

The Hindu Important News Articles & Editorial For UPSC CSE

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—It's about quality—

Page 07 : GS 3 : Environment – Environmental pollution and degradation

The aviation sector is among the top global emitters of greenhouse gases, with private jets having a significantly higher per-passenger carbon footprint.

- ➔ India's growing private aviation sector reflects its rising wealth, but sustainable solutions like SAFs, hydrogen, and electrification face cost and feasibility challenges.

Private aviation is releasing more than its 'fair share' of emissions

Scientists analysed flight data from the ADS-B Exchange platform and focused on five recent global events which were accompanied by international travel. They found some 47% of all these flights were for distances shorter than 500km and around 19% were in fact for distances shorter than 200km. About 5% spanned less than 50km

Monika Mondal

If the aviation sector were a country, it would be among the world's top 10 greenhouse gas-emitting nations. Air travel is one of the most polluting modes of travel for its relatively higher carbon dioxide and nitrogen oxide emissions and the effects of vapour trails and gases it deposits in the atmosphere.

But even within air travel, private jets and chartered planes have a higher carbon footprint per passenger.

According to a 2021 report of the European Federation for Transport and Environment, private jets are five- to 14-times more polluting per passenger than commercial flights and 50-times more than trains.

A recent study in *Nature* reported emissions increased by 46% between 2019 and 2023, especially thanks to private aviation. The number of aircraft increased from 25,993 in December 2023 to 26,454 in February 2024 and is expected to grow further. According to the paper, "Private aviation contributed at least... about 3.6 tonnes of CO₂ per flight."

More millionaires in India

As of March 2024, 112 private planes were registered in India. According to the paper, India has very few aircraft per lakh population (0.01) compared to Malta (46.5), the U.S. (5.45), Switzerland (3.76), the U.K. (0.78), Brazil (0.43), France (0.36), and Russia (0.1). China has a comparable 0.02.

"But India is actually among the top 20 countries in terms of private aircraft ownership and the highest among low-middle-income countries," Ramya Natarajan, a research scientist at the Centre for Study of Science, Technology, and Policy (CSTEP), a think-tank in Bengaluru, said. "This isn't surprising because India, while still a developing country, has the third highest number of billionaires in the world and also has a rapidly growing millionaire population."

Despite nascent efforts to decarbonise the aviation industry, solutions like sustainable aviation fuels (SAFs), hydrogen, and electrification haven't been easy to implement at a large scale.

Private flight usage

In the study, researchers from institutes in Sweden, Germany, and Denmark analysed flight data from the ADS-B Exchange platform and focused on five recent global events accompanied by international travel.

These events were the World Economic Forum in Switzerland; the Super Bowl in the U.S.; the COP28 climate talks in the U.A.E.; the Cannes Film Festival in



As of March 2024, 112 private planes were registered in India. Representative photo. CHRIS LEIPOLD

France; and the 2022 FIFA World Cup in Qatar. In many cases, the researchers found the same aircraft units were used for these events.

Some 47% of all these flights were for distances shorter than 500km. Around 19% were in fact for distances shorter than 200km; many of them were actually empty or used to deliver goods. About 5% of the flights spanned less than 50km – a distance otherwise easily covered by road or rail.

The study also reported that the use of private aircraft for leisure destinations like Ibiza in Spain and Nice in France peaked in June-August, which is summer in the northern hemisphere, and especially over the weekends.

Around 69% of private aviation was concentrated in the U.S.

The researchers also estimated that another 8,500 jets will be delivered to private parties in the next 10 years, although how many will end up in India is unknown. "How many additional private flights might be added every year as India becomes a wealthier, developed country? Can India afford to take the U.S. route? What would the overall impact of such lifestyle choices be?" Natarajan asked.

Air travel and India's emissions

In the last decade, the Indian government launched the policies 'Ude Desh Ka Aam Nagrik' (UDAN) to enhance rural connectivity and 'Nextgen Airports for



In India, the alcohol-to-jet pathway seems most likely in the medium term. However, planning is needed to avoid negative land-use change and groundwater implications. Demand for SAF should not incentivise sugarcane or maize

Bharat Nirman' (NABH) to increase airport capacity by more than five times.

Indian airline operators have also been testing low-carbon fuels. In 2018, for example, SpiceJet operated a flight from Uttarakhand to New Delhi on aviation fuel blended with oil from seeds of the jatropha plant, to the tune of 25% by volume. In 2023, Air Asia flew a flight from Pune to New Delhi powered by SAF blended with aviation turbine fuel (ATF) based on indigenous feedstock and supplied by the Indian Oil Corporation, Ltd. But these attempts have not translated into the commercialisation of SAF due to its limited availability and efficiency. According to one April 2024 estimate, it also costs "at least 120%" more than conventional jet fuel for reducing emissions by at least 27%.

Apart from SAFs, both experts and lawmakers have discussed hydrogen and electrification as possible alternatives to kerosene, which is used in aviation for its

high energy density. Hydrogen packs three-times more energy in the same mass but handling it is a nightmare. Engineers will need to redesign, remodel, and restructure aircraft bodies as well as the fuel storage, transportation, and fuelling facilities at airports to use hydrogen-based fuels in aviation.

Likewise, electrification is currently a poor solution due to issues of battery weight, flight stability, and its dependency on other economies for its raw materials, industry experts have said. "In India, the alcohol-to-jet pathway seems most likely in the medium term, given that we already have a good ethanol production supply chain," Natarajan said.

"However, this should be carefully planned to avoid negative land-use change and groundwater implications. A demand for SAF should not incentivise increased cultivation of sugarcane or maize. Instead, only surplus sugar should be used."

However, Natarajan added, the work of her and her peers at CSTEP suggests there is hope. "If by the year 2050, only surplus sugar is converted to ethanol and ethanol is fully used to make aviation fuel, instead of blending with petrol as we do currently, then we can meet almost 15-20% of the aviation fuel demand of 2050," she said.

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THE GIST

Private jets are five to 14 times more polluting than commercial flights and 50 times more than trains. *Nature* reports emissions increased by 46% because of private aviation

India is among the top 20 countries in terms of private aircraft ownership. India though a developing country has the third highest number of billionaires and a rapidly growing millionaire population

Hydrogen and electrification are being discussed as alternatives to kerosene. Hydrogen packs three times more energy but handling is a nightmare. Electrification is beset by issues like weight, flight stability, and raw materials

Aviation Sector and Greenhouse Gas Emissions

- ➔ If considered a country, the aviation sector would rank among the top 10 global greenhouse gas emitters.
- ➔ Air travel is one of the most polluting transportation modes due to high carbon dioxide and nitrogen oxide emissions, as well as the effects of vapour trails and atmospheric gases.

Private Jets and Their High Carbon Footprint

- Private jets are 5–14 times more polluting per passenger than commercial flights and 50 times more than trains, according to a 2021 European Federation for Transport and Environment report.
- A Nature study highlights that private aviation emissions rose by 46% between 2019 and 2023.
- Private jets contributed an average of 3.6 tonnes of CO₂ per flight during this period.

Private Aircraft in India

- India had 112 private planes as of March 2024, with a ratio of 0.01 private aircraft per lakh population.
- While this ratio is lower than countries like the U.S. (5.45) and Switzerland (3.76), India ranks among the top 20 nations in private aircraft ownership and leads among low-middle-income countries.
- This trend is driven by India's rapid economic growth and its ranking as the third-largest country in terms of billionaires.

Private Jet Usage and Global Trends

- Researchers analyzed private jet usage at events like the World Economic Forum and FIFA World Cup, finding 47% of flights were for distances under 500 km.
- About 19% of flights were shorter than 200 km, including empty flights or those delivering goods.
- Leisure travel via private jets peaks during summer months, particularly to destinations like Ibiza and Nice.

Decarbonizing Aviation

- India launched initiatives like UDAN and NABH to enhance connectivity and airport capacity.
- Efforts to use sustainable aviation fuels (SAFs) include trials by SpiceJet in 2018 and Air Asia in 2023. However, SAF commercialization faces challenges like high costs and limited availability.

Future Solutions

- Hydrogen and electrification are being explored, but implementation faces challenges like infrastructure redesign and battery dependency.
- Alcohol-to-jet fuel is a promising medium-term solution, especially using surplus sugar for ethanol production, which could meet 15–20% of India's aviation fuel demand by 2050 without negative agricultural impacts.

UPSC Mains Practice Question

Ques : Analyze the environmental challenges posed by the aviation industry, particularly private aviation, and discuss the potential of alternative fuels and technologies in reducing its carbon footprint. (150 Words /10 marks)

Minority rights safeguard cultural diversity and equality in democratic societies.

The Constitution on minority rights

The preservation of diversity is the rationale behind minority rights in the Indian Constitution. On Minority Rights Day, it is essential to remember Franklin Roosevelt's words, 'no democracy can long survive which does not accept as fundamental to its very existence the recognition of the rights of minorities'

LETTER & SPIRIT

Faizan Mustafa

The debate on minority rights should be lifted from its current framework of communalism versus secularism and placed in the theoretical field of democracy and substantive equality. Recognising the importance of minority rights, the UN General Assembly adopted a declaration on the 'Rights of Persons Belonging to National, or Ethnic, Religious and Linguistic Minorities' on December 18, 1992. This date is celebrated as Minority Rights Day all over the world. Minority rights are essential in a democratic polity because as Franklin Roosevelt reminds us "no democracy can long survive which does not accept as fundamental to its very existence the recognition of the rights of minorities".

Origin of minority rights
Article 19 of the Austrian Constitutional Law (1867) acknowledged that ethnic minorities have an absolute right to maintain and develop their nationality and languages. Similar provisions were found in Hungary's Act XLIV of 1868, and in the Constitution of the Swiss Confederation of 1874, which granted the three languages of the country equal rights in civil services, legislation and in courts. The provisions of the peace treaties after the First World War, focused particularly on the status of minorities. Minority protections were codified in the five treaties negotiated between the allied and associated powers on the one hand, and Poland, Czechoslovakia, Romania, Greece and Yugoslavia on the other. Special provisions for minorities were incorporated in the peace treaties with Austria, Bulgaria, Hungary and Turkey, while Albania, Finland and Iraq declared that they would protect their minorities. Article 27 of the Universal Declaration of Human Rights gives every individual a right to community – that is the right to enjoy their own culture and to participate in cultural forums, associations etc.

Debate in the Constituent Assembly
The framers of the Constitution showed profound sensitivity to the needs of minorities. Pandit G.B. Pant, moving the resolution to set up an Advisory Committee on Fundamental Rights and the Rights of Minorities, explicitly stated that the 'satisfactory solution of questions pertaining to minorities will ensure the health, vitality and strength of the free State of India... now it is necessary that a new chapter should start and we should all realise our responsibility. Unless the minorities are fully satisfied, we cannot make progress; we cannot even maintain peace in an undisturbed manner.' The committee headed by Sardar Vallabhbhai Patel examined the issue of minority rights and accordingly Articles 25 to 30 were enacted in our Constitution. The underlying argument in these Articles is that individualistic universal rights are not of much use in a heterogeneous country such as India, and that one needs to have discussions on the basis of multiculturalism, difference, and the rights of minorities that mark contemporary political theory.

Rationale behind minority rights
The preservation of diversity is the rationale behind minority rights in the Indian Constitution. In fact, individualistic rights under Articles 14-18 (equality), 19 (free speech) and 25 (freedom of religion) are not enough for



Nation for all: A woman holds up a poster during a protest against the CAA during Republic Day at Shaheen Bagh, in New Delhi in 2020. SUSHIL KUMAR VERMA

the conservation of language, script or culture which comes under Article 29. One may not be individually unjustly treated but it hurts if the group to which one belongs is subjected to ridicule or denied any value. This also undermines an individual's right to dignity. An individual's right to culture holds little meaning or significance, unless the community of which a person is a member of, or is identified with, is accorded the right to exist in a viable form. It requires not only the presence of a group that shares a common culture but a conducive environment in which such cultures can flourish. Thus, under Article 30 both religious and linguistic minorities are allowed to establish and administer institutions of their choice so that such a space is created in these institutions. Recently, a seven judge Bench in *Aligarh Muslim University* (2024) in unequivocal terms described Article 30 as a 'facet of equality and non-discrimination'. A nine judge Bench in *St. Xavier's College Society* (1974) too had observed that "the whole object of conferring the right on minorities under Article 30 is to ensure that there will be equality between the majority and the minority. If the minorities do not have such special protection, they will be denied equality." In *Keshavananda Bharti* (1973), rights under Article 30 were held to be part of the basic structure which even Parliament cannot change through a constitutional amendment.

What are minority rights?
Interestingly, though the term 'minority' has been used in four places in the Constitution no definition of the term 'minority' has been given. The Supreme Court has consistently held that minorities are to be defined at the level of the State. Since Hindus are a religious minority in Punjab, Kashmir and in the northeastern States, they too are entitled to minority rights. There are hundreds of Hindu minority institutions in India.

Article 29(1) lays down that 'any section of the citizens residing in the territory of India or any part thereof having a distinct

language script or culture of its own shall have the right to conserve the same'. This provision signifies two vital dimensions. First, it concedes that different groups do have different cultures and that all people may not have just one culture. Since these linguistic and religious cultures are valuable for their members, they need to be given explicit rights to conserve their own culture especially since such minority cultures can face disadvantages in a majoritarian society. Secondly, the right to culture is an individualistic right, that is, individuals have been given the right to preserve their distinctive culture. Article 30 guarantees that all religious and linguistic minorities shall have the right to establish and administer educational institutions of 'their choice'. In the *re Kerala Education Bill* (1957), the Supreme Court said that the dominant word in Article 30 is 'choice' and minorities can expand their choice as much as they want. The court also said that the term 'educational institution' includes universities. The courts have also been consistent in extending protection under Article 30 to pre-Constitution institutions in cases like *S.K. Patro* (1969), *St. Stephens* (1992) and *Azeez Basha* (1967). In the latest judgment of *Aligarh Muslim University* (2024), the majority has held that even an institution of national importance can claim minority character. Additionally, Article 350 A provides for instruction in the primary stages of education in the mother tongue, and Article 350 B for the appointment of a special officer for linguistic minorities. Their religion based personal laws have also been constitutionally protected, for example, the customary law of Nagas. There is no religious qualification attached to the holding of high constitutional positions. There is also a National Commission for Minorities and a National Commission For Minority Educational Institutions to deal with the problems of minorities.

Defining a minority
The 11 judge Bench in the *TMA Pai Foundation* (2002) case had left

unanswered the question of the indicia of minority institutions. Former Chief Justice Dr D.Y. Chandrachud in a historic judgment in the *Aligarh Muslim University* (2024) case has now laid down the indicia.

Interestingly, on the issue of indicia there was broad agreement amongst the seven judges. They all preferred holistic, broad and flexible yardsticks such as ideation – looking at the genesis or ideation or brain behind the idea. Moreover, the person taking the initiative must belong to the minority community. His intent must be to found an institution 'predominantly for the minority community' and other factors to be considered would be the collection of funds, getting land, construction of buildings and governmental approvals. It is not necessary that the administration must be vested within the minorities themselves. Right to administer is the consequence of establishment.

Though there is no right to get governmental aid, Article 30(2) explicitly says that the State cannot discriminate against a minority institution while granting aid. In the *re Kerala Education Bill* (1957) case, Chief Justice S.R. Das held that the State cannot impose such 'onerous' conditions either in granting aid or in giving affiliation to minority institutions that require surrendering the minority character of their institutions.

Furthermore, the Supreme Court has consistently maintained that minorities have no right to maladminister their institutions, and that the government can come up with reasonable regulations to insist on proper safeguards against maladministration, to maintain fair standards of teaching, and to ensure "excellence of the institutions." In *St. Xavier's* (1974), the top court explicitly observed that "under the guise of exclusive right of management, minorities cannot decline to follow the general pattern. In fact, they may be compelled to keep in step with others."

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THE GIST

Recognising the importance of minority rights, the UN General Assembly adopted a declaration on the 'Rights of Persons Belonging to National, or Ethnic, Religious and Linguistic Minorities' on December 18, 1992.

Article 29(1) lays down that 'any section of the citizens residing in the territory of India or any part thereof having a distinct language script or culture of its own shall have the right to conserve the same'.

One may not be individually unjustly treated but it hurts if the group to which one belongs is subjected to ridicule or denied any value. This also undermines an individual's right to dignity.

- ➔ Recognized globally on December 18, Minority Rights Day highlights their significance, underscored by constitutional provisions like Articles 29 and 30 in India.

Daily News Analysis

- ➡ Judicial interpretations, including recent cases, emphasize minority rights as integral to the Constitution's basic structure, ensuring dignity and inclusivity.

Introduction to Minority Rights

- ➡ Minority rights are critical for democracy, emphasizing equality and the preservation of diversity.
- ➡ The UN adopted the 'Declaration on the Rights of Minorities' on December 18, 1992, celebrated globally as Minority Rights Day.
- ➡ Franklin Roosevelt emphasized that democracy cannot survive without recognizing minority rights.

Historical Origin of Minority Rights

- ➡ **19th Century Developments:**
 - Article 19 of Austria's Constitutional Law (1867) and Hungary's Act XLIV (1868) recognized the rights of ethnic minorities.
 - The Swiss Constitution (1874) granted equal rights to its three national languages.
- ➡ **Post-World War I Treaties:**
 - Peace treaties included minority protections for nations like Poland, Romania, and Yugoslavia.
 - Nations such as Albania and Finland voluntarily pledged to protect their minorities.
- ➡ **Universal Declaration of Human Rights (1948):**
 - Article 27 affirms every individual's right to community and cultural participation.

Minority Rights in India's Constitution

- ➡ **Constituent Assembly Debate :** Pandit G.B. Pant highlighted the importance of minority satisfaction for peace and progress. Articles 25-30 were incorporated to safeguard minority rights, emphasizing multiculturalism and equality.
- ➡ **Key Provisions : Article 29(1):** Grants minorities the right to conserve their culture, language, and script.
- ➡ **Article 30:** Guarantees minorities the right to establish and administer educational institutions.
- ➡ **Articles 350A and 350B:** Mandate primary education in the mother tongue and the appointment of a linguistic minorities officer.

Judicial Interpretation of Minority Rights

- ➡ **Aligarh Muslim University Case (2024):** Article 30 was upheld as a 'facet of equality.'

Daily News Analysis

- **St. Xavier's College Case (1974):** Affirmed equality between majority and minority through Article 30.
- **Keshavananda Bharati Case (1973):** Declared minority rights as part of the Constitution's basic structure.
- Courts have consistently ruled that minority institutions, including pre-Constitution entities, deserve protection.

Defining a Minority

- **Supreme Court's View:** Minorities are determined at the state level. Hindus qualify as minorities in states like Punjab and Kashmir.
- **Criteria for Minority Institutions (TMA Pai Foundation, 2002 & AMU, 2024):** Institutions must be ideated by minorities and predominantly serve their community. Administration need not rest exclusively with minorities, but intent and effort must align with minority upliftment.

Rationale for Minority Rights

- Focuses on the preservation of diversity and the dignity of individuals through community viability.
- Rights under Articles 14-18, 19, and 25 are insufficient without additional protections under Articles 29 and 30.
- The Supreme Court permits regulations to prevent maladministration and uphold institutional excellence.

Conclusion

- Minority rights are integral to democratic functioning, fostering equality and ensuring cultural preservation.
- These provisions reinforce India's multicultural ethos while maintaining balance through judicial oversight.

UPSC Mains PYQ : 2018

Ques : Whether National Commission for Scheduled Castes (NCSCJ) can enforce the implementation of constitutional reservation for the Scheduled Castes in the religious minority institutions? Examine. **(150 words/10m)**

Cyclone Chido, the worst in nearly a century, devastated Mayotte, France's poorest territory.

- The storm caused widespread destruction, leaving thousands affected and authorities fearing significant casualties.

France rushes aid to Mayotte after cyclone

Roofs were ripped from homes, and palm trees were half-shorn from winds that exceeded 220 kmph; as of Monday, there were 21 deaths at hospitals, with 45 people in critical condition; 70% of the population gravely affected; French President to declare a national mourning period

Associated Press
MAMOUDZOU

France used ships and military aircraft to rush rescuers and supplies to Mayotte on Monday after the tiny French island territory off Africa was battered by its worst cyclone in nearly a century. Authorities fear hundreds and possibly thousands of people have died.

Survivors wandered through streets littered with debris, searching for water and shelter, after Cyclone Chido leveled entire neighbourhoods on Saturday when it hit Mayotte, the poorest territory of France and, by extension, the European Union.

French President Emmanuel Macron said he will declare a national mourning period and planned to visit in the coming days after "this tragedy that has shaken each of us."

Mayotte resident Fahar Abdoulhamidi described the aftermath as chaotic. In Mamoudzou, the capital, destruction was total – schools, hospitals, restaurants and offices were in ruins. Roofs were ripped from homes, and palm trees were half-shorn from winds that exceeded 220 kmph, according to the French weather service.

"Mayotte is totally devastated," French Interior Minister Bruno Retailleau said, with the ministry esti-



Tempest effect: Pamandzi region in Mayotte on Tuesday after the French island territory was hit by Cyclone Chido. AFP

mating 70% of the population was gravely affected.

As of Monday evening, the ministry confirmed 21 deaths at hospitals, with 45 people in critical condition. But French Health Mi-

nister Geneviève Darrieussecq warned that any estimates were likely major undercounts "compared to the scale of the disaster."

Electricity was down across the archipelago,

with only the capital spared. Telecommunications were severely disrupted, with most antennas knocked out of service. Authorities were concerned about a shortage of drinking water.

Grave situation

The French Red Cross described the devastation as "unimaginable" and said rescuers were still searching for bodies. The damage, including to Mayotte's sole airport, has left some areas inaccessible to emergency teams.

Many people ignored the cyclone warnings in the 24 hours before the storm hit, underestimating its power.

"Nobody believed it

would be that big," Abdoulhamidi said by phone. "Those who live in bangas stayed in despite the cyclone, fearing their homes would be looted," he said, referring to the island's informal settlements.

Even worse, many migrants avoided shelters out of fear of deportation, Abdoulhamidi said.

Mayotte is a densely populated archipelago between Madagascar and the African continent of more than 3,20,000 people, according to the French government.

Most residents are Muslim and French authorities have estimated another 100,000 migrants live there from as far away as Somalia.

Cyclone Chido:

- Formed in early December 2024 in the South-West Indian Ocean.
- Peaked as a Category 4-equivalent intense tropical cyclone.
- Made landfall in Agaléga (Mauritius) on December 11th.
- Brought devastating winds exceeding 155 mph and heavy rainfall.
- Struck Mayotte on December 14th, causing widespread damage and casualties.
- Considered the worst storm to hit Mayotte in 90 years.
- Also impacted Mozambique and Malawi with heavy rains and flooding.
- Dissipated near Zimbabwe on December 17th.
- Left thousands displaced and hundreds feared dead in Mayotte.
- Caused significant infrastructural damage in the affected regions.

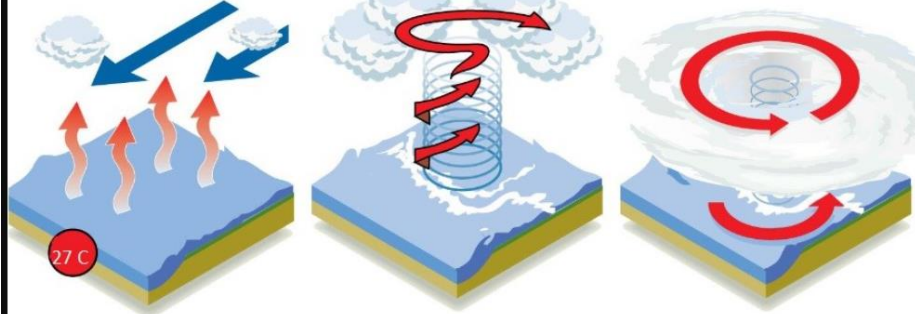
How tropical storms are formed

High humidity and ocean temperatures of over 27 °C are major contributing factors

Water evaporates from the ocean surface and comes into contact with a **mass of cold air**, forming clouds

A **column of low pressure** develops at the centre. **Winds form** around the column

As pressure in the central column (the eye) weakens, the **speed of the wind** around it increases



Saffir-Simpson hurricane wind scale

| Category 1 | Category 2 | Category 3 | Category 4 | Category 5 |
|----------------------|----------------------|----------------------|----------------------|---------------------------|
| Minimal damage | Moderate damage | Extensive damage | Extreme damage | Catastrophic |
| | | | | |
| Winds 119-153 kph | Winds 154-177 kph | Winds 178-208 kph | Winds 209-251 kph | Winds 252 kph and more |

In News : Persistent Organic Pollutants

The scientists have found in the orcas' blubbers (fat layer under the skin) high levels of persistent organic pollutants (POPs)—toxic chemicals used in industrial and agricultural processes.



About Persistent Organic Pollutants (POPs):

- ▶ They are organic chemical substances (carbon-based), widely used throughout the supply chain, in all kinds of products including pesticides, industry processes, etc.
- ▶ These POPs do not break down easily and remain in the environment for decades, travel over great distances through water and wind and eventually remain in the food chains through bioaccumulation.
- ▶ They are toxic to both humans and wildlife.

A global treaty on POPs:

- ▶ The Stockholm Convention on POPs calls for reduction or elimination of releases of POPs globally.
- ▶ It was entered into force in 2004.
- ▶ Parties to the Convention commit to not produce or use the chemicals listed in its annexes.
- ▶ To date, 185 countries have ratified the Stockholm Convention and 34 POPs are listed as 17 pesticides, 15 industrial chemicals, 7 unintentional by-products.

UPSC Mains PYQ : 2013

Ques : "What are the key features of the Stockholm Convention on Persistent Organic Pollutants (POPs)? What are the benefits of this convention for India?" **(250 Words /15 marks)**

In News : Doubling the income of farmers

The article discusses the Government of India's efforts in the agricultural sector through various schemes aimed at increasing production and providing income support.



- It highlights the budgetary allocations, key programs, and initiatives like the Agriculture Infrastructure Fund (AIF) to address infrastructure gaps.
- These efforts are designed to improve farmers' livelihoods and sustainable agricultural practices.

Government Support for Agricultural Development

- Agriculture is a State Subject, but the Government of India supports state-level efforts through policy measures, budgetary allocation, and various schemes.
- These initiatives aim to increase crop production, ensure remunerative returns, and provide income support to farmers.

Key Strategies for Farmer Welfare

- To increase farmer incomes, strategies focus on improving crop productivity, reducing production costs, promoting agricultural diversification, adapting to climate change, and compensating for losses.
- These strategies are essential for sustainable agriculture and enhanced farmer livelihoods.

Budgetary Support

Daily News Analysis

- ➡ The Government of India has significantly increased the budget for the Department of Agriculture & Farmers Welfare (DA&FW) from Rs. 21,933.50 crore in 2013-14 to Rs. 1,22,528.77 crore in 2024-25.

Major Schemes and Programs

- ➡ **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN):** Financial support to farmers.
- ➡ **Pradhan Mantri Kisan MaanDhan Yojana (PM-KMY):** Pension scheme for farmers.
- ➡ **Pradhan Mantri Fasal Bima Yojana (PMFBY):** Crop insurance for farmers.
- ➡ **Agriculture Infrastructure Fund (AIF):** Financial support for agriculture infrastructure projects, including warehouses and cold storage units.
- ➡ **Formation of Farmers Producers Organizations (FPOs):** Promoting collective farming.
- ➡ **Mission for Integrated Development of Horticulture (MIDH):** Focus on horticulture development.
- ➡ **Soil Health Card (SHC):** Providing soil health monitoring to farmers.

Agriculture Infrastructure Fund (AIF)

- ➡ Launched to address infrastructure gaps, AIF provides debt financing for post-harvest management and farming assets.
- ➡ The fund includes interest subvention and credit guarantees.
- ➡ Key projects funded include Custom Hiring Centres, primary processing units, sorting and grading units, and cold storage facilities.

Success Stories

- ➡ The Indian Council on Agricultural Research (ICAR) has documented success stories of 75,000 farmers who have doubled their incomes through the convergence of schemes operated by the Ministry of Agriculture & Farmers Welfare.

UPSC Mains PYQ: 2016

Ques : Given the vulnerability of Indian agriculture to vagaries of nature, discuss the need for crop insurance and bring out the salient features of the Pradhan Mantri Fasal Bima Yojana (PMFBY). **(200 words/12.5m)**

The legal gaps in India's unregulated AI surveillance

In 2019, the Indian government made headlines by announcing its intention to create the world's largest facial recognition system for policing. Over the next five years, this ambition has materialised with Artificial Intelligence (AI)-powered surveillance systems being deployed across railway stations and the Delhi Police preparing to use AI for crime patrols. The latest plans include launching 50 AI-powered satellites, further intensifying India's surveillance infrastructure.

While technological integration in law enforcement is commendable, it raises substantial legal and constitutional concerns. The use of AI for surveillance has global parallels, often resulting in "dragnet surveillance", a term that refers to indiscriminate data collection beyond just suspects or criminals. As observed with Section 702 of the Foreign Intelligence Surveillance Act (FISA) in the United States, even well-intended surveillance laws can result in overreach, infringing on citizens' rights.

This article explores the legal frameworks, gaps, and concerns surrounding AI surveillance in India and how they intersect with constitutional rights, particularly the right to privacy.

The Telangana Police data breach earlier this year revealed deep-rooted concerns about the data collection practices of Indian law enforcement agencies. According to reports, Hyderabad police had access to databases from social welfare schemes, including "Samagra Vedika", raising questions about the scope of data being collected and the lack of transparency regarding its use.

Lack of proportional safeguards

While data-driven governance offers solutions for public welfare and crime prevention, these practices must be measured against the individual's right to privacy, as guaranteed under Article 21 of the Constitution. The Supreme Court of India, in *K.S. Puttaswamy vs Union of India* (2017), recognised privacy as a fundamental right, extending its scope to "informational privacy". The judgment emphasised that the era of "ubiquitous dataveillance" brings challenges that must be addressed through robust legal frameworks. However, the extent of surveillance infrastructure in India currently lacks proportional safeguards, leading to legitimate concerns about the implications of AI-driven data collection.

The Digital Personal Data Protection Act (DPDPA), passed in 2023, was meant to provide a framework for managing consent and ensuring accountability for data privacy in India. However, the law has been heavily criticised for broad exemptions that grant the government unchecked power to process personal data.

For instance, Section 7(g) of the DPDPA waives

Shri Venkatesh

the Managing Partner at SKV Law Offices and has over a decade's experience in dispute resolution

Bharath Gangadharan

Counsel with the Dispute Resolution Team at SKV Law Offices

Aashwyn Singh

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There needs to be a comprehensive regulatory framework that addresses AI's implications for civil liberties

the need for consent when processing data for medical treatment during an epidemic. Section 7(i) further exempts the government from consent requirements for processing data related to employment, a particularly concerning clause given that the government is India's largest employer. These exemptions raise red flags about the potential for misuse, especially when applied to AI-powered surveillance technologies that operate on vast quantities of personal data.

Moreover, the DPDPA introduces obligations for citizens that could further exacerbate privacy concerns. Section 15(c) mandates that citizens not to suppress any material information when submitting personal data. This provision, while intended to ensure data accuracy, could lead to punitive measures for something as simple as an outdated address or technical error in data collection systems.

In short, the DPDPA places heightened scrutiny on individual data while offering the government broad leeway in its use and collection. Given the profound implications of AI technologies in processing sensitive personal information, the legal framework appears unbalanced, skewed in favour of state surveillance over individual rights.

The approach in the West

India is not alone in grappling with AI and its impact on civil liberties. The European Union (EU) has enacted regulations that could serve as a useful guide for India. The EU's Artificial Intelligence Act takes a risk-based approach to AI activities, categorising them into unacceptable, high, transparency, and minimal risk levels. Unacceptable risk activities, such as real-time remote biometric identification for law enforcement, are prohibited under EU law unless exceptions apply, such as searching for victims of serious crimes or responding to imminent threats. In stark contrast, India has begun deploying AI-powered facial recognition technology and CCTV surveillance in public spaces with little to no legislative debate or risk assessment. For example, Delhi and Hyderabad have integrated AI into policing without any publicly available guidelines on how data is collected, processed, or stored, or how potential abuses of the technology will be prevented.

As of now, AI remains largely unregulated in India. In 2022, the government promised that AI technologies would be regulated under the upcoming Digital India Act, but draft legislation has yet to materialise. This regulatory void leaves citizens vulnerable to the risks associated with AI-powered surveillance, including the infringement of privacy, discrimination, and data breaches.

Countries such as the United States and members of the European Union have already begun to legislate on the use of AI in public

systems, with clear categorisations and restrictions for technologies that could pose a significant threat to civil liberties. The absence of a similar legal framework in India is troubling, especially given the government's ambitious plans to expand surveillance capabilities.

At its core, the debate over AI surveillance in India touches on fundamental constitutional questions. The right to privacy, as enshrined in Article 21, and the principle of proportionality, as outlined in the *Puttaswamy* judgment, demand that any intrusion into personal data be backed by law, pursue legitimate aims, and be proportionate to the goal pursued. However, the existing surveillance framework, bolstered by AI technologies, appears to stretch these principles to their limits.

Address the impact on civil liberties

It is not the use of AI in governance itself that is problematic, but rather its unchecked application without sufficient safeguards. A comprehensive regulatory framework that addresses AI's implications for civil liberties is urgently needed.

It would help protect public interest in consonance with the 'Right to Privacy' if such a framework includes provisions for transparent data collection practices, where it is publicly disclosed, what data is being collected, for what purpose, and how long it will be stored. Furthermore, the framework must ensure consent gathering mechanisms have narrow and specific exemptions for processing data with independent and effective judicial oversight. This will not only ensure transparency in consent gathering but also safeguard the constitutionality of such applications of AI-based data processing. In this context, India could benefit from adopting a risk-based regulatory approach, such as the EU's, which categorises AI activities based on the risks they pose to citizens' rights.

India is at a crucial juncture in deploying AI-powered surveillance. While integrating advanced technologies in law enforcement and governance offers immense potential, it must be balanced against citizens' constitutional rights. Policy decisions that embed privacy measures into infrastructure before deployment, with inherent safeguards in surveillance protocols, are vital. Consent mechanisms, transparency reports, and judicial oversight at relevant stages of data collection and management can avoid costly retrofits and retraining.

Though the DPDPA addresses some issues, criticisms persist, and the long-awaited DPDP Rules remain unnotified. To mitigate risks from AI-driven surveillance, regulating "high-risk activities" through restrictions on digital personal data processing and transparent auditor oversight of data sharing is crucial. A proactive regulatory approach will ensure AI serves public interest without compromising civil liberties.

GS Paper 03 : Science and Technology

PYQ: (UPSC CSE (M) GS-3 2023): Introduce the concept of Artificial Intelligence (AI).

How does AI help clinical diagnosis? Do you perceive any threat to privacy of the individual in the use of AI in healthcare? (150 words/10m)

UPSC Mains Practice Question: Critically analyze the implications of AI-powered surveillance on citizens' privacy in India. Suggest measures to balance technological advancements with constitutional safeguards. (150 Words /10 marks)

Context :

- ➡ India's growing AI-powered surveillance infrastructure, including facial recognition systems and AI satellites, raises significant privacy and constitutional concerns.
- ➡ The Digital Personal Data Protection Act (DPDPA) 2023, while addressing some issues, grants broad government exemptions, creating a regulatory imbalance.
- ➡ Comparisons with the EU highlight India's lack of robust safeguards for protecting civil liberties.

India's Growing AI-Powered Surveillance Infrastructure

- ➡ In 2019, India announced its ambition to create the world's largest facial recognition system for policing.
- ➡ Over five years, AI-powered surveillance systems have been deployed in railway stations, and the Delhi Police is using AI for crime patrols.
- ➡ Plans to launch 50 AI-powered satellites further expand India's surveillance infrastructure.

Legal and Constitutional Concerns in AI Surveillance

- ➡ AI-driven surveillance raises questions about potential overreach and infringement on citizens' rights.
- ➡ Global parallels, such as the U.S. Section 702 of the Foreign Intelligence Surveillance Act (FISA), highlight risks of "dragnet surveillance," where data is collected indiscriminately.

Privacy Concerns and Data Breaches

- ➡ The Telangana Police data breach revealed misuse of social welfare databases like "Samagra Vedika" by law enforcement.

- ➡ This incident highlighted the lack of transparency and safeguards in data collection practices.

Lack of Proportional Safeguards

- ➡ Privacy, recognized as a fundamental right under Article 21 in the K.S. Puttaswamy vs Union of India (2017) judgment is undermined by India's surveillance practices.
- ➡ Current surveillance lacks proportional safeguards, creating challenges for "informational privacy."
- ➡ While the Digital Personal Data Protection Act (DPDPA) 2023 was introduced to address privacy concerns, it has significant flaws.

Issues with the Digital Personal Data Protection Act (DPDPA) 2023

- ➡ The DPDPA provides broad government exemptions for data processing without consent:
- ➡ Section 7(g) allows consent waiver for medical treatment during epidemics.
- ➡ Section 7(i) exempts government data processing for employment purposes.
- ➡ Citizens face obligations under Section 15(c) to ensure data accuracy, risking punitive measures for minor errors.
- ➡ The framework disproportionately favors state surveillance over individual rights.

Contrasting Approaches in the West

- ➡ The European Union's Artificial Intelligence Act categorizes AI activities by risk, banning high-risk practices like real-time biometric identification in most cases.
- ➡ In contrast, India deploys AI-powered facial recognition and surveillance without legislative debate or risk assessments.
- ➡ Promises to regulate AI under the Digital India Act remain unfulfilled, leaving a regulatory vacuum.

Constitutional Questions and Civil Liberties

- ➡ India's surveillance practices challenge constitutional principles like the right to privacy and proportionality.
- ➡ AI surveillance requires robust laws to ensure legitimacy, necessity, and proportionality.

Recommendations for a Balanced Approach

- ➡ A comprehensive regulatory framework is needed to balance AI integration with citizens' rights:
- ➡ Transparent data collection practices with public disclosure of purpose and duration.
- ➡ Narrow, specific exemptions with independent judicial oversight.

Daily News Analysis

- Adoption of a risk-based regulatory approach, similar to the EU model, to classify AI activities by risk levels.
- Transparent consent mechanisms, judicial oversight, and regular transparency reports can safeguard privacy.
- Policy decisions must embed privacy protections at the design stage to avoid costly retrofits.

Need for Proactive Regulation

- The DPDPA addresses some concerns but remains incomplete without accompanying rules.
 - Regulating high-risk AI activities through strict oversight of data processing and sharing is critical.
 - A proactive approach can ensure AI serves public interest without compromising civil liberties.
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