

08 Jun 2023: UPSC Exam Comprehensive News Analysis



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Category: ENVIRONMENT

1. How can we transition to a low-carbon city?

Syllabus: National Environment Agencies, Legislations and Policies

Mains: Significance of low carbon cities for climate change mitigation

Context:

This article discusses various strategies necessary for the transition of polluting cities into low-carbon cities.

Introduction:

- In the year 2020, an enormous amount of 29 trillion tonnes of carbon dioxide was released into the atmosphere by cities.
- Considering the substantial influence cities have on the environment, the presence of low-carbon cities becomes essential in order to alleviate the consequences of climate change.
- The process of transitioning towards cities with low carbon emissions, or even achieving net-zero emissions, necessitates the incorporation of mitigation and adaptation strategies across various sectors.
- This approach, known as the 'sector-coupling approach', is vital for reducing <u>carbon footprints</u> in urban systems.

Sector-coupling approach:

- It involves the integration of different energy sectors, such as electricity, heating and cooling, transportation, and industry, to create a more efficient and sustainable energy system.
- By coupling these sectors, low-carbon cities can optimize the use of renewable energy sources, such as solar and wind power, and better manage energy demand and supply.



- Energy storage technologies, such as batteries or thermal storage systems, can store excess renewable energy for later use during periods of high demand or when renewable energy generation is low.
 - This decentralised approach enhances energy resilience, reduces transmission losses, and minimises the need for fossil fuel-based backup power.
- Sector-coupling emphasises demand-side management and flexibility to optimise energy consumption and reduce carbon emissions.

Significance of energy-system transitions:

- An energy-system transition has the potential to significantly decrease urban carbon dioxide emissions, potentially reaching a reduction of around 74%.
- Recent advancements in clean energy technologies, coupled with declining costs, have eliminated economic and technological obstacles, making it feasible to adopt low-carbon solutions.
- To achieve a successful transition, efforts should be focused on both the demand and supply sides.
 - On the supply side, this involves phasing out fossil fuels, increasing the use of renewable energy sources, and implementing carbon capture and storage (CCS) technologies.
 - On the demand side, employing the "avoid, shift, improve" framework entails reducing energy and material consumption, substituting fossil fuels with renewables, and addressing remaining emissions through the adoption of carbon dioxide removal (CDR) technologies.

Tailored strategies for different cities:

- The strategies for addressing low-carbon challenges differ based on the unique characteristics of each city, highlighting the need for customized approaches.
- Policymakers shall consider both social and environmental fairness, taking into account factors such as a city's spatial structure, land use, development level, and degree of urbanization while formulating energy-transition policies.
- Established cities can enhance energy efficiency and encourage sustainable modes of transportation like walking and cycling by retrofitting and repurposing existing infrastructure.
- Rapidly growing cities can optimize their urban planning to reduce transportation energy demand
 by locating residential areas closer to places of work. These cities also have the opportunity to
 adopt low-carbon technologies, including renewables and carbon capture and storage, as they
 develop.

Ensuring equitable energy governance:

• The social and economic impacts of transitioning to renewable energy sources vary across different sectors and economies.



- A one-size-fits-all approach may lead to disproportionate effects on certain groups or communities. Therefore, issues such as energy security, urbanization, land dispossession, poverty concentration, gender disparities, and reliance on fossil fuel exports need to be considered.
- Developing economies heavily dependent on fossil fuel exports, like Nigeria and Venezuela, may face economic hardships during the transition.
- Developed countries also experience energy poverty and inequity, with high energy costs impacting low-income households' ability to afford essential amenities.

Way Forward:

- Achieving a transition to low-carbon energy systems in cities necessitates tailored strategies focusing on governance, behavioural changes, technology, and institutional capacity building.
- It is also essential to ensure that all members of society have fair and equal access to clean energy resources and benefits. By promoting inclusivity and addressing socio-economic disparities, energy governance can contribute to a just transition towards a low-carbon future.
- Governments must focus on engaging diverse stakeholders in energy governance, promoting energy efficiency, increasing climate investments, and incorporating diverse knowledge sources, including indigenous and local perspectives.
- The transition requires comprehensive actions that include mitigation and adaptation, encouraging participation in decision-making to ensure a just and sustainable energy future.

Nut Graf: To mitigate climate change, low-carbon cities are crucial, and a sector-coupling approach integrating energy sectors is key to reducing carbon footprints. Energy-system transitions can significantly decrease urban carbon emissions, aided by advancements in clean energy technologies.

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: POLITY

1. Sedition

Syllabus: GS-2, Constitution-Significant Provisions

Prelims: Provisions related to Sedition

Mains: Sedition and its effect on the democratic credentials of the country.



Context: The 279th report of the law commission has recommended the continuation of the sedition law in the wake of the national security challenges.

What is Sedition?

- Section 124A defines sedition as: "Whoever, by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the Government established by law shall be punished with imprisonment for life, to which fine may be added.
- Read more on the sedition law in India in the linked article.

Pre-Independence incidences:

Several pre-independence cases involving Section 124A of the IPC were there against celebrated freedom fighters, including <u>Bal Gangadhar Tilak</u>, Annie Besant, Shaukat and Mohammad Ali, Maulana Azad and Mahatma Gandhi. It is during this time that the most notable trial on sedition — Queen Empress v. Bal Gangadhar Tilak — took place in 1898.

The Kedar Nath ruling on sedition:

- The court held that unless accompanied by incitement or call for violence, criticism of the government cannot be labelled sedition.
- The ruling restricted sedition only insofar as seditious speech tended to incite "public disorder"- a phrase Section 124A itself does not contain but was read into it by the court.
- The court also issued seven "guidelines", underlining when critical speech cannot be qualified as sedition.
 - o In its guidelines on using the new, restrictive definition of sedition law, the court said not all speech with "disaffection", "hatred," or "contempt" against the state, but only speech that is likely to incite "public disorder" would qualify as sedition.

Sedition laws in other countries:

- In the United Kingdom, the sedition law was officially repealed under Section 73 of the Coroners and Justice Act, 2009, citing a chilling effect on <u>freedom of speech</u> and expression.
- Australia repealed its sedition law in 2010, and in 2022, Singapore also repealed the law citing that several new legislations can sufficiently address the actual need for sedition law without its chilling effects.

Nut graf: Sedition can seriously dismantle the constitutional rights of the citizens and impair India's democratic credentials. There is a need to consider the continued existence of this law in the country's law books.



2. Human dog conflict

Syllabus: GS02-Social Justice, Issues Relating to Development & Management of Social Sector-Children and Health

Mains: Stray dog menace in India, Human-dog conflict, Legislation in this regard

Context: Rising incidences of human-dog conflict have raised serious issues in urban areas.

Stats related to stray dogs in India:

- According to Family Welfare's Central Bureau of Health Intelligence (CBHI) 2021 report, there were 105 cases of human death from rabies in India in 2019.
 - The 2018 edition put the figure at 97 in 2017. According to various data, there were 86 human deaths from rabies in 2016, 113 in 2015, 125 in 2014 and 132 in 2013.
- Over the last five years, more than 300 people, mostly children from poor and rural families, have been killed by dogs. Dogs are responsible for over 20,000 rabies deaths.
- According to Lok Sabha data, Delhi has 60,472 stray dogs as of 2019. There were at least 1.53 crore dogs in the streets of India till 2019, the Animal Husbandry Ministry said in Parliament.

Dog Control Laws in India

- The Animal Birth Control (Dog) Rules, 2001, deals with the population control of strays. It provides for the neutering of strays to achieve population stabilisation, as opposed to killing them.
 - It also proposes the formation of monitoring committees that will take steps to limit the population of strays in an area through animal birth control programmes.
 - Rules will also address the role of resident welfare associations (RWAs) to end frequent conflicts between dog feeders and other residents.
- The Animal Welfare Board of India, a statutory body under the Prevention of Cruelty to Animals Act, promulgated the Animal Birth Control (Dogs) Rules in 2001.
 - This policy was meant to control both the dog population, as well as the deadly rabies virus.
 - The Animal Birth Control programme can be conducted by the local bodies which will help in reducing the stray dog population and addressing animal welfare issues.
 - The Municipal Corporations need to implement the ABC and Anti-Rabies Program jointly.

Alternative to Animal Birth Control:

• There is a need for a participative approach to deal with the issue of the dog menace in India.



- There is a need to streamline the monitoring system of stray dogs in India.
 - A monitoring committee should be set up at the state, district and municipal levels to track dogs.
- The recent rules also require investment in the expansion of the infrastructure for the capture, housing, surgery and release of dogs.
 - **Standard operation procedure (SOP)** has been devised for the purpose of upkeep of the dogs, reporting and conflict management.
- Engagement with NGOs to ensure the ABC system is diligently followed.
- Efforts are also being made to **differentiate between pet dogs and stray dogs in India.** This would clearly help in better understanding and implementation of the policies.

Nut graf: Dealing with the problem of stray dogs requires a multi-dimensional approach and participative policies. Urgent measures are needed to check human deaths due to strays and also ensure a humane way to combat this menace.

F. Prelims Facts

1. Kerala Fibre Optic Network project

Syllabus: GS02-Governance

Prelims: Fibre Optic Network; Basic Human rights

Context: Kerala government launches Kerala Fibre Optic Network project.

Key Details:

- Kerala launched its own internet service through the Kerala Fibre Optic Network (KFON) project, making it the first state in India to do so.
- With the goal of bridging the <u>digital divide</u>, the KFON project aims to provide internet access to every citizen. Initially, it plans to offer internet connectivity to 100 households in each assembly constituency of the state.
- KFON has successfully established a robust IT infrastructure that can facilitate up to 40 lakh internet connections throughout Kerala, setting the stage for widespread internet accessibility and connectivity.
- This initiative has successfully reached remote locations, including tribal hamlets in Wayanad and other previously underserved areas.
- The Department of Telecommunications (DoT) in July 2022 granted KFON an infrastructure provider (IP) license and also approved the organization as an internet service provider (ISP).



Internet as a basic human right:

- In 2019, the Kerala government became the first state in India to declare internet access as a fundamental right. This significant step followed a <u>United Nations</u> resolution that recognized internet access as a basic human right in 2016.
- The declaration was accompanied by a comprehensive plan to transform it into a tangible reality.
- KFON was established as a means to provide free internet connections to 20 lakh below-poverty-line (BPL) families in the state.
- Recognizing the transformative potential of the internet, the Kerala government took proactive measures to address the digital divide and promote inclusivity.
- Recently Kerala declared itself as India's first fully e-governed State.
 - The e-office system has already been implemented in the Secretariat, district collectorates, commissionerates and directorates.
 - As many as 900 government services, comprising all the services usually required by the public, are now available through a single-window portal.
- The government has also begun a digital literacy campaign at the grassroots level through various local bodies to ensure that everyone is equipped to access basic services through the Internet.
- By ensuring widespread access to the internet, Kerala aims to foster social and economic development while creating a more digitally empowered society.

Fibre Optic Network:

- Fibre optic network refers to a high-speed telecommunications network infrastructure that uses optical fibres to transmit data as pulses of light.
- It is a technology that enables the transfer of information over long distances at incredibly fast speeds and with minimal signal loss.
- In a fibre optic network, data is transmitted in the form of light pulses generated by lasers or light-emitting diodes (LEDs).
- The optical fibres, which are thin strands of glass or plastic, act as waveguides to carry the light signals over long distances with very little attenuation or loss of signal strength.
- The core principle behind fibre optic communication is total internal reflection.
 - When light enters the fibre at a shallow angle, it reflects off the inner walls of the fibre due to the difference in refractive index between the core and the cladding. This allows the light to travel through the fibre by bouncing off the walls in a process called internal reflection.
- Fibre optic networks are widely used in various applications, including telecommunications, internet service providers (ISPs), cable television, data centres, and enterprise networks.



2. Minimum Support Price

Syllabus: GS03-Economy

Prelims: MSP; Kharif crops

Context: Government hikes Kharif MSP.

Key Details:

• The Union government has set the <u>minimum support price (MSP)</u> for paddy sown in the kharif or monsoon season at ₹2,183 per quintal, an increase of ₹143 a quintal from 2022.

- The 2023-24 MSPs for 17 kharif crops and variants were approved at a meeting of the Cabinet Committee on Economic Affairs (CCEA), chaired by Prime Minister Narendra Modi.
- Apart from paddy, new MSPs have been set for major pulses.
- The expected margin to farmers over their cost of production is estimated to be highest in the case of bajra (82%) followed by tur (58%), soybean (52%) and urad (51%).
- The increase in MSP for Kharif Crops for Marketing Season 2023-24 is in line with the Union Budget 2018-19 announcement of fixing the MSP at a level of at least 1.5 times the All-India weighted average Cost of Production, aiming at reasonably fair remuneration for the farmers.

G. Tidbits

1. Revival Package for BSNL

- The Union Cabinet has granted approval for a ₹89,047 crore revival package for Bharat Sanchar Nigam Ltd. (BSNL).
- This includes the allocation of spectrum in the 26 GHz, 700 MHz, 2,500 MHz, and 3,300 MHz bands through equity infusion.
- Under the revival package, BSNL will extend its 4G coverage to rural and underserved villages through various connectivity projects.
- It will also offer fixed wireless access services to provide high-speed Internet connectivity. Additionally, BSNL will provide services and spectrum for captive non-public networks.
- This will be the third revival package for BSNL. Earlier packages included a significant capital infusion to support the company's operations, improve infrastructure, and enhance service quality.

2. India, U.S. review export control regulations

• During the inaugural India-U.S. Strategic Trade Dialogue (IUSSTD), India and the U.S. committed to streamlining their export control systems for critical technologies.



- The talks took place in anticipation of Prime Minister Narendra Modi's visit to Washington, where several high-technology partnerships, including a deal involving GE-414 jet engine sales to India, are expected to be finalised.
- The meeting focused on ways in which both governments can facilitate the development and trade of technologies in critical domains such as semiconductors, space, telecom, quantum, AI, defence, biotech and others.
 - The dialogue is a key mechanism to take forward the strategic technology and trade collaborations envisaged under the India-US initiative on <u>Critical and Emerging Technologies (iCET)</u>.
- Both sides also reviewed their respective export control regulations with the goal of establishing resilient supply chains for these strategic technologies.

3. Kakhovka dam

- Kakhovka dam, a major dam on the Dnipro River in Russia-controlled areas of southern Ukraine collapsed on June 06, 2023, flooding villages, endangering crops and threatening drinking water supplies.
- Both countries are accusing the other of the destruction caused by the dam collapse.
- Thousands of people have been evacuated from low-lying areas on either side of the river Dnipro.
- Both sides warned of a looming environmental disaster from polluted waters partly caused by oil leaking from the dam's machinery and farmland deprived of irrigation.
- The Zaporizhzhia Nuclear Power Plant, Europe's biggest, relies in large part on water from the dam's now-emptying reservoir.



Image Source: APNews



H. UPSC Prelims Practice Questions

Q1. Consider the following statements: (Level-Medium)

- 1. The Minimum Support Price is recommended by the Cabinet Committee on Economic Affairs.
- 2. It is the minimum price at which the government buys the crops from the farmers.
- 3. The system of MSP was first introduced in India in 1966-67.

How many of the above statements are incorrect?

- A. Only 1 statement
- B. Only 2 statements
- C. Only 3 statements
- D. None

Answer: A

Explanation:

• The Commission for Agricultural Costs & Prices (CACP) recommends MSPs. It is approved by the Cabinet Committee on Economic Affairs.

Q2. How many of the following gases are greenhouse gases? (Level-Easy)

- 1. Methane
- 2. Nitrogen
- 3. Water Vapour
- 4. Argon
- 5. Carbon Dioxide

Options:

- A. Only 2 gases
- B. Only 3 gases
- C. Only 4 gases
- D. All 5 gases

Answer: B

Explanation: The Primary GHGs are: Water Vapour, Carbon dioxide, Methane, Nitrous oxide and Ozone.

Other GHGs are carbon monoxide, fluorinated gases, chlorofluorocarbons (CFCs), black carbon (soot), and brown carbon.

Read more on Greenhouse Gases

Q3. How many of the following statements are correct about cotton cultivation? (Level-Medium)



- 1. It is a Kharif crop.
- 2. India is one of the top 5 producers of cotton globally.
- 3. Bt Cotton was introduced in India in 2002.

Options:

- A. Only 1 statement
- B. Only 2 statements
- C. Only 3 statements
- D. None

Answer: C

Explanation: Cotton is a kharif crop which is cultivated during the rainy season. India is the largest cotton producer in the world with 6,188,000 tonnes production volume per year. China comes second with 6,178,318 tonnes yearly production.

- <u>Bt cotton</u> was first approved for field trials in the United States in 1993, and first approved for commercial use in the United States in 1995. Bt cotton was approved by the Chinese government in 1997
- In 2002, a joint venture between Monsanto and Mahyco introduced Bt cotton to India.

Q4. Which of the following statements are true regarding the Madden Julian Oscillation? (Level-Difficult)

- 1. It is an Eastward moving system near the equator.
- 2. It has a periodicity of 30-60 days.
- 3. Its presence over the Indian Ocean during monsoons, helps bring good rainfall over the Indian Subcontinent.

Options:

- A. Only 1 statement
- B. Only 2 statements
- C. Only 3 statements
- D. None

Answer: C

Explanation: Madden Julian Oscillation (MJO) is an oceanic-atmospheric phenomenon which affects weather activities across the globe. It brings major fluctuation in tropical weather on weekly to monthly timescales.

- The MJO is characterised as a pulsating disturbance moving eastward near the equator, consisting of clouds, rainfall, winds, and pressure.
 - It has a regular cycle of occurrence every 30 to 60 days.
- The MJO follows a path comprising eight distinct phases as it progresses through its journey.



• During the Monsoon season, when the MJO reaches the Indian Ocean, it brings substantial rainfall to the Indian subcontinent.

Q5. The money multiplier in an economy increases with which one of the following? (Level-Medium) (PYQ-CSE-2019)

- A. Increase in the cash reserve ratio
- B. Increase in the banking habit of the population
- C. Increase in the statutory liquidity ratio
- D. Increase in the population of the country

Answer: B

Explanation: The <u>money multiplier</u> represents the total money generated by commercial banks based on a fixed amount of base money and reserve ratio.

- When the cash reserve ratio is raised, it limits the ability of banks to lend money, resulting in a decrease in the money multiplier.
- A rise in the population's banking activity fosters increased lending, leading to higher deposits in the banking system and consequently elevating the money multiplier.
- The money multiplier in an economy does not automatically increase with a population growth, highlighting that population size alone does not determine changes in the money multiplier.

I. UPSC Mains Practice Questions

- 1. How well equipped are the new animal birth control rules, 2023 to tackle the human-dog conflict? Critically analyze. (250 words; 15 marks) [GS-2, Social Justice]
- 2. <u>Transitioning towards low-carbon cities would only be justified if it is just and fair. Elaborate on this statement and suggest ways to achieve the same.</u> (250 words; 15 marks) [GS-3, Environment]