
	– Act as noise buffers in busy urban settings
Ecological	– Support urban biodiversity (birds, insects, small mammals)
	– Function as mini-ecosystems, improve soil and water cycles
Urban Sustainability	– Enhance climate resilience and disaster preparedness
	– Align with smart city and green infrastructure goals

MAJOR URBAN FORESTS IN INDIA

Urban Forest Name	City	Notable Features
Kancha Gachibowli	Hyderabad	One of the city's last remaining patches; currently threatened by urban expansion.
Aarey Forest	Mumbai	An ecologically sensitive area, key for biodiversity and air quality, despite controversies over development.
Delhi Ridge & Neela Hauz	Delhi	Offers a green lung to the national capital, critical for recreational and environmental functions; judicial interventions help protect these areas.
Turahalli Forest	Bengaluru	A valued natural enclave amidst rapid urbanization, noted for its biodiversity and recreational use.
Pol Ka Baadli	Jaipur	Serves as an important green space in the city, contributing to urban ecological balance.

GOVERNMENT INITIATIVES FOR URBAN FORESTS



JUDICIAL AND LEGAL INTERVENTIONS IN URBAN FOREST CONSERVATION

1. Judicial Activism & PILs: Courts actively protect urban forests through Public Interest Litigations filed by concerned citizens and civil society groups.

2. Supreme Court Intervention: In the Kancha Gachibowli case, the Supreme Court reprimanded the Telangana government, highlighting its role in enforcing environmental accountability.

3. Check on Executive Actions: The judiciary acts as a watchdog over executive decisions that harm ecological balance, ensuring public interest is upheld.

4. Environment Protection Act, 1986: Provides a legal framework to regulate and prevent activities that damage forests and the environment.

5. Forest Conservation Act, 1980: Restricts diversion of forest land for non-forest use without central approval, safeguarding forest areas.

6. Judicial Guidelines: Courts have issued key directives to prevent tree felling and illegal encroachments in urban forest areas.
7. Constitutional Support: Article 48A of the Directive Principles directs the State to protect and improve the environment.
8. Sustainable Development Focus: Legal interventions help balance urban growth with ecological preservation, ensuring long-term sustainability.

THREATS TO URBAN FORESTS

1. Rapid Urbanisation: Expansion of cities leads to the conversion of forest lands into residential, commercial, and industrial areas.
2. Infrastructure Development: Construction of roads, flyovers, metro lines, and industrial parks often involves clearing large green areas.
3. Encroachments: Illegal settlements, slums, and unauthorised constructions reduce forest cover and disturb biodiversity.
4. Pollution: Air, noise, and water pollution from surrounding urban activities degrade the health of urban forest ecosystems.
5. Tree Felling and Logging: Unregulated cutting of trees for fuelwood, construction, or land clearance threatens forest sustainability.
6. Invasive Species: Introduction of non-native plant species disrupts the natural composition and health of the forest ecosystem.
7. Lack of Legal Protection and Poor Enforcement: Many urban forests are not classified as protected forests, making them vulnerable to exploitation and weak regulatory oversight.
8. Climate Change: Rising temperatures, irregular rainfall, and extreme weather events stress forest health and alter native biodiversity.
9. Real Estate Pressure: High land value in urban areas increases the temptation to convert forested land into profitable ventures.

WAY FORWARD FOR URBAN FOREST CONSERVATION

1. Legal Protection Status: Designate urban forests as protected areas under relevant forest and environmental laws to ensure long-term security.
2. Integrated Urban Planning: Include urban forests in city master plans and zoning regulations to prevent encroachments and unplanned development.
3. Strict Enforcement of Laws: Strengthen implementation of the Environment Protection Act, Forest Conservation Act, and judicial guidelines.
4. Community Participation: Involve local residents, RWAs, and student groups in protection, monitoring, and afforestation efforts.
5. Urban Afforestation Drives: Promote native species plantation in degraded urban spaces, including buffer zones and wastelands.
6. Use of Technology: Employ GIS, satellite imagery, and drone monitoring for forest mapping, encroachment detection, and conservation tracking.
7. Green Incentives: Provide incentives to developers for creating green infrastructure and preserving forest cover in urban projects.
8. Awareness and Education: Launch campaigns in schools and communities to build awareness on the ecological, health, and climate benefits of urban forests

CONCLUSION

The Kancha Gachibowli episode underscores the urgent need to re-evaluate urban development paradigms that prioritise short-term economic gains over long-term ecological stability. Urban forests are not just green patches—they are vital ecosystems that enhance climate resilience, safeguard public health, support biodiversity, and provide psychological comfort amidst concrete jungles. Judicial interventions, as seen in this case, play a crucial role in upholding environmental justice and enforcing accountability. However, sustainable conservation demands more than reactive legal measures—it requires proactive governance, community engagement, and a vision that integrates nature into urban planning. Protecting urban forests is not just an environmental imperative but a developmental necessity for India's future cities.

PRELIMS QUESTIONS

Q. Consider the following statements regarding urban forests in India:

1. Urban forests help mitigate the urban heat island effect.
2. The Forest Conservation Act, 1980 allows diversion of forest land for any purpose without Central government approval.
3. Urban forests play a significant role in flood mitigation in cities.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Answer: C

MAINS QUESTIONS

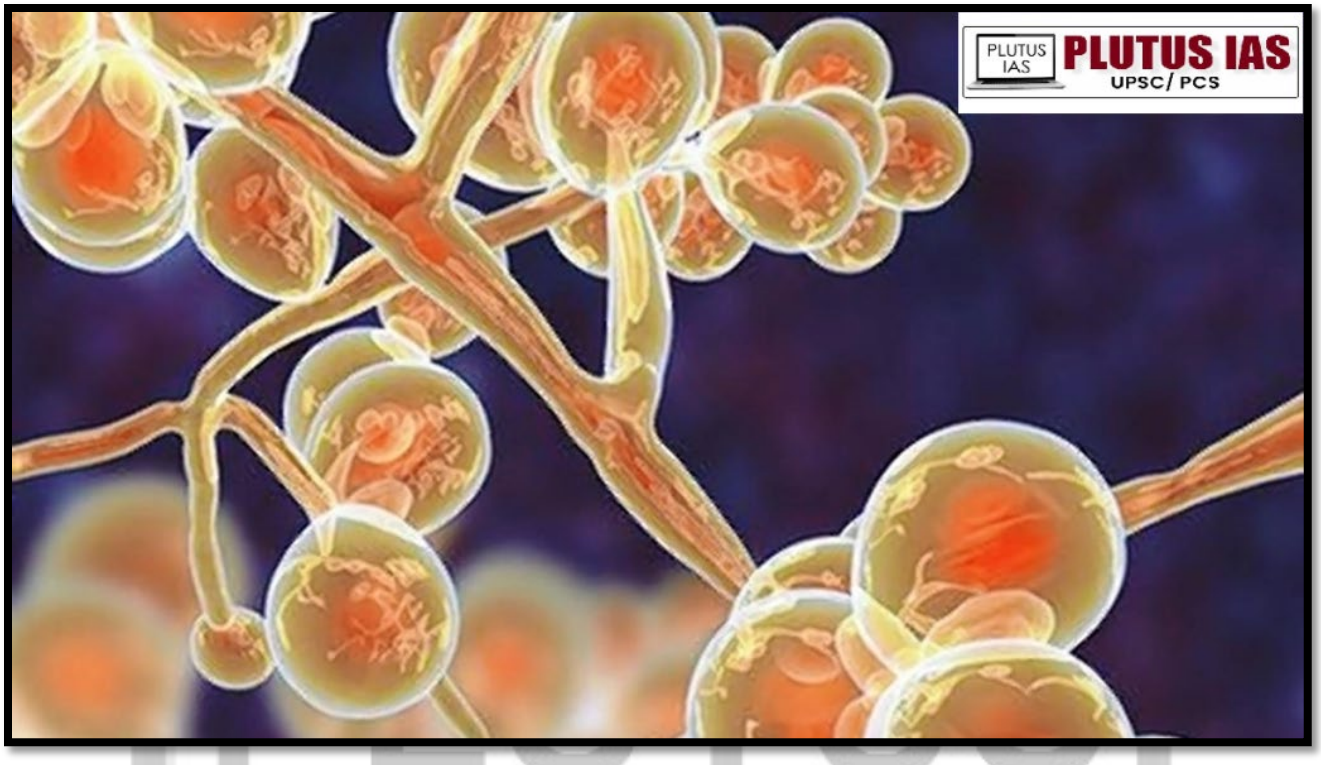
Q. Urban forests are vital to the environmental and ecological balance of expanding Indian cities, yet they remain vulnerable to development pressures and weak legal protection. Discuss the importance of urban forests, major threats to their existence, and suggest measures for their conservation.

(250 words, 15 marks)

NEW ANTIBIOTICS VS. EVOLVING RESISTANCE: A RACE AGAINST TIME

WHY IN THE NEWS?

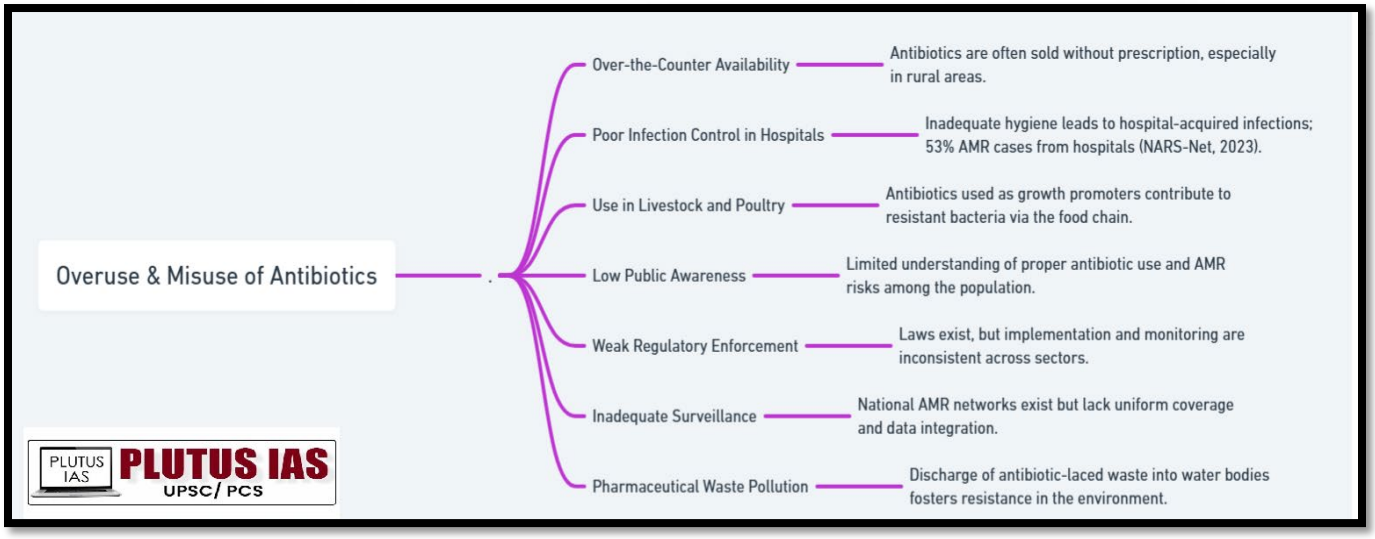
The death of 55-year-old Viswanatham from rural India has spotlighted the growing threat of Antimicrobial Resistance (AMR). After a respiratory illness in 2020, he sought help from a rural private practitioner, which led to complications and a leg infection. As a diabetic with a weak immune system, he was given a last-resort antibiotic that damaged his kidneys. Hospital-acquired infections further worsened his condition, and he died in 2021. His case underscores the dangers of irrational antibiotic use and the spread of resistant infections in both community and hospital settings. According to the Institute for Health Metrics and Evaluation (IHME), AMR caused 4.1 million deaths directly and 2.8 million associated deaths in 2019. The crisis has gained renewed attention, calling for urgent measures in antibiotic regulation, infection control, and public awareness.



WHAT IS AMR?

Antimicrobial Resistance (AMR) is the ability of microorganisms such as bacteria, viruses, fungi, and parasites to resist the effects of drugs that once killed them or stopped their growth. It occurs due to the overuse and misuse of antibiotics in humans, animals, and agriculture. AMR makes infections harder to treat, leading to prolonged illness, higher medical costs, and increased mortality. It is a growing global health threat, especially in countries like India with high antibiotic usage and poor regulatory control. The World Health Organisation (WHO) identifies AMR as one of the top 10 global public health threats. Tackling AMR requires a multi-sectoral, One Health approach involving healthcare, veterinary, and environmental sectors.

KEY FACTORS CONTRIBUTING TO AMR IN INDIA



RECENT DEVELOPMENTS IN AMR

1. Development of Nafithromycin (Nafasyn): India's Wockhardt developed a new antibiotic (first in over 30 years), effective against respiratory tract infections, requiring just 3 doses.

2. Rise of Indian Antibiotic Innovators: Indian companies like Wockhardt, Bugworks, and GangaGen are advancing antibiotic R&D, contributing to global AMR solutions.

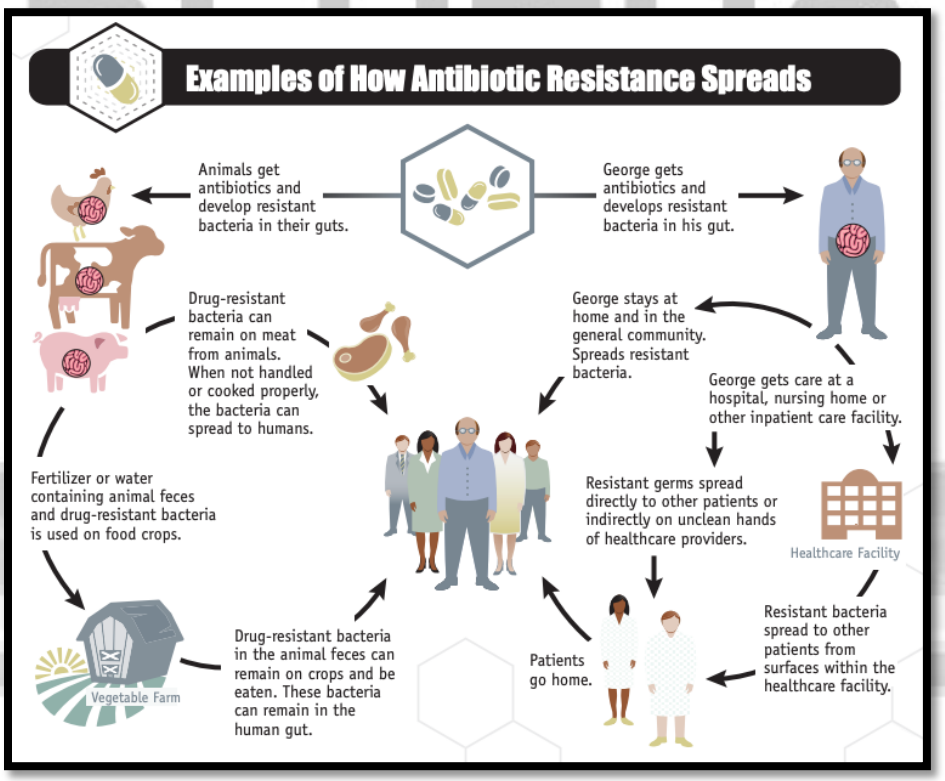
3. Strengthening of National Surveillance (NARS-Net): Expanded surveillance of AMR in hospitals and labs under the National Programme on AMR Containment.

4. Ban on Colistin for Growth Promotion: India banned colistin, a critical antibiotic, in livestock to curb resistance transmission.

5. Promotion of One Health Approach: The Government is integrating human, animal, and environmental health sectors in AMR response policies.

6. Public Health Campaigns: Awareness programs launched by ICMR and MoHFW on rational antibiotic use and infection prevention.

7. Global Recognition of India's Role: WHO and international platforms acknowledge India's leadership in tackling AMR through innovation and regulation.



GOVERNMENT INITIATIVES TO COMBAT ANTIMICROBIAL RESISTANCE (AMR)

1. National Action Plan on AMR: Launched to promote awareness, surveillance, infection control, and rational antibiotic use in humans and animals.

2. National Programme on AMR Containment: Strengthens lab capacity, surveillance (NARS-Net), and infection prevention in hospitals.

3. Ban on Colistin in Livestock: Prohibits the use of critical antibiotics as growth promoters to prevent resistance spread.

4. One Health Approach: Integrates human, animal, and environmental health sectors for coordinated AMR response.
5. Antibiotic Stewardship: Encourages rational prescribing and reduces over-the-counter antibiotic sales.
6. Public Awareness Campaigns: Conducted by ICMR and MoHFW to educate on antibiotic misuse and infection prevention.
7. Support for R&D: Promotes the development of new antibiotics and alternative treatments by Indian innovators.
8. International Cooperation: Collaborates with WHO and global partners to tackle AMR worldwide.

CHALLENGES IN AMR MANAGEMENT

1. Overuse and Misuse of Antibiotics: Widespread irrational prescribing and self-medication increase resistance.
2. Poor Regulation and Enforcement: Weak control over antibiotic sales and use in humans and animals.
3. Limited Awareness: Lack of public and healthcare worker knowledge about AMR and proper antibiotic use.
4. Inadequate Surveillance: Insufficient data collection and monitoring of resistance patterns, especially in rural **areas.**
5. Infection Prevention Gaps: Poor sanitation and hygiene in healthcare settings facilitate spread of resistant infections.
6. Environmental Contamination: Antibiotics entering water bodies from pharmaceutical waste and agriculture.
7. Slow Development of New Drugs: Limited investment and innovation in new antibiotics and alternatives.
8. Multi-sectoral Coordination: Difficulty in integrating human, animal, and environmental health efforts effectively.

WAY FORWARD TO COMBAT AMR

1. Strengthen Antibiotic Stewardship: Promote rational use of antibiotics among doctors, pharmacists, and the public.
2. Enhance Surveillance: Expand and improve monitoring of AMR in hospitals, communities, animals, and the environment.
3. Improve Infection Control: Upgrade sanitation, hygiene, and infection prevention measures in healthcare settings.
4. Enforce Regulations: Tighten laws on antibiotic sales and use in humans and livestock.
5. Promote Research and Innovation: Support development of new antibiotics, diagnostics, and alternative treatments.
6. Adopt One Health Approach: Foster collaboration across human, animal, and environmental health sectors.
7. Increase Public Awareness: Conduct sustained education campaigns on AMR and responsible antibiotic use.
8. Strengthen International Cooperation: Share data, best practices, and resources globally to address AMR collectively.

CONCLUSION

Antimicrobial Resistance (AMR) poses a severe and growing threat to global health, with millions of lives lost each year due to drug-resistant infections. India, with its high antibiotic use and regulatory challenges, faces

a critical battle against AMR. The tragic case of Viswanatham highlights the urgent need for coordinated action to prevent misuse of antibiotics, strengthen surveillance, and improve infection control. Through government initiatives, innovation, public awareness, and a One Health approach, India can lead the fight against AMR. Sustained efforts and global cooperation are essential to safeguard the effectiveness of antibiotics and protect future generations from the devastating impacts of resistant infections.

PRELIMS QUESTIONS

Q. With reference to the National Action Plan on AMR (India), consider the following statements:

1. It aims to improve surveillance and infection control in hospitals.
2. It encourages unrestricted use of antibiotics in animals to boost productivity.
3. It promotes public awareness campaigns on rational antibiotic use.

How many of the above-given statements are correct?

(a) Only one
(b) Only two
(c) All three
(d) None

Answer: A

MAINS QUESTIONS

Q. Discuss the challenges posed by Antimicrobial Resistance (AMR) in India. What steps has the government taken to tackle this issue? Suggest ways forward to effectively combat AMR in the country.

(250 words, 15 marks)