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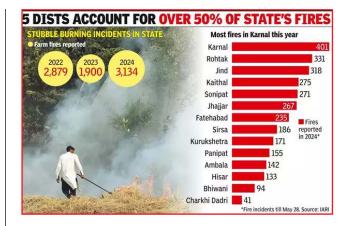
Farm Fires Rise Across Haryana

Why in News?

Farm fires that are used to clear land after wheat harvesting in the summer months reached 3,134 cases in Haryana in April and May, making it the highest number recorded in the state during this period in the last three years.

Key Points

- As per satellite data analyzed by the <u>Indian Agricultural</u> <u>Research Institute</u> in 2023, there was a 42% reduction in farm fires during April-May, with only 1,900 incidents recorded.
 - The decrease in figures for 2023 was attributed to a higher number of pre-monsoon showers in the area.
- The <u>Commission for Air Quality Management (CAQM)</u> recently stated that the increased occurrences of burning crop residue in and around the National Capital Region (NCR) and forest fires in neighboring states may be contributing to the poor air quality in Delhi-NCR, alongside dry weather conditions causing dust to linger over the area.
 - Public awareness initiatives have been initiated to inform both farmers and the public about the adverse effects of burning crop residue and the significance of embracing environmentally friendly alternatives.
- According to the Center for Study of Science, Technology and Policy (CSTEP), authorities must not only focus on combating air pollution in winter but also address the issue throughout the year.
 - Although the negative impact of farm fires causing poor air quality is usually highlighted during October–November, the <u>burning of Rabi stubble</u> in April and May is equally detrimental.
 - Even though stubble burning may not significantly affect Delhi's air quality in the summer due to monsoon winds, it does contribute to a decline in air quality in Punjab and nearby regions.
 - This situation worsens when stagnant winds persist for several days, hindering the dispersion of pollutants.



Indian Agricultural Research Institute (IARI)

- Indian agricultural Research Institute (IARI), popularly known as Pusa Institute, began in 1905 at Pusa (Bihar) with the generous grant from an American philanthropist, Mr. Henry Phipps.
- Following a devastating earthquake in 1934, the institute was shifted to Delhi on 29th July 1936. Post independence, the institute has been renamed as Indian Agricultural Research Institute (IARI).
- The green revolution that brought smiles to millions of Indians bloomed from the fields of IARI with the development of famous wheat varieties which contributed to massive production.
- ➤ IARI continues to be the leading institution for agricultural research, education and extension in the country.

Commission for Air Quality Management (CAQM)

- ➤ It is a **statutory mechanism** to coordinate and **oversee diverse efforts to improve air quality** in Delhi, Punjab, Haryana, Rajasthan and UP, with the underlying remedial approach.
- The establishment of CAQM has the potential to address the problem of air pollution but an institution by itself is not a solution.

Haryana to Demolish Illegal Floors

Why in News?

Recently, the Haryana government's department of town and country planning (DTCP) has issued directions stating that illegally built fourth floors of houses constructed on residential plots may be demolished and their occupancy certificates cancelled.



Key Points

- In February 2023, the Haryana government suspended approval for new 'stilt plus four floors' building plans for residential plots, including pending applications.
 - o The government has not yet decided whether to allow such buildings across the state.
- > The DTCP officials clarified that occupation certificates of those residential buildings, where a fourth floor was built but necessary formalities had not been completed by February 23, 2023, will remain suspended till further directions from the Haryana government on the policy.

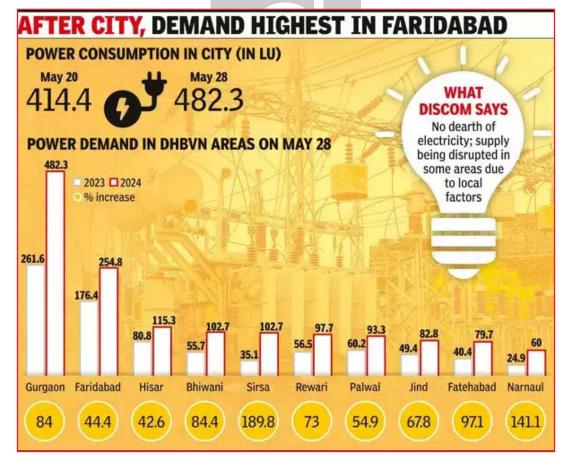
High Power Demand Amid Heatwave

Why in News?

Gurugram is facing a significant **increase in electricity demand** due to the current **heatwave**. Recently, the **power demand** reached a record high of **482.3 lakh units (LU)** as the temperature soared to 47 degrees, marking an 84% rise from 2023.

Key Points

- > The **high demand for electricity** is causing significant **stress on the city's power distribution system.** People all over the city are experiencing **unplanned power outages and frequent changes in voltage**, resulting in nights without proper rest.
- According to the **officials**, they are diligently **overseeing the situation** and **implementing necessary measures** to avoid power outages or failures.





Aravalli Fire

Why in News?

As temperatures rose, a **forest fire** broke out in the Aravallis near Surajkund in Faridabad.

Despite the fire department successfully putting out the flames within half an hour, locals claimed that several acres of land and trees had already been burnt.

Key Points

- Aravallis are fold mountains of which rocks are formed primarily of folded crust, when two convergent plates move towards each other by the process called orogenic movement.
 - o The Aravallis of Northwestern India, one of the oldest fold mountains of the world, now form residual mountains with an elevation of 300m to 900m. They stretch for a distance of 800 km. from Himmatnagar in Gujarat to Delhi, spanning Haryana, Rajasthan, Gujarat, and Delhi, the 692 kilometre.
 - The hidden limb of the Aravallis that extends from Delhi to Haridwar creates a divide between the drainage of rivers of the Ganga and the Indus.
- The Aravallis date back to millions of years when a pre-Indian subcontinent collided with the mainland Eurasian Plate. Carbon dating has shown that copper and other metals mined in the ranges date back to at least 5th century BC.
- The mountains are divided into two main ranges the Sambhar Sirohi Range and the Sambhar Khetri Range in Rajasthan, where their extension is about 560 km.

Haryana Records 65% Voter Turnout

Why in News?

According to the Haryana Chief Electoral Officer, the elections for 10 Lok Sabha seats and the Karnal Assembly seat in the state remained peaceful, witnessing approximately 65% voter turnout in the General Elections of 2024.

Key Points

The Sirsa parliamentary constituency recorded the highest turnout of 69%.

- Following this, Ambala parliamentary constituency saw a 66.9% turnout, and Kurukshetra witnessed 66.2% voting.
- Similarly, Faridabad recorded 59.7%, Hisar 64.6%, Sonipat 62.2%, Rohtak 64.5%, Bhiwani-Mahendragarh 65.2%, Karnal 63.2% and Gurgaon 60.6% voter turnout.
- There were 99 polling stations which will be operated entirely by women staff and 71 polling stations manned by Person with Disability (PwD) employees.

Gurugram in Top 50 List of **Startup Cities**

Why in News?

Recently, PitchBook unveiled its global Venture Capital ecosystem rankings for 2024, showcasing the top 50 startup cities worldwide and providing insights into the development of these ecosystems.

Key Points

- Three Indian cities have featured among the top 50 startup cities globally, with Mumbai at 32nd place, Bengaluru at 34th, and Gurugram at 48th.
- > The global startup ecosystem has seen a significant increase in innovation and growth in recent years.
 - o As a result, global investors are exploring opportunities in new countries, with startups securing substantial funding and valuations reaching multi-billion-dollar levels, and cities worldwide are actively competing to establish themselves as prominent hubs for startups.
- > PitchBook is the leading resource for comprehensive data, research and insights spanning the global capital markets.
- It is a financial data and software company with offices in London, New York, San Francisco and Seattle.

Backlash Over Haryana Govt.'s E-initiatives

Why in News?

The Haryana government is facing a backlash from a section of stakeholders over some of its e-initiatives, the opposition has turned it into an election issue and promised to roll them back on coming to power.



Key Points

- Parivar Pehchan Patra and Meri Fasal Mera Byora are the e-initiatives, due to which the government is facing backlash.
 - The Parivar Pehchan Patra has been marred by privacy concerns and large-scale discrepancies in user details, causing inconvenience to people.
 - According to the sources, Meri Fasal Mera Byora, which provides multiple services to farmers through a single portal, was a good initiative, but poor implementation and loopholes not just caused hassles to farmers but also led to instances of fraud and corruption.

Parivar Pehchan Patra (PPP) Scheme

- Background: PPP scheme was formally launched in July 2019 to achieve Haryana government's vision for 'paperless' and 'faceless' delivery of schemes, services and benefits offered by the state government.
 - Under this, each family is considered a single unit and gets an 8-digit unique identification number, called family ID.
 - Family IDs are also linked to independent schemes like scholarships, subsidies and pensions, so as to ensure consistency and reliability.
 - It also enables automatic selection of beneficiaries of various schemes, subsidies and pensions.
- Objective: The primary objective of Parivar Pehchan Patra (PPP) is to create authentic, verified and reliable data of all families in Haryana.

Meri Fasal Mera Byora

- It was launched in 2022, for the convenience of the farmers of the state for redressal of grievances of Pradhan Mantri Fasal Bima Yojana.
- > Through this portal, farmers can register their complaints from anywhere.

Report on Haryana Government Schools

Why in News?

A recent government report revealed that 19 schools in the state are without any students, 811 schools have just one teacher, and a total of 3,148 schools have less than half of their student capacity filled.

Key Points

- ➤ The report, which outlined key points from a meeting held by the Union education ministry's project approval board in February 2024, pinpointed 14,562 government schools in the state.
- > The report highlighted the **insufficient number of teachers**, particularly in elementary schools, and advised the government to promptly fill these vacancies.
 - The shortage of teachers has impacted the central funding allocated for salary payments.
 - In the primary sector, the financial assistance has decreased to Rs 14 lakh from Rs 19 lakh in the 2021-22 period.
 - Similarly, in higher education, grants have dropped from Rs 20 lakh to Rs 14 lakh due to several unfilled positions.
- Apart from the shortage of teachers, the report also pointed to lack of basic infrastructure for students in these schools.
 - While the schools are 18% short of their target for additional classrooms, toilets for boys and girls are 1% and 1.8% fewer than what they should be. Smart classrooms are also 1.4% behind the required number.
- The report emphasized that non-recurring approvals from the past, which have not been addressed by the state for years, will eventually become the state's sole responsibility after a period of 5 years according to the Samagra Shiksha framework.
- Schools that have not set up facilities must withdraw their initial proposals and think about submitting new ones.
 - The state government has been directed to regularly update the progress of pending tasks on the <u>Prabandh portal</u> to avoid any errors in the data presented.

Samagra Shiksha Scheme

- It is an integrated scheme for school education covering the entire gamut from pre-school to class XII.
- It aims to deliver inclusive, equitable, and affordable school education.
- It subsumes the three Schemes of Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).



- The scheme covers 1.16 million schools, over 156 million students and 5.7 million Teachers of Govt. and Aided schools (from pre-primary to senior secondary level).
- It is being implemented as a centrally sponsored scheme. It involves a 60:40 split in funding between the Centre and most States. It was launched by the Ministry of Education in 2018.

Samagra Shiksha Scheme 2.0

> Direct Benefit Transfer (DBT):

- In order to enhance the direct outreach of the scheme, all child-centric interventions will be provided directly to the students through DBT mode on an IT-based platform over a period of time.
- This DBT would include RTE (Right to Education) entitlements such as textbooks, uniforms and transport allowance.

> On NEP Recommendations:

- Encouraging Indian languages:
 - It has a new component for appointment of language teachers, which includes salaries, and training costs as well as bilingual books and teaching learning material as recommended in NEP.

Pre-primary Education:

- It will now include funding to support preprimary sections at government schools, i.e. for teaching and learning materials, indigenous toys and games and play-based activities.
- Master trainers for pre-primary teachers and anganwadi workers will be supported under the scheme.

O NIPUN Bharat Initiative:

 Under this initiative, an annual provision of Rs. 500 per child for learning materials, Rs. 150 per teacher for manuals and resources and Rs. 10-20 lakh per district will be given for assessment for foundational literacy and numeracy.

On Digital Initiatives:

 There is a provision for ICT labs and smart classrooms, including support for digital boards, virtual classrooms and DTH channels which have become more important in the wake of the Covid-19 pandemic.

o For out-of-school children:

- It includes a provision to support out of school children from age 16 to 19 with funding of Rs.
 2000 per grade to complete their education via open schooling.
- There will also be a greater focus on skills and vocational education, both for students in school and dropouts.

Ozone Levels Breached Safe Limit

Why in News?

According to **the Haryana State Pollution Control Board (HSPCB)**, the ground-level <u>ozone level</u> has exceeded safe limits in certain areas of the city over the past 15 days.

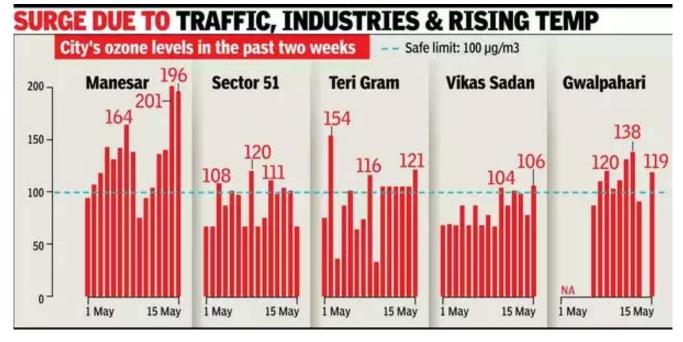
Key Points

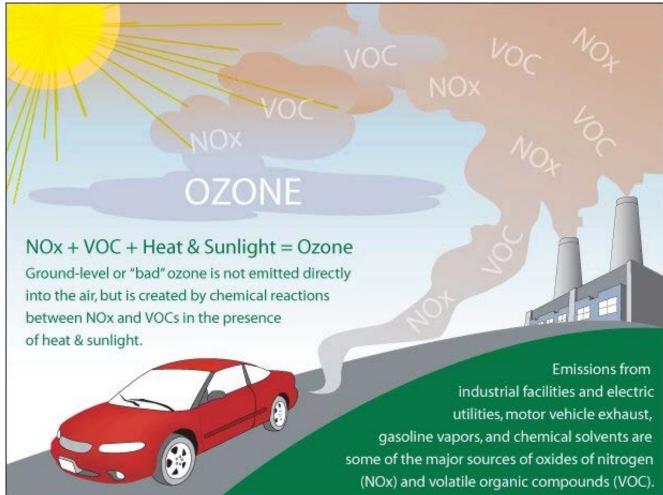
- Data from air monitoring stations in Manesar, Sector 51, and Gwalpahari indicate multiple instances of surpassing the 100 micrograms per cubic meter (ug/ m3) eight-hour ozone limit.
- Experts have characterized the situation as concerning, noting that the existence of ground-level ozone indicates increased levels of other pollutants such as <u>nitrogen oxide (NOx)</u> and sulphur oxide (Sox).
- These pollutants interact with sunlight to produce ozone, with this phenomenon predominantly happening during the day in locations experiencing traffic congestion or where multiple industries are active.
- Tropospheric ozone exposure poses health risks and can worsen conditions like asthma and chronic obstructive pulmonary disease.
- Officials from HSPCB stated that they have instructed local authorities to take steps to reduce road dust and burning of garbage.

Ozone

- Ozone (composed of three atoms of oxygen) is a gas that occurs both in the Earth's upper atmosphere and at ground level.
- Ozone can be "good" or "bad" for people's health and the environment, depending on its location in the atmosphere.









Haryana's New Excise Policy

Why in News?

Recently, the **Haryana Cabinet** gave its nod to a **new excise policy** for the year **2024-25** after receiving approval from the **Election Commission**.

Key Points

- There will be a slight increase in the excise duty on IMFL (Indian Made Foreign Liquor) and country liquor in the new policy starting from 12th June.
- > The cabinet met here under the chairmanship of Chief Minister Nayab Singh Saini.
- The maximum basic quota of IMFL will be 700 lakh proof liters (Measurement Unit) and 1,200 lakh proof liters for the country liquor for the year 2024-25.
- The QR code-based track and trace system that was introduced in 2023-24 for IMFL and country liquor will be extended to imported foreign liquor as well.
- The maximum number of retail vends will remain the same in the new policy. Any person desirous of participating in the e-auction will be required to furnish an <u>Aadhar Card</u> or <u>Parivar Pehchan Patra, Income</u> <u>Tax Returns</u> for the last three assessment years and must have a minimum net worth of Rs 60 lakh.
- As the <u>Model Code of Conduct</u> is in force in view of the ongoing Lok Sabha election, the approval of the EC was taken before the decision was taken on the policy.

Model Code of Conduct

- ➤ The MCC is a **consensus document**. The political parties have themselves agreed to keep their conduct during elections in check and to work within the Code.
- It helps the EC in keeping with the mandate it has been given under Article 324 of the Constitution, which gives it the power to supervise and conduct free and fair elections to the Parliament and State Legislatures.
- The MCC is operational from the date on which the election schedule is announced until the date of the result announcement.
- > The government **cannot announce any** financial grants, promise construction of roads or other facilities, and make any ad hoc appointments in government or public undertaking during the time the Code is in force.

Income Tax Return

- Income Tax: It is a tax charged on the annual income of an individual or business earned in a financial year.
- The Income Tax system in India is governed by <u>The Income Tax Act</u>, <u>1961</u> and it is a direct tax.
 - Income Tax Return: It is a designated document used to convey details about an individual's earnings in a financial year and the taxes paid on that income to the Income-tax Department.
- This form also facilitates the carrying forward of losses and enables individuals to claim refunds from the income tax department.

Heatwave in Haryana

Why in News?

Recently, the <u>India Meteorological Department (IMD)</u> has issued a "**yellow**" and "**orange**" alert, signaling the likelihood of heatwave conditions in Haryana.

Key Points

- Heatwaves are prolonged periods of excessively hot weather that can cause adverse impacts on human health, the environment, and the economy.
 - India, being a tropical country, is particularly vulnerable to heatwaves, which have become more frequent and intense in recent years.
- > Criteria for Declaring Heat Wave in India:
 - Plains and Hilly Regions:
 - Heat wave is considered if the maximum temperature of a station reaches at least 40°C or more for Plains and at least 30°C or more for Hilly regions.
 - Based on Departure from Normal Heat Wave: Departure from normal is 4.50°C to 6.40°C.
- > Severe Heat Wave: Departure from normal is >6.40°C.
 - Based on Actual Maximum Temperature Heat Wave: When actual maximum temperature ≥45°C.
- Severe Heat Wave: When actual maximum temperature ≥47°C.
 - If the above criteria are met in at least 2 stations in a Meteorological subdivision for at least two consecutive days, it is declared so on the second day.



O Coastal Areas:

 When the maximum temperature departure is 4.50°C or more from normal, a heat wave may be described provided the actual maximum temperature is 37°C or more.

Rise in Plastic Waste Generation

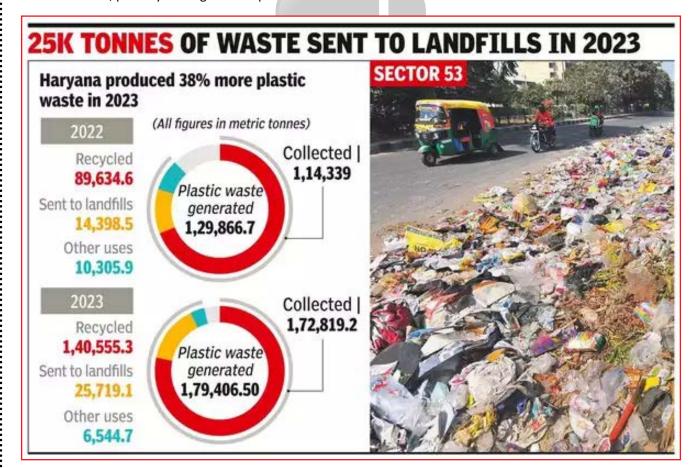
Why in News?

According to the Haryana State Pollution Control Board's annual report, there is an increase in plastic waste production in 2023 to 1,79,406.5 tonnes, marking a 38% surge from 2022's 1,29,866.7 tonnes. About 14% of this waste was disposed of in landfills.

Key Points

> The report has highlighted a rise in plastic consumption in the state, possibly leading to more plastic waste.

- This development is concerning as it presents major hurdles for <u>waste management</u> and can have lasting <u>environmental consequences</u>.
- Experts suggest that the solution to this problem involves cutting down on plastic usage and encouraging the adoption of eco-friendly alternatives.
- Burning plastic waste in landfills poses a significant environmental issue as it can lead to toxic Particulate Matter (PM) and gaseous emissions due to poorly managed sites where fires can commonly occur.
 - Therefore, it is advised to minimize the disposal of plastics in landfills as a preventive measure.
- The Urban Local Body (ULB) department has devised a strategy for managing plastic waste, which has been submitted to the Central Pollution Control Board (CPCB).
 - All municipal corporations have been instructed to establish Material Recovery Facilities (MRFs) as necessary and to handle their plastic waste in accordance with the Solid Waste Management Rules, 2016, and Plastic Waste Management Rules, 2016.





Central Pollution Control Board (CPCB)

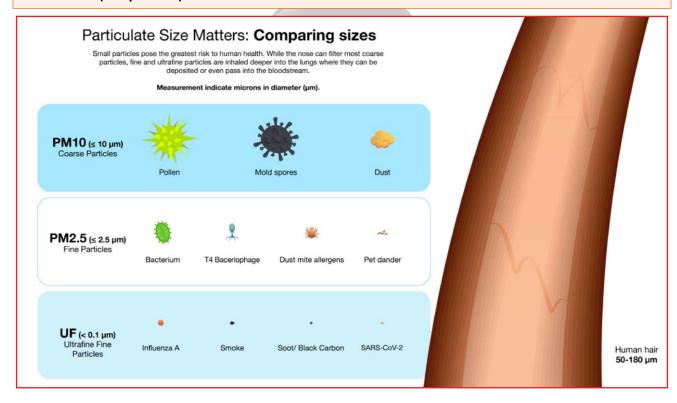
- > CPCB is a **statutory organisation** which was **constituted in September, 1974** under the **Water (Prevention and Control of Pollution) Act, 1974**.
- > It was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.
- > It serves as a field formation and also provides technical services to the Ministry of Environment and Forests and Climate Change of the provisions of the Environment (Protection) Act, 1986.

Haryana State Pollution Control Board

> It was formed as a **statutory organisation** by Government of Haryana in the **year 1974** to preserve the wholesomeness of water and prevent water pollution after Government of **India legislation of Water Act, 1974.**

Particulate Matter (PM)

- > Particulate matter, or PM, refers to a complex mixture of extremely **small particles and liquid droplets** suspended in the air. These particles come in a wide range of sizes and can be made up of hundreds of different compounds.
 - o PM10 (coarse particles) Particles with a diameter of 10 micrometres or less.
 - o PM2.5 (fine particles) Particles with a diameter of 2.5 micrometres or less.



Swiss Military to Invest in Haryana

Why in News?

Global lifestyle brand Swiss Military announced that it will set up its first fully owned manufacturing unit in Haryana with an initial investment of Rs 56.5 crore.



Key Points

- The company plans to set up its first fully owned manufacturing unit for luggage and travel gear in Faridabad, Haryana.
 - Spread over 1.21 acres and a built-up area of about 85,000 sq ft, the proposed plant will have a production capacity of 10 lakh pieces per year.
- The targeted completion for the manufacturing unit will be within 8 months by 31st Dec, 2024.
 - With domestic and international leisure and business travel bouncing back aggressively, the company has seen very vigorous growth in the luggage and travel gear segment.
- This new venture by Swiss Military is aligned to the future vision of expansion in India and abroad while being part of 'Make in India' movement.

'Make in India' Movement

- Launched in 2014, Make in India aims to transform the country into a leading global manufacturing and investment destination.
- It is being led by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India.
- > The initiative is an open invitation to potential investors and partners across the globe to participate in the growth story of 'New India'.
- Make in India has substantial accomplishments across 27 sectors under Make in India 2.0 which include strategic sectors of manufacturing and services as well.

Chakravyuh: The Escape Room

Why in News?

Recently, the <u>Haryana State Narcotics Control Bureau</u> (<u>HSNCB</u>) has launched a pioneering project called 'Chakravyuh: The escape room' which aims to keep teenagers away from <u>narcotics addiction</u>.

Key Points

Chakravyuh, meaning labyrinth, is an "anti-drug escape room" experience designed to simulate reallife challenges through immersive and interactive learning environments.

- The first functional smart classroom has been launched in DAV Public School, Ambala, and the project will be replicated in other government and private schools across the state.
- It is designed to simulate realistic scenarios in a controlled environment where participants must use their intellect and moral judgment to navigate the situations.
 - The setup is equipped with modern technologies such as <u>augmented reality (AR) and virtual reality</u> (VR) to create engaging and captivating scenarios that grab the attention and interest of young people.
 - The activity involves solving a set of challenges, each representing a different life scenario, including the urge to take drugs.
- The escape room educates participants about the consequences of drug abuse and the importance of good decision-making skills. It immerses them in scenarios that require quick thinking and effective communication, reflecting real-life situations. The initiative enhances teamwork and peer support mechanisms by requiring a collaborative effort to progress through challenges.
- The HSNCB is also working on digitising this experience so that the children interested in gaming can also play this game online and gain knowledge about the adverse impact of narcotic abuse.

Drug Addiction

- It refers to the condition of being addicted to a drug, particularly narcotic drugs.
- > These are generally illegal drugs that affect the mood and behaviour of a person.
- Drug abuse refers to the use of certain chemicals for the purpose of creating pleasurable effects on the brain.
- There are over 190 million drug users around the world and the problem has been increasing at alarming rates, especially among young adults under the age of 30.
- Government Initiatives to Tackle Drug Addiction:
 - It constituted the <u>Narco-Coordination Centre</u> (<u>NCORD</u>) in November, 2016 and revived the scheme of "Financial Assistance to States for Narcotics Control".



- Narcotics Control Bureau has been provided funds for developing a new software i.e. Seizure Information Management System (SIMS) which will create a complete online database of drug offences and offenders.
- The government has constituted a fund called "National Fund for Control of Drug Abuse" to meet the expenditure incurred in connection with combating illicit traffic in Narcotic Drugs; rehabilitating addicts, and educating the public against drug abuse, etc.
- The government is also conducting a National Drug Abuse Survey to measure trends of drug abuse in India through the Ministry of Social Justice & Empowerment with the help of National Drug Dependence Treatment Centre of AIIMS.
- 'Project Sunrise' was launched by the Ministry of Health and Family Welfare in 2016, to tackle the <u>rising HIV prevalence</u> in north-eastern states in India, especially among people injecting drugs.
- The Narcotic Drugs and Psychotropic Substances
 Act, (NDPS) 1985: It prohibits a person from
 producing, possessing, selling, purchasing,
 transporting, storing, and/or consuming any
 narcotic drug or psychotropic substance.
 - The NDPS Act has since been amended thrice in 1988, 2001 and 2014.
 - The Act extends to the whole of India and it applies also to all Indian citizens outside India and to all persons on ships and aircraft registered in India.
- Government has also announced the launch of the 'Nasha Mukt Bharat', or Drug-Free India Campaign which focuses on community outreach programs.

Government Plans to Turn South Haryana Greener

Why in News?

According to the forest department, **Six districts in south Haryana** are prepared to **plant 2.4 million saplings** in the 2024 monsoon season.

Key Points

Faridabad will lead the initiative by planting 5 lakh saplings, followed by Mahendergarh with 4.9 lakh saplings.

- Palwal and Gurgaon will plant 3.7 lakh and 3.4 lakh saplings, respectively, while Nuh and Rewari are planning to plant 3.3 lakh saplings each.
- The Gurgaon's urban area has a forest cover of less than 1% despite yearly large-scale plantation efforts. 2024's extensive plantation campaign is focused on boosting the green cover.
 - To ensure the success of the plantation drive, the forest department plans to involve local communities and raise awareness about the significance of trees.
 - The planting initiatives will probably be paired with educational initiatives to raise awareness about the benefits of preserving and safeguarding the newly established green areas.
- This project aims to improve the air quality of Gurgaon which is one of the most polluted according to IQAir, a Swiss company.
 - According to the report by this firm, the PM 2.5 concentration in the city rose by 11% in 2021 compared to 2020.
- The Forest Survey of India (FSI) indicates a decline of 2.47sq km of forest cover between 2019 and 2020.
 - O However, simply planting a large number of trees without ensuring their survival is not an effective solution. The survival rate of saplings in the region stands at only 10 to 20%, underlining the insufficiency of mass plantation drives.
 - Environmentalists stress the need for plantation drive audits and the revival of native species to enhance biodiversity in the area.

Forest Survey of India (FSI)

- FSI was **founded in June 1981** and **headquartered at Dehradun** in Uttarakhand.
- > It is under the Ministry of Environment, Forest and Climate Change.
- This organisation conducts forest surveys, studies and researches to periodically monitor the changing situations of land and forest resources.
- It presents the data for national planning, conservation and sustainable management of environmental protection as well as for the implementation of social forestry projects.



Air Pollutants

Sulphur Dioxide (SO₂)





It comes from the consumption of fossil fuels (oil, coal and natural gas). Reacts with water to form acid rain.

Impact: Causes respiratory problems.

Ozone (O₃)





Secondary pollutant formed from other pollutants (NOx and VOC) under the action of the sun.

Impact: Irritation of the eye and respiratory mucous membranes, asthma attacks.

Nitrogen Dioxide (NO₂)







Emissions from road transport, industry and energy production sectors. Contributes to Ozone and PM formation.

Impact: Chronic lung disease.

Carbon Monoxide (CO)







It is a product of the incomplete combustion of carbon-containing compounds.

Impact: Fatigue, confusion, and dizziness due to inadequate oxygen delivery to the brain.

Ammonia (NH₃)





Produced by the metabolism of amino acids and other compounds which contain nitrogen.

Impact: Immediate burning of the eyes, nose, throat and respiratory tract and can result in blindness, lung damage.

Lead (Pb)





Released as a waste product from extraction of metals such as silver, platinum, and iron from their respective ores.

Impact: Anemia, weakness, and kidney and brain damage.

Particulate Matter (PM)







PM10: Inhalable particles, with diameters that are generally 10 micrometers and smaller.

PM2.5: Fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

Source: Emitted from construction sites, unpaved roads, fields, fires.

Impact: Irregular heartbeat, aggravated asthma, decreased lung function.

Note: These major air pollutants are included in the Air quality index for which short-term National Ambient Air Quality Standards are prescribed.





Key Points	Details
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