

Topics of discussion:

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1. Centre asks smartphone makers to preinstall its cybersecurity app Sanchar Saathi on phones
 2. WHO terms obesity 'global health crisis', backs long-term use of GLP-1 drugs
 3. Give states their fair share, protect their fiscal space
 4. Govt China counter: Push for RE magnets
 5. Why pollution affects north Indian cities more than south & west
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Centre asks smartphone makers to preinstall its cybersecurity app Sanchar Saathi on phones

Syllabus:

Preliminary Examination: Current events of national and international importance

Mains Examination: General Studies-II: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

General Studies-III: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

What's the ongoing story: The Department of Telecommunications (DoT) has asked smartphone companies in India to preinstall a state-developed cybersecurity application that allows users to report fraudulent calls and messages, and stolen mobile phones, The [Indian Express](#) has learnt. Users should not be able to delete the application, the Department has told smartphone companies.

Key Points to Ponder:

- What are the major cyber security threats in India?
- What are the cyber security measures taken by the government?
- Know about the features of 'Sanchar Saathi' application
- What is the International Mobile Equipment Identity (IMEI)?
- What are the reasons for the increase in cybercrimes in India?
- What is the cybersecurity framework in India?
- What are the steps taken by the government to spread awareness about these frauds?

Key Takeaways:

- It has insisted that all new devices sold by the manufacturers come pre-installed with the ‘Sanchar Saathi’ application, and a software update to be issued to phones that have already been sold with the application made available with it.
- Smartphone makers have been given three months to adhere to the directive, which industry executives said companies are expected to push back on. It will impact manufacturers like Apple, Samsung, Xiaomi, Oppo, and Vivo, among others. Queries sent to the DoT, and the smartphone makers did not elicit a response until publication.
- A senior government official said that the directive is part of a broader strategy to “strengthen cybersecurity and anti-spam measures”, which also includes a recent directive by the DoT to online communications platforms like WhatsApp and Telegram to implement SIM binding – which means that these platforms will not be able to run without the SIM card with which a user had first registered for the service present in the device.
- The Sanchar Saathi application is currently available to be downloaded from both Apple’s and Google’s app stores, but users have a choice on whether they want to install it on their devices.
- The app was launched in January this year, and till August, has crossed 50 lakh downloads.
- The Sanchar Saathi app allows tracking and blocking of lost or stolen phones anywhere in India, based on the IMEI of the phones.
- The app can also assist police authorities in tracing stolen or lost devices, which can potentially prevent counterfeit phones from entering the black market. The app also allows users to report suspected fraud communications via calls, SMS, or platforms like WhatsApp.
- Right now, services like WhatsApp verify a user’s identity by sending a one-time password (OTP) to their mobile number. But, to follow the DoT’s directive, they will have to start accessing the IMSI of their SIM cards.
- IMSI stands for International Mobile Subscriber Identity, and is a unique number that identifies every mobile subscriber globally. It is stored on the SIM card

Do You Know:

- The International Mobile Equipment Identity (IMEI) is a unique 15-digit code that helps phone companies know which phone is which, helping mobile networks to identify and authenticate devices.

— The Sanchar Saathi website says, “Sanchar Saathi is a citizen centric initiative of Department of Telecommunications (DoT) to empower mobile subscribers, strengthen their security and increase awareness about citizen centric initiatives of the Government... Sanchar Saathi provides various citizen centric services..”

— It offers various facilities, like blocking a stolen phone, checking mobile connections in your name, and reporting suspected fraud through an option called Chakshu.

— The [Kaspersky report](#) released in February 2025, found that **one in every three internet users** in India were targeted by web-borne threats last year. Between January and December 2024, the company detected 4,43,72, 823 Internet-borne cyberthreats on computers of users in India.

— The changing geo-political and economic shifts have compelled the Indian government to take active steps to evolve in cyberspace. This includes key initiatives such as the National Cyber Coordination Centre, Cyber Surakshit Bharat, and National Critical Information Infrastructure Protection Centre. CERT-In, constituted in 2004, is the nodal agency for responding to computer security incidents when they occur.

Previous year UPSC Prelims Question Covering similar theme:

(1) In India, it is legally mandatory for which of the following to report on cyber security incidents? (UPSC CSE 2017)

1. Service providers
2. Data centres
3. Body corporate

Select the correct answer using the code given below:

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

Previous year UPSC Mains Question Covering similar theme:

What are the different elements of cyber security ? Keeping in view the challenges in cyber security, examine the extent to which India has successfully developed a comprehensive National Cyber Security Strategy. (UPSC CSE 2022)

WHO terms obesity 'global health crisis', backs long-term use of GLP-1 drugs

Syllabus:

Preliminary Examination: Current events of national and international importance

Mains Examination: General Studies-II: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources

What's the ongoing story: With the new class of GLP-1 medicines leading to effective weight loss, the World Health Organisation (WHO) on Monday released its first guidelines on their use to combat the obesity crisis. The agency recommended long-term use of these medicines for obesity but added that those prescribed these medicines should also undergo intensive behavioural therapy as part of a multi-pronged approach to treating obesity.

Key Points to Ponder:

- Who is obese?
- How does WHO define obesity?
- What are the reasons for the increasing obesity in India?
- What are GLP-1 drugs?
- How does it work in controlling obesity?
- Obesity is a global health crisis. Support this statement with data and reports.

Key Takeaways:

- The guidelines refer to obesity as “a chronic disease requiring lifetime care.” It goes on to say that comprehensive treatment for obesity should include screening, early diagnosis and management of obesity-related complications and co-morbidities with pharmaceuticals, surgeries and other treatment options.

— There are currently one billion people living with obesity across the world, including 188 million school-aged children and adolescents. If nothing is done to address the crisis, it is estimated that the numbers will double by 2030. And, obesity itself is a risk factor for other chronic conditions such as diabetes and heart diseases.

— At present, there are 12 GLP-1 therapies approved for the treatment of obesity or Type-2 diabetes. Another 40 agents, including those that target more than just the GLP-1 receptor, are in active development for various indications and in different formulations, according to the WHO.

— While the WHO has supported long-term use of these medicines in adults, except pregnant women, the recommendation is not strong owing to the lack of data on long-term use of the medicines.

— High costs, limited production capacity, and supply-chain were regarded as major barriers to universal access to these therapies. These medicines were included in the WHO list of essential medicines, which would ensure wider access to these drugs in healthcare settings.

— WHO also proposed manufacturing of generic versions of the drugs, pre-qualification to allow international organisations to purchase these medicines for various countries.

— The guidelines, in addition, propose changes to make the healthcare system more conducive to providing chronic obesity care.

Do You Know:

— UNICEF's **Child Nutrition Global Report 2025**, titled 'Feeding Profit: How food environments are failing children', has pointed out that obesity has, for the first time, surpassed underweight globally as the most common form of malnutrition among school-aged children and adolescents. Today, **one in ten children worldwide, nearly 188 million, live with obesity.**

— According to the NFHS data, in India, the number of overweight children below the age of five has more than doubled between 2006 and 2021, rising by 127 per cent (from 1.5 per cent to 3.4 per cent between NFHS 3 (2005-06) to NFHS 5 (2019-21). India has already broken into the top five countries in terms of adult obesity in the past few years.

— According to the UNICEF prediction, India is expected to be home to over 27 million children and adolescents (5 to 19 years) living with obesity by 2030. It will account for 11 per cent of the global burden.

Previous year UPSC Prelims Question Covering similar theme:

(2) Which of the following organisations has released the Child Nutrition Global Report 2025?

- (a) Save the Children
- (b) UNICEF
- (c) WEF
- (d) Child Rights International Network

Give states their fair share, protect their fiscal space

Syllabus:

Preliminary Examination: Indian Polity and Governance – Constitution, Political System, Panchayati Raj, Public Policy, Rights Issues

Mains Examination: General Studies-II: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

What's the ongoing story: C Rangarajan and D K Srivastava wrote: States have often expressed concern regarding their fiscal space being squeezed in recent years. There was a noticeable change that was brought about by the 14th Finance Commission in raising the share of states in the divisible pool of central taxes from 32 per cent to 42 per cent.

Key Points to Ponder:

- What is the role and function of the Finance Commission?
- Who is the chairperson of the 16th Finance Commission?
- How does tax devolution take place between the centre and the state?
- What are cess and surcharge? How are they shared between Centre and state?
- How has GST implementation impacted state's revenue?
- What are the constitutional provisions related to financial relations between Centre and the states?

Key Takeaways:

- Both the Finance Commission (FC) and non-Finance Commission (non-FC) grants had broadly remained stable over the period from 12th Finance Commission to the 14th. There was a marginal increase in the grants in the 15th Finance Commission period.

— Transfers from the Centre to the states consist of tax devolution and FC and non-FC grants. We can consider trends in these relative to the combined revenue receipts of the Centre and the states with respect to some of the recent FC periods.

— States' share in central taxes relative to the combined revenue receipts increased from an average of 15 per cent during the 13th FC period to 19.2 per cent in the 14th FC period — an increase of 4.25 percentage points.

— There was a corresponding increase in the post-transfer share of states by 4.23 percentage points. Thus, the share of states after transfers (fiscal space) increased from 63.85 per cent to 68.08 per cent of combined revenue receipts. Thus, the relative shares of Centre and states were reversed.

— There has been, however, a small fall during the 15th FC period in states' total receipts, that is, their fiscal space, which consists of their own revenue receipts and the total transfers that they receive from the Centre, including the FC transfers.

— States' aggregate revenue receipts relative to combined revenue receipts fell from 68.08 per cent in the 14th FC period to 67.39 per cent in the 15th FC period — that is, a reduction of nearly 0.70 per cent points.

— This was due to a reduction in the share of tax devolution by 1.05 percentage points to 18.2 per cent in the 15th FC period, which was largely offset by an increase in the shares of both FC and non-FC grants so that the total transfers fell only by a margin of 0.23 percentage points of combined revenue receipts. The share of states' own revenue receipts also fell from 37.72 per cent (14th FC) to 37.35 per cent (15th FC), that is, by a margin of 0.47 percentage points.

— The key aggregates determining their fiscal space consist of states' own revenue receipts and total transfers from the Centre.

— Comparing the 14th FC with the 13th FC period, there was no change in the fiscal space of these high-income states as the increase in the total transfers from the Centre was offset by a fall in their own revenue receipts. There is, however, a fall in the fiscal space of high-income states when we compare the 15th FC to the 14th FC period averages.

— Going forward, states' GST revenues may be further adversely affected due to the extensive rate reductions in the reforms introduced recently under GST 2.0 and the discontinuation of the GST compensation cess.

— Hopefully, the 16th Finance Commission has taken into account these concerns and modified the weight attached to the distance criterion in the horizontal distribution. The Centre should also refrain from raising

non-sharable surcharges and cesses. Needless to say, both the Centre and the states need larger resources to meet multiple challenges.

— For this, tax receipts of both the Union and state governments must increase. This must be supplemented by a fair system of transfers that strikes a balance between equity and contribution.

Do You Know:

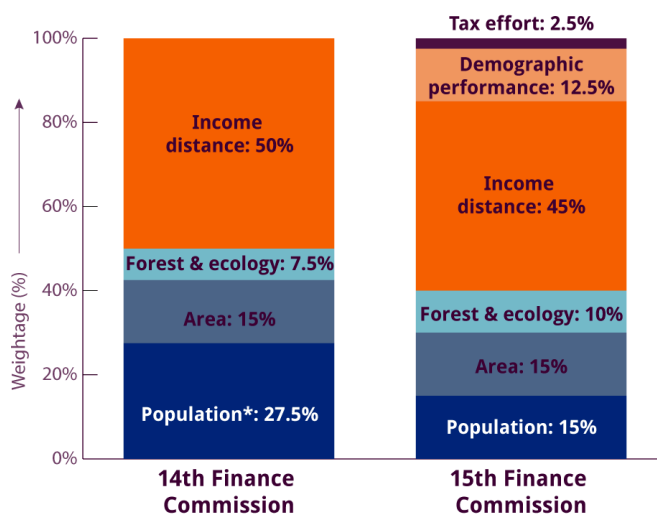
— Articles 268 to 293 of the Indian Constitution govern the distribution of financial powers between the Union and state governments. The Seventh Schedule of the Constitution (Article 246) delineates the tax base between the centre and states.

— The Finance Commission, under Article 280, has been bestowed with the exclusive power to recommend the distribution of intergovernmental finance, including tax devolution and grants-in-aid.

— Although Indian states are often regarded as enjoying more autonomy in terms of spending power compared to their counterparts in many federal countries like Brazil and Indonesia, many have voiced concerns about the Union government's reliance on cesses and surcharges, which fall outside the divisible tax pool. Consequently, the divisible tax pool had shrunk from 88.6 per cent in 2011-12 to 78.9 per cent in 2021-22.

— States such as [Tamil Nadu](#) and Kerala have also raised concern over the rigid conditionalities attached to Centrally Sponsored Schemes (CSS), which require them to contribute a larger share to CSS despite having little role in their formulation. This has accentuated a horizontal disparity among states.

Revenue-sharing formulas in the 14th and 15th Finance Commissions



Previous year UPSC Prelims Question Covering similar theme:

(4) With reference to the Fourteenth Finance Commission, which of the following statements is/are correct?
(UPSC CSE 2015)

1. It has increased the share of States in the central divisible pool from 32 percent to 42 percent.
2. It has made recommendations concerning sector-specific grants.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Previous year UPSC Mains Question Covering similar theme:

How have the recommendations of the 14th Finance Commission of India enabled the states to improve their fiscal position? (UPSC CSE 2021)

Govt China counter: Push for RE magnets

Syllabus:

Preliminary Examination: Current events of national and international importance.

Mains Examination: General Studies-II, III: Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Indian Economy and issues relating to planning, mobilisation of resources, growth, development and employment.

What's the ongoing story: At a time when China's dominance over processing and manufacturing of rare earth magnets has posed risk to the global supply chain, the government Wednesday approved a Rs 7,280-crore scheme to promote manufacturing of rare earth permanent magnet (REPM) in India.

Key Points to Ponder:

- What is the significance of REPM?
- What is the difference between rare earth minerals and REPM?

- How do China's restrictions on rare earth magnets impact the supply chain?
- What are the initiatives taken by the Indian government for self-reliance in rare earth minerals?
- What are the challenges in extracting rare earth minerals?
- What is the Critical Minerals Action Plan?
- What is the National Critical Mineral Mission (NCMM)?

Key Takeaways:

- These high-strength REPMs are crucial for a wide range of technologies – from electric vehicles and renewable energy systems to electronics, aerospace, and defence applications. Yet, their manufacturing is concentrated in just a handful of countries, with China alone controlling over 90 per cent in both manufacturing and processing of raw material needed to produce these magnets.
- This dominance gives China an edge over other countries, which it has often used as leverage during times of trade tensions. This was evident in April, when China imposed export controls on magnets in response to the tariffs announced by the United States of America.
- The demand for REPM is rising sharply in India, with the government's push for large-scale renewable energy expansion and EV adoption. The government estimates that India's consumption of rare earth permanent magnets is expected to double by 2030. Yet, India currently meets almost all its REPM requirements through imports.
- Under the REPM scheme, the government aims to support 6,000 metric tonnes per annum (MTPA) of integrated REPM manufacturing capacity, which will be allocated among five beneficiaries selected through a competitive bidding process, with each eligible for up to 1,200 MTPA.
- The scheme specifically focuses on "sintered rare-earth permanent magnets", which are primarily neodymium, iron and boron (NdFeB) magnets, considered the strongest and most commercially demanded.
- These magnets use light rare-earth elements like neodymium (Nd) and praseodymium (Pr), combined with iron (Fe) and boron (B), for their strong magnetic properties. They also use heavy rare-earth elements such as dysprosium (Dy) and terbium (Tb) to improve susceptibility to demagnetisation, especially at high temperatures.

- The production of these magnets involves various steps: mining, beneficiation, processing, extraction, refining to rare earth oxide, conversion of oxides to metal, then metal to alloy, and finally magnet manufacturing.
- The new scheme aims to support integrated REPM manufacturing facilities which are capable of undertaking final three stages: Converting rare earth oxide to metal, metal to alloy, and alloy to REPM.
- India currently depends heavily on China for these magnets. During 2024-25, India imported over 53,000 tonnes of rare earth magnets, with over 90 per cent coming from China.
- Outside of China, only a few countries – such as Japan and Vietnam – produce these magnets, but their share in the global market remains minimal. India, meanwhile, doesn't have any commercial scale manufacturing, although some companies claim to have the capability. For India, this scheme marks an initial step in a long and challenging journey.
- The scheme's planned capacity of 6,000 metric tonnes a year looks modest when set against China's scale. Utah-based Rare Earth Exchanges estimates that China can produce roughly 2,40,000 tonnes of REPM annually — a stark reminder of the gap India is trying to bridge.
- While India does produce some rare earth oxides required for REPM manufacturing, it still has no domestic production of heavy rare earth oxides. Indian Rare Earths Limited (IREL) under the Department of Atomic Energy produces some required light rare earth oxides such as neodymium-praseodymium (NdPr) oxides.
- There have been multiple global efforts to cut this dependence on China. In July, the Quad, comprising India, Australia, Japan, and the United States, launched an initiative to secure supply chains of critical minerals. That followed the Critical Minerals Action Plan put forth at the G7 Summit in Canada in June, which was also endorsed by India.

Initiatives taken by India

- India, too, launched its **National Critical Mineral Mission (NCMM)** in January for a period of seven years from 2024-25 to 2030-31. With a proposed outlay of Rs 16,300 crore, it aims to secure India's critical mineral supply chain by ensuring reliable access to key minerals at home and overseas, and strengthening the entire value chain by improving technology, regulation and financing for exploration, mining, processing and recycling.
- In 2023, India **identified 30 minerals as “critical”**. The same year, the government also amended the Mines and Minerals (Development and Regulation) (MMDR) Act, 1957, empowering the central government

to exclusively auction critical and strategic minerals like lithium, cobalt, and rare earth elements etc. Since then, the government has auctioned 34 critical mineral blocks in the country.

Do You Know:

— The QUAD critical minerals initiative underscores the importance of diversified and reliable global supply chains. “Reliance on any one country for processing and refining critical minerals and derivative goods production exposes our industries to economic coercion, price manipulation, and supply chain disruptions, which further harms our economic and national security,” said the statement.

— [Dhiraj Nayyar](#) in *The Indian Express* writes, “Coal powered the first industrial revolution of the 19th and early 20th centuries. Oil and its derivatives fuelled the Second Industrial Revolution (think cars and planes), and global prosperity in the second half of the 20th century. Now, the long 21st century is going to be the critical minerals age.”

Previous year UPSC Prelims Question Covering similar theme:

(5) With reference to the Rare Earth Elements, consider the following statements:

1. These are crucial for manufacturing high-value goods in defence and clean energy.
2. The United States dominated rare earth elements, supplying 85 to 95 per cent of the world's demand.
3. Gadolinium (Gd) and holmium (Ho) are considered Rare Earth Elements.

Which of the statements given above are correct?

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

Why pollution affects north Indian cities more than south & west

Syllabus:

Preliminary Examination: Current events of national and international importance

Mains Examination: General Studies-III: Conservation, environmental pollution and degradation, environmental impact assessment

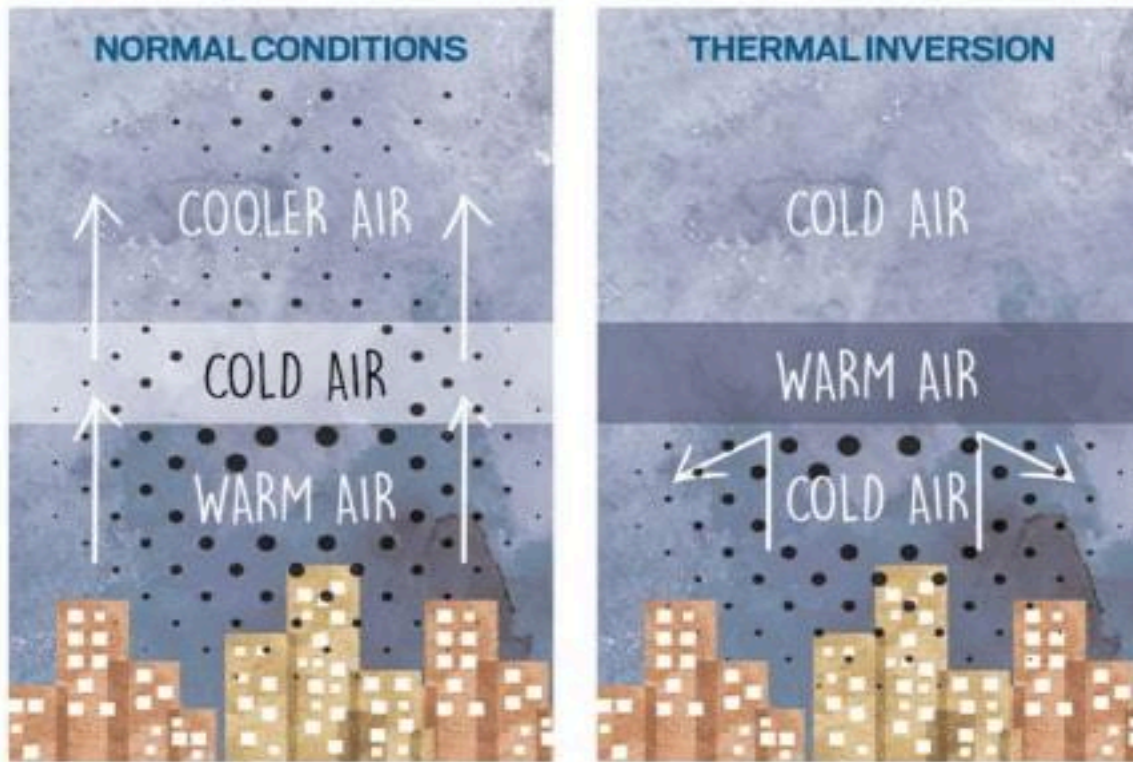
What's the ongoing story: No major urban cities in India recorded safe air quality levels between 2015 and November 2025, with Delhi being the most polluted city during this period, according to a new analysis. It also found that while northern cities experienced the most severe and persistent levels of pollution, southern and western cities comparatively saw better air quality levels.

Key Points to Ponder:

- Understand the reasons for difference in the air circulation of North India and South India
- What is the relationship between winter inversion and air pollution?
- What are the reasons for extreme air pollution in Delhi compared to other states?
- How does the geography of a region impact air pollution?
- What are the steps taken to mitigate air pollution?
- Suggest measures to reduce air pollution mainly in North Indian states (Incorporate measures from different stakeholders- citizens, cities, State government, and Central government)

Key Takeaways:

- The analysis, 'Air Quality Assessment of Major Indian Cities (2015–2025)', was released on Friday (November 28) by Climate Trends, a [Delhi](#)-based climate research organisation. For the study, the organisation examined annual mean AQI data of 11 cities: [Ahmedabad](#), [Bengaluru](#), [Chandigarh](#), [Chennai](#), [Delhi](#), [Kolkata](#), [Lucknow](#), [Mumbai](#), [Pune](#), Varanasi, and Visakhapatnam.
- Note that when the AQI ranges between 0 and 50, the air quality is generally considered to be at a safe level.
- The latest analysis shows that Delhi saw the worst air quality between 2015 and November 2025 among the 11 examined cities. The annual mean AQI levels were highest in 2016 (more than 250) in the national capital, and since 2019, have seen a dip. However, they remain far from safe levels. In 2025, the AQI stood at 180.
- Compared to western and southern cities — such as Chennai, [Chandigarh](#), Visakhapatnam, Mumbai, and [Bengaluru](#) — northern cities — like Delhi, [Lucknow](#), and Varanasi — experience worse air quality levels, especially during winters, due to the region's geography.



Dip in temperature

When the temperature dips, it lowers the inversion height, which is the layer beyond which pollutants cannot disperse into the upper layer of the atmosphere. The concentration of pollutants in the air increases when this happens

#QUIXPLAINED

3

— The issue is that these northern cities are landlocked, as the Indo-Gangetic Plain is surrounded by the Himalayas. Due to this, pollutants get trapped and are not able to disperse. Moreover, “within cities, dense urban structures create additional “surface roughness,” a frictional effect that further slows wind speeds and limits dispersion,” the analysis said.

— While during the summer monsoon, rain and strong westerly winds help disperse pollutants, in winter, the situation becomes worse. Delhi is particularly affected during this time because it is situated in the middle of a vast, flat basin bound by the Himalayas to the north.

— “During winters (December-February), the air in the planetary boundary layer (the lowest part of the atmosphere) is thinner as the cooler air near the Earth’s surface is denser. The cooler air is trapped under the warm air above, forming a kind of atmospheric ‘lid’. This phenomenon is called **winter inversion**. Since the vertical mixing of air happens only within this layer, the pollutants released lack enough space to disperse in the atmosphere,” the analysis said.

Do You Know:

— The Supreme Court on Monday said the air pollution issue in the Delhi-NCR cannot be treated as a “customary” case to be listed only during the winter months, noting that it will be taken twice in a month to find out short and long-term solutions to the menace.

— Air pollution in [Delhi](#) and the whole of the Indo Gangetic Plains is a complex phenomenon that is dependent on a variety of factors. The first and foremost is the input of pollutants, followed by weather and local conditions.

— High-speed winds are very effective at dispersing pollutants, but winters bring a dip in wind speed over all as compared to in summers. The combination of these meteorological factors makes the region prone to pollution. When factors such as farm fires and dust storms are added to the already high base pollution levels in the city, air quality dips further.

Previous year UPSC Prelims Question Covering similar theme:

In the context of WHO Air Quality Guidelines, consider the following statements:

1. The 24-hour mean of PM_{2.5} should not exceed 15 $\mu\text{g}/\text{m}^3$ and annual mean of PM_{2.5} should not exceed 5 $\mu\text{g}/\text{m}^3$.
2. In a year, the highest levels of ozone pollution occur during the periods of inclement weather.
3. PM₁₀ can penetrate the lung barrier and enter the bloodstream.
4. Excessive ozone in the air can trigger asthma.

Which of the statements given above are correct?

- (a) 1, 3 and 4 only
- (b) 1 and 4 only
- (c) 2, 3 and 4 only
- (d) 1 and 2 only

Previous year UPSC Mains Question Covering similar theme:

Describe the key points of the revised Global Air Quality Guidelines (AQGs) recently released by the World Health Organisation (WHO). How are these different from its last update in 2005? What changes in India's National Clean Air Programme are required to achieve revised standards? (UPSC CSE 2021)

ALSO IN NEWS

For climate solutions,
look to the Global
South

Syed Munir Khasru writes: As COP 30 ended on Nov 21 in Belém, Brazil, its legacy is mixed. It is a moment of diplomatic reaffirmation, but also a sobering reminder of how far the divided global community still has to go.

From the Amazon to the Andaman, the Global South's most climate-vulnerable regions are becoming its diplomatic core, transforming exposure into influence.

Across the South, countries are co-creating frameworks for the next generation of climate governance. Brazil's new carbon-market law blends regulated and voluntary systems, while India and Indonesia are advancing renewable transitions. These moves signal a shift in leverage. The South is no longer just following climate rules; it is helping write them.

What is emerging is less a call for aid than a design for autonomy. Brazil has halved deforestation since 2023, India is adding 22 GW of renewables, and Indonesia aims for 35 per cent renewable electricity by 2034.

Brazil, after its G20 presidency and now after hosting COP 30, has already used its convening power to advance debates on global tax reform and the restructuring of development banks. Meanwhile, India's renewable energy transformation and Indonesia's commitment to a just transition demonstrate that climate leadership can be inclusive, growth-oriented, and grounded in regional realities.

Pakistani couple who
'fled to India for love'
found to be adults:
How bones and teeth
determine age

A Pakistani couple who had crossed into Kutch in October, claiming to have fled their village because their families opposed their relationship, have been booked under The Foreigners Act and the Passports Act after they were found to be adults, and not minors as they had claimed.

The procedure for Medical Age Estimation is established in law, under which a person's bones and teeth are examined to determine age. Specifically, experts measure the level of ossification of bones and mineralisation of teeth to figure out the age of a person.

Ossification is the process of bone formation, where cartilage and other tissues harden into bones. Mineralisation is the natural enamel repair process of teeth.

Since bones and teeth follow set biological processes for development, and are relatively unaffected by environmental changes unlike other parts of the body, they are the preferred choice for age estimation procedures.

Distinguishing minors from adults are two bones — radius and ulna — that form the forearm... He added that there are differences between men and women. "Bone fusion in females takes place a year or two earlier than males. The margin of error is 1 to 2 years," he said.

PRELIMS ANSWER KEY

1. (d) 2. (b) 3. (c) 5. (c) 6. (b)