

**DAILY  
CURRENT  
AFFAIRS  
ANALYSIS**



LAKSHYA ACADEMY®

**20 JANUARY 2024**

## **1 – SATHEE Portal:**

### **GS II**

#### **Government Policies and Interventions:**

- **Context:**
- The Department of Higher Education, Ministry of Education, and IIT Kanpur have launched the SATHEE (Self-Assessment, Test, and Help for Entrance Examination) webpage, according to a recent written response made by the Minister of State for Education to the Lok Sabha.
- Every student who plans to take part in competitive education, such as JEE, NEET, and various State level Engineering and other Examinations, will receive a quality education from the portal.
- A 45-day JEE crash course has been introduced to help students preparing for JEE and other engineering exams.
- Academicians, subject matter experts, and IIT toppers curate the course. There are five languages available for this crash course, English included.
- A machine learning (AI) translation tool has been created by the All India Council of Technical Education (AICTE). It can be used with 22 Indian languages.

*Source → The Hindu*

## **2 - Climate Change Performance Index 2024:**

### **GS III**

#### **Environmental Conservation:**

- **Context:**
- The Climate Change Performance Index (CCPI) 2024, which was just issued, places India in 7th place, highlighting its noteworthy role and contribution in the continuing worldwide efforts aimed at mitigating climate change.

## • **What Key Lessons Can Be Drawn From CCPI 2024?**

- **About:** The CCPI is an independent monitoring tool that tracks how well nations are protecting the climate. It has been released annually since 2005. It makes national and international climate policy more transparent and makes it possible to compare the advancements and efforts made by various nations to safeguard the environment.
- Germanwatch, the NewClimate Institute, and Climate Action Network International are the publishers.
- It shows the EU's and 63 nations' climate mitigation initiatives, which together are responsible for more than 90% of the world's greenhouse gas (GHG) emissions.
- **Performance Metrics:** The Climate Policy Index (CCPI) assesses nations in relation to four primary areas: energy usage (20%), renewable energy (20%), greenhouse gas (GHG) emissions (40%) and climate policy (20%).
- **CCPI 2024:** No nation received a very high ranking overall due to poor performance in all index categories. Thus, the top three overall spots stay unoccupied.
- Fourth place went to Denmark, fifth place went to Estonia, and sixth place went to the Philippines among the top six.
  
- **India's ranking in the CCPI 2024:** Moving up from the eighth slot in the CCPI 2023, India achieved the 7th rank in the CCPI 2024. It's interesting to note that India really ranks fourth in terms of global climate performance because the top three slots are occupied by other nations.
- **India's Position and Score in Important Areas:**
- **GHG Emissions & Energy Use:** India's reduced per capita energy use, which improves its standing in the climate, helped it rank ninth among examined countries in GHG Emissions and tenth in Energy Use.
- Additionally, the nation is headed towards meeting a benchmark of far below 2°C in the per capita GHG category.
- **Climate Policy:** India ranked tenth in the category, demonstrating a moderate level of improvement over its results in earlier evaluations.
- **Renewable Energy:** At 37th place, India's performance was more moderate and barely kept it in the "high" performance category.
- This ranking represents a drop from CCPI 2023's 24th place.
  
- **International Context and Analytical Framework:**
- **Global Trends:** In 2022, global greenhouse gas emissions grew, with atmospheric CO2 levels rising 50% over pre-industrial levels. This is a worrying trend, as the CCPI research noted, despite the pressing need to decarbonise.
- **G20 performance:** Only three G20 nations/regions rank among the top performers in the CCPI 2024, with India ranking seventh, Germany ranking fourteenth, and the EU ranking sixteenth.
- More than 75 percent of the greenhouse gas emissions in the world are produced by the G20 nations.

- **Developed Countries:** It is noteworthy that a large number of developed nations, such as the US, Italy, the UK, and others, demonstrated lower performance when compared to the CCPI 2023, indicating a lack of significant progress in addressing climate change.
- Take note
- Despite efforts to encourage renewable energy, the research highlights India's reliance on coal, oil, and gas to meet its energy demands. This dependence adds a great deal to city air pollution and greenhouse gas emissions.

- **What are India's Main Climate Change-Related Challenges?**

- **Water Scarcity:** India's water security is under risk due to receding glaciers and shifting rainfall patterns. The best projections, according to NITI Aayog, show that by 2030, India's water demand will double over its supply.
- **Agricultural Vulnerability:** Crop patterns are impacted by climate change, which lowers yields and compromises food security. Farming is disrupted by rising temperatures and harsh weather events like droughts and floods.
- A 2019 study found that crop losses resulting from extreme weather events amount to approximately 0.25% of India's GDP annually.
- **Increasing Sea Levels:** Coastal areas, which include big cities like Kolkata and Mumbai, are at risk due to increasing sea levels. Millions of people's livelihoods, environments, and infrastructure are all at risk from this.
- It is projected that erosion brought on by increasing sea levels will cause India to lose roughly 1,500 square kilometres of land by the year 2050.
- **Air Pollution:** India faces serious problems with air quality, mostly as a result of burning crops, industrial pollution, and vehicle emissions. Climate change makes this issue worse by having an effect on ecosystems and public health.
- India's average PM2.5 concentration was 53.3 micrograms per cubic metre ( $\mu\text{g}/\text{m}^3$ ), citing a 2022 report. This exceeds by more than ten times the annual guideline amount of 5  $\mu\text{g}/\text{m}^3$  set by the World Health Organisation (WHO).
- The urban heat island effect raises city temperatures, which increases the frequency and severity of heatwaves. This increases the chance of heat-related diseases and deaths, particularly for vulnerable groups residing in crowded cities.
- New Delhi, Kolkata, Mumbai, and Chennai are the four Indian cities that ranked among the top ten for heat exposure in 2021.

- **The Way Ahead:**

- **Climate-Resilient Crop Varieties:** Funding research and development of crop varieties that are genetically engineered or carefully cultivated to resist extreme weather conditions in order to maintain food security in the face of changing climate trends.
- Building vertical forests in urban areas can improve biodiversity and green cover while reducing the impact of the urban heat island effect. These structures, which include several layers of flora on the outside of buildings, are beneficial to the environment and enhance air quality.

- In order to provide sustainable energy, floating solar farms can be built on bodies of water like lakes and reservoirs. This creative method generates clean energy, minimises evaporation from water surfaces, and maximises land use.
- The implementation of community-driven climate insurance programmes that incorporate local communities in risk-sharing and climate adaption techniques is known as community-based climate insurance. This aids in the recovery of people that are vulnerable to climate-related calamities.
- Blockchain for Carbon Credits: Using blockchain technology, carbon credit systems may be made transparent and effective. This would make it possible to track and trade carbon credits accurately, which would motivate companies and private citizens to fund emission reduction initiatives.
- Promoting the cultivation of seaweed as a means of sequestering carbon emissions. Seaweed can be harvested for a variety of uses and contributes to the mitigation of climate change by absorbing carbon dioxide during its growth.
- Creating incentive-based programmes to encourage climate-smart transportation, such as providing tax breaks or subsidies for electric cars, bicycle infrastructure, or carpooling activities, is known as "climate-smart transportation."

*Source → The Hindu*

### 3 - Coal Report 2023 by the International Energy Agency:

#### GS III

#### **Environmental Conservation:**

- **Context:**
- The yearly coal market report from the International Energy Agency (IEA) indicates a substantial change in the worldwide coal demand trajectory, with a suggestion of a structural fall by 2026.
- A number of variables, including the growth of renewable energy and an increase in nuclear output in strategic regions, are driving this expected shift.
- **Which aspects of the report stand out the most?**
- **Trends in Global Coal Demand:**
- Amidst the global energy crisis, the demand for coal increased by 4% annually to 8.42 billion tonnes (Bt) in 2022, setting a record.

- Asia continues to be the main engine driving the rise in coal consumption across the non-power and power sectors.
- China had a 4.6% increase in demand for coal, or 200 million metric tonnes (Mt).
- India experienced a notable 9% increase, totaling 97 Mt.
- Indonesia saw an incredible 32% increase, to 49 Mt, led by nickel smelters.
- Among the major markets, the United States experienced the largest reduction in coal demand, with a total decline of 8% to 37 Mt.
- Europe had more subdued growth than expected, even with a 4.3% increase in consumption.
- nuclear power plants and restrained hydropower plants in some European nations.
- A poor European economy and mild winters helped to limit the impact of natural gas price rises.

- **Prospects and Uncertainties for the Future:**

- Demand for coal is expected to fall in the majority of developed economies in 2023.
- Global coal consumption is expected to decrease by 2.3% overall in 2026 compared to 2023.
- Global coal consumption is predicted to be above 8 billion tonnes through 2026, despite the anticipated drop, underscoring its ongoing significance as a major source of carbon dioxide emissions.
- The three biggest producers of coal in the world, China, India, and Indonesia, are predicted to shatter output records in 2023, setting a new record for worldwide production. More than 70% of the coal produced worldwide is currently produced in these three nations.
- Particularly in China and India, limited hydropower generation and a strong increase in electricity demand are the main causes of increased coal usage.

- **Factors Affecting the Drop in the Demand for Coal:**

- The world's trend away from coal and towards renewable energy sources is blamed for the decrease in coal demand.
- According to the IEA, the predicted decrease is related to changes in the global climate, specifically the move from El Nino to La Nina conditions, which may result in higher hydropower output.
- The study shows a notable increase trend in the low-cost solar photovoltaic deployment, which is helping to fuel the expansion of renewable energy production.
- It is anticipated that nuclear power would moderately rise, especially in China, India, and the EU, which will have an additional impact on coal-fired power.

- **The Dominance of China in the Coal Markets:**

- It is anticipated that China's coal usage would decline in 2024 and stay constant through 2026.
- While China's electricity generation from solar PV and wind is predicted to expand dramatically, hydropower output is likely to recover.
- China is undergoing significant structural changes, which will affect both the country's rate of economic growth and its usage of coal.

- Despite pledges to implement renewable energy, it is anticipated that India, Indonesia, and other developing nations would continue to rely on coal for economic growth.
- Aiming for a roughly 95% decrease in coal emissions between 2020 and 2050, efforts to reduce the use of "unabated" coal in accordance with the 28th Conference of Parties (COP28) are considered crucial for attaining international climate targets.
- **Coal Sector Changes:**
- Over the past two years, there has been an unanticipated spike in coal costs, which has affected consumer behaviour as well as industrial dynamics.
- Coal mining businesses have kept their profit margins solid in spite of rising costs. Because of this, diversified mining companies have been able to profit from the projected increase in demand associated with the energy shift by strategically reinvesting coal revenues in other commodities.

*Source → The Hindu*

## 4 – Telecommunications Bill 2023:

### GS II

### Government Policies and Interventions:

- **Context:**
- The Telecommunications Bill 2023 was recently introduced by the government in the Lok Sabha. The Indian Telegraph Act of 1885, the Indian Wireless Telegraphy Act of 1933, and the Telegraph Wires (Unlawful Possession) Act of 1950 are all intended to be repealed. The Telecom Regulatory Authority of India (TRAI) Act, 1997 is also amended by it.
- **Which Sections of the Telecommunications Bill 2023 Are the Most Important?**
- **Authorization for Telecom-Related Activities:** In order to construct, run, maintain, or grow a telecommunications network, offer telecommunication services, or own radio equipment, prior central government authorization is needed.
- Current licences will remain in effect for the duration of their grant, or five years if no time frame is stated.
- **Spectrum Assignment:** Spectrum will be allotted through auction, with the exception of a few designated uses, in which case it will be distributed administratively. These cover things like transportation, weather forecasting, disaster relief, national security and defence, DTH and satellite phone services, BSNL, MTNL, and public broadcasting services.

- Any frequency band may be repurposed or reassigned by the central authorities. The sharing, trading, leasing, and surrender of spectrum may also be authorised by the national government.
- Allotments for Satellite Internet: The Bill includes provisions for distributing spectrum to American businesses like SpaceX's Starlink and satellite Internet providers like OneWeb, which is backed by Bharti.
- As of right now, Jio and OneWeb have been granted active authorizations, opening the door for satellite-based Internet services.
- Authority to Monitor and Search: Communications or a group of communications between two or more people may be obstructed, tracked, or intercepted for specific reasons.
- Such measures must be required or practical in the interest of public safety or emergency situations, and they must serve specific objectives, such as maintaining public order, state security, or preventing the incitement of criminal activity.
- For similar reasons, telecom services may be suspended. In the event of a public emergency or safety concern, the government has the authority to temporarily seize any telecom infrastructure, network, or services.
- An official with government authorization has the authority to search buildings or cars to check for illegal telecom networks or equipment.
- Authority to Establish Standards: When it comes to telecom hardware, networks, infrastructure, and services, the federal government has the authority to establish guidelines and evaluations.
- Right of Way: In order to install telecom infrastructure, facility providers may ask for permission to cross public or private property.
- To the greatest extent feasible, rights of way must be granted in a non-discriminatory and non-exclusive manner.
- Protection of Users: The establishment of Do Not Disturb registries, the ability for users to report malware or specific messages, and prior consent to accept advertising messages are only a few of the measures the central government may do to safeguard users.
- In order to prevent spam calls and messages, telecom users must use biometric authentication.
- Telecom service providers are required to set up an online grievance registration and settlement system.
- Appointments to TRAI: The Bill modifies the TRAI Act to permit the appointment of persons who possess at least 25 years of professional experience as members and at least 30 years of experience as chairpersons.
- Digital Bharat Nidhi: To provide telecom services in underserved areas, the 1885 Act established the Universal Service Obligation Fund.
- This clause is kept in the Bill; the money is now known as Digital Bharat Nidhi, and research and development can be funded using it.
- Regulation of Over-the-Top (OTT) Apps: To the great relief of communication service providers like WhatsApp and Telegram, over-the-top (OTT) services and apps have been excluded from the definition of telecommunication services.
- Under the proposed Digital India Act, which is separate from the Telecom Bill, the Ministry of Electronics and IT will be in charge of regulating over-the-top (OTT) applications.
- Penalties and Offences: The Bill lists a number of civil and criminal offences. Unauthorised access to a telecom network or data, as well as the provision of telecom services, are penalised by up to two crore rupees in fines or three years in jail.



- Violations of the authorization terms and conditions might result in a civil penalty of up to five crore rupees.
- A fine of up to 10 lakh rupees can be imposed for using an unauthorised network or service or for possessing unauthorised equipment.
- Process of Adjudication: In accordance with the Bill, the central government will designate an adjudicating official to carry out investigations and issue directives against civil offences.
- The officer needs to be at least a joint secretary in rank.
- Within thirty days, orders made by the adjudicating officer may be appealed to the Designated Appeals Committee.
- Within 30 days, appeals against the Committee's orders regarding terms and conditions violations may be submitted to the Telecom Disputes Settlement and Appellate Tribunal (TDSAT).
- The law now incorporates the Trusted Sources Regime, a policy put in place following the 2020 border dispute between India and China to prohibit the entry of telecom equipment from potentially hostile countries.

- **What is the Indian telecom sector's current state?**

- **Present Situation:**

- With 1.179 billion cellular and wireline subscribers as of August 2023, India's telecom sector is the second largest in the world.
- At 6% of overall FDI inflow, it ranks as the fourth-largest sector in terms of FDI inflows.
- In India, the tele-density is 84.69% overall. One key measure of telecom penetration is tele-density, which is the number of phones per 100 people.
- Additionally, from 61.66 MB in March 2014 to 17.36 GB in March 2023, the average monthly data consumption per wireless data subscriber has grown.

*Source → The Hindu*