

17 Oct 2021: UPSC Exam Comprehensive News Analysis

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Category: INTERNAL SECURITY

1. In the line of defence, with growing powers

Context:

- The Union Ministry of Home Affairs has recently **enhanced the Jurisdiction and operational limits of the Border Security Force (BSF)** in states where it guards the international border (Punjab, West Bengal and Assam).

Background:

Border Security Force (BSF):

- The BSF is a **central armed police force (CAPF)** that functions under the Union government.
 - The Ministry of Home Affairs issues all orders pertaining to the BSF and other CAPFs such as the Central Reserve Police Force (CRPF), Sashastra Seema Bal (SSB), Indo Tibetan Border Police (ITBP), Central Industrial Security Force (CISF), National Security Guard (NSG) and Assam Rifles.
- It was **raised in 1965 in the aftermath of the India-Pakistan war.**
- India is a Union of States and under One Border One Force policy, the **BSF is deployed along the Pakistan and Bangladesh borders.** It is also deployed in areas affected by Left Wing Extremism (LWE) and is routinely deployed for election and other law and order duties on the request of State governments.
- According to the **BSF Act, 1968**, passed by Parliament and the rules framed in 1969, the BSF has been assigned three primary tasks while deployed along the borders — promote a sense of security among the people living in the border area; prevent trans-border crimes/unauthorised entry into or exit from the territory of India and prevent smuggling and any other illegal activity.
 - The MHA has given powers to the BSF personnel in border areas under the Customs Act, the Passport Act, the Narcotics Drugs and Psychotropic Substances Act, the Code of Criminal Procedure (CrPC), Registration of Foreigners Act, 1939, the Central Excises and Salt Act, 1944, the Foreigners Act, 1946, and the Foreign Exchange Regulation Act, 1947.
 - The violations against which the BSF carries out search and seizure include smuggling of narcotics, prohibited items, illegal entry of foreigners and offences punishable under any other Central Act.

Details:

- The Ministry of Home Affairs (MHA), through a notification in the Gazette of India has **enhanced the “arrest, search and seize” powers of the Border Security Force (BSF) up to 50 km from the**

international boundary within Assam, West Bengal and Punjab. The BSF's powers — which include arrest, search and seizure — were limited to up to 15 km in these states.

- In Gujarat, the limit was reduced from the existing 80 km to 50 km. In Rajasthan, the 50-km limit remains unchanged.
- The notification replaces a 2014 order under the BSF Act, 1968, which also empowers the force to conduct counter-insurgency operation in Manipur, Mizoram, Tripura, Nagaland and Meghalaya.
- Its jurisdiction has been extended only in respect of the powers it enjoys under Criminal Procedure Code (CrPC), Passport (Entry into India) Act, 1920 and the Passport Act, 1967. BSF currently has powers to arrest and search under these laws.
- It also has powers to arrest, search and seize under the NDPS Act, Arms Act, Customs Act and certain other laws. Its jurisdiction under these laws has not been changed, meaning its powers under these will continue to be only up to 15 km inside the border in Punjab, Assam and West Bengal, and will remain as far as 80 km in Gujarat.

Significance of the move:

- Notably, the BSF before this notification had different jurisdictions in different states. The fresh notification will help end this anomaly.
- The move will **bring in much needed uniformity in the BSF's jurisdiction** and also **help increase operational efficiency and effectiveness of BSF in curbing trans-border crimes**. The new notification gives the BSF a legal teeth to conduct the searches in nearby areas and not be constrained by territorial limit.
- Also the move was also necessitated due to increasing instances of drones dropping weapons and drugs in Jammu and Kashmir and Punjab. With enhanced territorial limits in States, the border agency is set to expand its operations and also undertake independent pre-emptive search operations, especially at a time when the **borders remain tumultuous**.

Arguments against the move:

- The move has been criticised by the Punjab and West Bengal governments, which have called it an **attack on the federal structure and an attempt to curtail the rights of the state police**.
- The states argument has been that **law and order and policing is a state subject** and enhancing BSF's jurisdiction infringes upon powers of the state government.
 - According to the Seventh Schedule of the Constitution, policing is a State subject.

Government's line of argument:

- The union government has argued that it is only exercising the powers under the **Border Security Force Act of 1968** to enhance the jurisdiction of BSF.
- Also notably, **the BSF does not have police powers**; after apprehending a suspect it can only conduct "preliminary questioning" and has to hand over a seized consignment or the suspect to the local police within 24 hours. **It does not have powers to prosecute crime suspects**. Thus it is in line with police being a State subject under the Constitution.

Category: ENVIRONMENT AND ECOLOGY

1. 'Shift focus to demand management of water'

Context:

- Mihir Shah, Chairman of the 11-member drafting committee of India's new water policy in an interview has shared some insights on the **upcoming National Water Policy**.
 - India previously had a National Water Policy in 1987, 2002, 2012.

Background:

Threat of Water insecurity in India:

- As per available scientific estimates, if the current pattern of water demand continues in India, **about half of the national demand for water will remain unmet by 2030**.
 - Notably while India supports around 16% of the global population, India has access to only around 4% of the global fresh water resources.
- The current context of **climate change leading to changing patterns and intensity of precipitation** is adding to the grave crisis of water facing the country.
- The **deteriorating water quality** is also adding to water stress in India.

Recommendations:

- There is the urgent need to **take very serious cognisance of the grave crisis of water facing the country**.
- There is the need for greater emphasis on **agility, resilience and flexibility in water management**, so that there could be an adequate response to the heightened uncertainty and unpredictability of the future. There is the need for a **radical change in the approach to water management**.

Demand side management:

- India should shift focus from endlessly increasing supply of water towards measures for **demand-management**.
- This could involve measures such as diversifying of cropping pattern to include **less water-intensive crops**, **lowering the industrial water footprint** by reducing fresh water use and shifting to recycled water and the **use of treated wastewater** for all non-potable uses, such as flushing, fire protection, vehicle washing, landscaping etc in cities.

Improving supply side efficiency:

- There should be sufficient focus on supply of water through **rejuvenation of catchment areas**, which needs to be incentivised through **compensation for ecosystem services** in the upstream, mountainous regions.
- There should be renewed thrust on **local rainwater harvesting**. **Protection and revival of traditional local water bodies** in both rural and urban areas needs to be prioritized. This would form part of **urban blue-green infrastructure** for improved water levels and quality, as also flood mitigation.

Nature based solutions:

- There is the need to **adopt 'nature-based solutions' for storage, supply of water** in India given their **low cost characteristic** and also the **environmental sustainability** of such an approach.
- There is mounting evidence across the globe in favour of “nature-based solutions” for water storage and supply.

Differential water pricing:

- Economic services (like industrial and commercial use) must be charged at a rate where the O&M (Operation and Management) costs and part of the capital cost would be the basis for the water service fees. **Concessional rates should be provided for vulnerable social sections.**

Category: SCIENCE AND TECHNOLOGY

1. Zeolite oxygen concentrators: chemistry in three dimensions

Metal–organic frameworks (MOFs):

- Metal–organic frameworks (MOFs) are a class of **compounds consisting of metal ions or clusters coordinated to organic ligands** to form one-, two-, or three-dimensional structures.
- They are a subclass of coordination polymers, with the special feature that they are often porous.
- The main advantages offered by this class of compounds include their **stability, large surface area, controlled pore sizes, and tunable chemical environments.**

Applications:

Molecular sieve:

- Frameworks can be designed to act as sieves in separating out molecules of a specified size. This makes it viable for usage in a wide variety of applications including sensing.

Energy applications:

- They can also be used for both storing energy (as **capacitors**) and for conducting it (along membranes in **fuel cells**).

Catalysis:

- It can be used in catalysis, where they can **replace very expensive metals as catalysts.**

Medical field:

- It can be used in **drug-delivery** wherein anti-cancer and other drugs with severe side effects can be trapped in the porous confines of MOFs, to be released in small and steady doses.

Zeolites:

- **Zeolites are highly porous, 3-D meshes of silica and alumina.** They also occur naturally, where volcanic outflows have met water.

- One notable application of synthetic Zeolite is in **oxygen concentrators**.
- Zeolite based oxygen concentrators use synthetic frameworks of silica and alumina with nanometer-size pores that are rigid and inflexible. Being highly porous, zeolite beads have a **surface area of about 500 square meters per gram**.
- At high pressures in the column, nitrogen enter into a tight embrace with the zeolite. Oxygen remains free, and is thus enriched.
 - Interaction between the negatively charged zeolite and the asymmetric nucleus of nitrogen causes it to be preferentially adsorbed on the surface of the zeolite.
- Lowering the pressure in the column releases the nitrogen, which is flushed out, and the cycle is repeated with fresh air to get enriched oxygen.

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: ECONOMY

1. What is the extent of India's coal crisis?

Background:

- Recent reports have pointed to the **critically low levels of coal in Indian Thermal power plants** which could push India to a power crisis.
 - **India relies on coal to meet over 70% of its power needs**
- Many power plants are said to be operating with zero reserve stock or with stocks that could last just a few days.
 - According to data released by the Central Electricity Authority India's 135 thermal power plants overall had on average coal stock that would last just four days. 112 of the 135 power plants are operating with stocks that are at critical or super-critical levels.
- Some states have also resorted to **partial load-shedding** aimed at saving power.
- The current coal crisis comes amid a broader energy crisis across the world with the prices of natural gas, coal and oil rising sharply in the international market.

Factors responsible for the coal shortage:

- Many factors have been blamed for the insufficient supply of coal. There are **both transient as well as structural challenges** which have resulted in the current coal shortage in India.

Poor domestic production:

- The current crisis in the availability of coal can be mainly attributed to the **lacklustre domestic production of coal**. Despite repeated appeals by the central government to increase domestic coal production in India, Coal India Limited has failed to increase the domestic production.

Drop in coal imports:

- There has been a **sharp drop in coal imports over the last few years**.
- The government in 2020 had stated that it would stop all coal imports by FY24.

Sudden spike in power demand:

- Stagnating supply did not cause trouble last year with the economy shut down to tackle the COVID-19 pandemic. But the sudden rise in power demand this year has exposed the coal shortage in India.

Transient factors:

- Short-term issues like **flooding in coal-mining areas, transport issues, labour disruptions in major coal-mining countries** have severely affected the coal supply chains.

Structural issues:

- Structural problems have plagued the power industry in India.
 - **Populist politics have resulted in financially unviable pricing of electricity in India.** The price that many consumers pay for power in India is not commensurate with the production costs. This has **increased the debt burden on public sector companies like Coal India Limited and discouraged private investment in power generation sector.** There is very little financial incentive that major producers across the supply chain, including miners, possess to ramp up production.
 - The mining of coal is nearly monopolised by public sector companies like CIL. Coal India Limited (CIL) supplies over 80% of the total coal. There are big questions on the efficiency of CIL.

Conclusion:

- Despite the ongoing climate action deliberations calling for the cutting down of fossil fuel consumption, fossil fuels are likely to remain critical to meet India's growing energy demands. Hence India should focus on making the thermal power sector resilient to supply shocks. Else it risks disrupting its economic revival in the post pandemic scenario.
- While the **short term measure of allowing increased coal imports** might help tide over the current crisis, there is also the need for more **robust long term reforms like market determined power tariffs** to ensure the financial viability of the sector in India.

2. Will Tata be able to turn around Air India?

The issue of disinvestment of Air India has been covered previously in the following article:

[UPSC Exam Comprehensive News Analysis of 11th Oct 2021](#)

Category: HEALTH

1. Vaccine for malaria

Recently the [World Health Organization](#) endorsed the first-ever malaria vaccine, RTS, S, among children in sub-Saharan Africa, and in other regions with moderate-to-high **Plasmodium falciparum malaria transmission**. For detailed information on this topic refer to the following article:

F. Prelims Facts

1. Army Air Defence steps up procurement

Igla-S:

- “Igla-S” is a **man-portable surface-to-air missile system**.
- Igla-S constitutes a **short range air defence system**.
- This type of air defense system is designed to defeat all types of visible fixed- and rotary-winged aircraft on head-on and in pursuit courses as well as small aerial targets like cruise missiles.
- The Indian Army had contracted a small number of Igla-S systems from **Russia** under emergency procurement through the Vice-Chiefs emergency financial powers and deliveries are expected soon.

2. 60 injured in Banni festival in Kurnool

Banni festival:

- During the **Devaragattu Banni festival**, people from the Kurava and Boya communities engage in a fierce stick fight.
- It is celebrated in **Kurnool district of Andhra Pradesh**.
- The Banni festival is celebrated on the night of Vijaya Dasami to celebrate the victory of Lord Mala Malleswara Swamy and Goddess Parvati Devi over demons Mani and Mallasura. Belief has it that Lord Siva took the form of Bhairava and killed two demons Mani and Malla using sticks. Devotees consider bloodshed during the Banni fight as a good omen.

Context:

- Sixty people were injured, four of them critically, during the Banni festival organised recently.

G. Tidbits

1. Climate finance, tech transfer norms not defined: FM

- In the run up to the upcoming **U.N. Climate Change Conference (COP26) in Glasgow**, India has come under pressure, especially from the U.S. and U.K, to announce more ambitious emission cuts, beyond what came out of its Paris commitments and to provide a deadline by which it will reach ‘**Net Zero**’ emissions.
- India’s line of argument has been that developing countries need space to grow and developed countries must move to a ‘**Net Minus**’ **paradigm** and meet climate finance obligations first.
 - ‘**Net Minus**’ **paradigm calls for Carbon Dioxide Removal (CDR)**. As it is the opposite of emissions, these practices or technologies are often described as achieving “negative emissions” or “sinks”.
- Indian Finance Minister who is on a U.S. visit has repeatedly raised or discussed the **issue of climate finance obligations and technology transfer from the developed countries**.

- Developed countries have committed under the Paris Agreement to allocate **\$100 billion per year from 2020 onwards to facilitate emission cuts in poorer countries** and also to **effect technology transfer**.

2. 'Virus less likely to develop resistance to molnupiravir'

Molnupiravir:

- Molnupiravir is an experimental **antiviral drug**. It was developed to treat influenza and is being studied for treatment of COVID-19.
- Molnupiravir is a **pro-drug**, which means that it needs to undergo processing in the body to become active. The drug **prevents the SARS-CoV-2 virus RNA replication process** through "error catastrophe". It exerts its antiviral action through **introduction of copying errors during viral RNA replication**.
- Molnupiravir is an oral drug unlike Remdesivir and this offers a major advantage in treating patients as it would not require hospitalisation.
- There are concerns that molnupiravir **may potentially drive mutagenesis in viral RNA and mammalian DNA**.

Context:

- The phase-3 trial of the antiviral drug molnupiravir has shown good efficacy of the drug in reducing risk of hospitalisation or death by 50% in non-hospitalised adult patients with mild-to-moderate COVID-19 disease.

H. UPSC Prelims Practice Questions

Q1. Kuakhai River is a distributary of which amongst the following Rivers?

- a. Vamsadhara
- b. Subarnarekha
- c. Brahmani
- d. Mahanadi

Answer: d

Explanation:

- Kuakhai River is a distributary of Mahanadi River which flows by Bhubaneswar, Odisha. Mahanadi River branches off at Naraj, Cuttack as Kathajodi River, then immediately it is bifurcated, with its southern branch flowing as Kuakhai River.
- Tributaries are small streams of water that join together to form a river. Tributaries are formed when the river breaks down into small streamlets or channels.



TRIBUTARY



NON-TRIBUTARY



DISTRIBUTARY



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Q2. With reference to Sea grasses, which of the following statements is/are correct?

1. Antarctica is the only continent without sea grasses
2. Sea grasses reproduce through both sexual and asexual methods
3. Sushi is made from Sea grasses

Options:

- a. 1 and 2 only
- b. 2 and 3 only
- c. 1 and 3 only
- d. 1, 2 and 3

Answer: a

Explanation:

- Seagrasses are the only flowering plants which grow in marine environments. There are about 60 species of fully marine seagrasses. Seagrasses evolved from terrestrial plants which recolonised the ocean 70 to 100 million years ago.
- Like all autotrophic plants, seagrasses photosynthesize, in the submerged photic zone, and most occur in shallow and sheltered coastal waters anchored in sand or mud bottoms. Most species undergo submarine pollination and complete their life cycle underwater. Some species also reproduce through asexual methods as well.
- Seagrasses form dense underwater seagrass meadows which are among the most productive ecosystems in the world. They function as important carbon sinks and provide habitats and food for a diversity of marine life comparable to that of coral reefs.

- Various coastal regions are dominated by one or few seagrass species. The regions in the tropical waters of the Indian and western Pacific oceans have the highest seagrass diversity. It is said that in the world Antarctica is the only continent without seagrasses.
- Sushi is made from Seaweeds.

Q3. Consider the following statements with respect to Khair (*Acacia catechu*):

1. It is a deciduous tree widely distributed throughout the greater part of India except the most humid, cold and the driest regions
2. The tree is known for its medicinal properties and helps in curing skin problems

Which of the above statements is/are correct?

- a. 1 only
- b. 2 only
- c. Both
- d. None

Answer: c

Explanation:

- Khair (*Acacia catechu*) is a deciduous tree widely distributed throughout the greater part of India except the most humid, cold and the driest regions. It is common in the sub-Himalayan tract and outer Himalayas ascending from 900 to 1,200 m from Jammu to Assam.
- Khair tree is known for its medicinal properties and helps in curing skin problems. Ayurveda uses wood and bark of the tree for various formulations. It finds its major application in the treatment of skin and respiratory problems more in particular, of allergic origin. Also, it is used as an important constituent for maintenance of oral hygiene and also as local treatment for bleeding injuries as styptic agent by virtue of its astringent properties.

Q4. Article 311 of the Indian Constitution deals with

- a. Tenure of office of persons serving the Union or a State
- b. Dismissal, removal or reduction in rank of persons employed in civil capacities under the Union or a State
- c. Recruitment and conditions of service of persons serving the Union or a State
- d. Power of Parliament to vary or revoke conditions of service of officers of certain services

Answer: b

Explanation:

- Article 311 in the Constitution of India deals with dismissal, removal or reduction in rank of persons employed in civil capacities under the Union or a State

- No person who is a member of a civil service of the Union or an all India service or a civil service of a State or holds a civil post under the Union or a State shall be dismissed or removed by a authority subordinate to that by which he was appointed
- No such person as aforesaid shall be dismissed or removed or reduced in rank except after an inquiry in which he has been informed of the charges against him and given a reasonable opportunity of being heard in respect of those charges

Q5. Regarding the taxation system of Krishna deva, the ruler of Vijaynagar, consider the following statement (UPSC-2016)

1. The tax rate on land was fixed depending on the quality of the land
2. Private owners of workshops paid an industries tax

Which of the statements given above is/are correct?

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

Answer: c

Explanation:

- Land revenue was the chief source of income during the Vijaynagar kingdom period. Land was divided into four categories for purposes of assessment, wet land, dry land, orchards and woods. The rates varied according to the type of the crops, soil, method of irrigation etc.
- Besides land tax, many professional taxes were also imposed. They were on shopkeepers, farm servants, workmen etc. Private owners of workshops paid an industries tax. Commercial taxes consisted of levies, duties and customs on manufactured articles of trade were also levied.

I. UPSC Mains Practice Questions

1. Why is India facing a shortage in coal supply and how will it affect the country? Discuss. (10 Marks, 150 Words)[GS-3, Economy]
2. The Ministry of Home Affairs recently issued a notification extending the jurisdiction of the Border Security Force. Is this a direct attack on federalism? Critically Examine. (10 Marks, 150 Words)[GS-3, Security]

Read the previous CNA [here](#).