10 Oct 2021: UPSC Exam Comprehensive News Analysis

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A. GS 1 Related

Nothing here for today!!!

B. GS 2 Related

Category: POLITY AND GOVERNANCE

1. Government cleared appointment of Chief Justice

Context:

Recently, the Central Government cleared the appointment of Eight new Chief Justices for High Courts along with the transfer of five Chief Justices.

Details:

Appointment procedure of HC Judges:

- **Article 217**of the Constitution: It states that the Judge of a High Court shall be appointed by the President in consultation with the Chief Justice of India (CJI), the Governor of the State.
- In the case of appointment of a Judge other than the Chief Justice, the **Chief Justice of the High Court is consulted.**
- **Consultation Process:** High Court judges are recommended by a **Collegium** comprising the **CJI and two senior-most judges.**
- The proposal, however, is initiated by the Chief Justice of the High Court concerned in consultation with two senior-most colleagues.
- The recommendation is sent to the Chief Minister, who advises the Governor to send the proposal to the Union Law Minister.

Transfer procedure of HC Judges:

- **Article 222**of the Constitution makes provision for the transfer of a Judge (including Chief Justice) from one High Court to any other High Court. The initiation of the proposal for the transfer of a Judge should be made by the Chief Justice of India whose opinion in this regard is determinative.
- Consent of a Judge for his first or subsequent transfer would not be required.
- All transfers are to be made in public interest i.e., for promoting better administration of justice throughout the country.

Evolution of Collegium System:

- It is the system of appointment and transfer of judges that has evolved through judgments of the SC, but not by an Act of Parliament or by a provision of the Constitution.
    - **First Judges Case (1981):** It declared that the “primacy” of the Chief Justice of India’s (CJI) recommendation on judicial appointments and transfers can be refused by the President and consultation doesn’t mean concurrence.
        - Thus, the ruling gave the Executive primacy over the Judiciary in judicial appointments for the next 12 years.
    - **Second Judges Case (1993):** SC introduced the Collegium System, holding that consultation means concurrence.
        - It added that it was not the CJI’s individual opinion, but an institutional opinion formed in consultation with the two senior-most judges in the SC.

- **Third Judges Case (1998):** SC on President's reference expanded the Collegium to a five-member body, comprising the CJI and four of his senior-most colleagues (for example for the transfer of HC judges).

Issues involved in appointment:

- **Cumbersome Process:**There are inordinate delays in the appointment of High Court judges and it leads to the pendency of cases.
- **Lack of Transparency:**There is no objective criteria for selection and people come to know about judges only after selection. It also promotes nepotism in the judiciary. The consultations of the Collegium are also not discussed in any public platform.
- **Instances of Politicisation:** In many cases, there is indication that due to the unfavorable judgments of certain judges the political executive hinders their appointments, elevation, or transfer. This reflects poorly on the concept of independence of the judiciary.
- **Improper Representation:**Certain sections of societies have higher representation whereas many vulnerable sections have nil representation.

Attempts of Reform:

- The attempt was made to replace the Collegium with a 'National Judicial Appointments Commission (NJAC)' in 2014 through the 99th Constitutional Amendment Act, 2014. However, the Constitutional Bench of the Supreme Court declared NJAC unconstitutional in 2015, citing that it violates the Basic Structure Doctrine of the Constitution on the ground that it posed a threat to the independence of the judiciary.

Way Forward

- It is high time to think of a permanent, independent body to institutionalize the process with adequate safeguards to preserve the judiciary's independence guaranteeing judicial primacy but not judicial exclusivity.
- It should ensure independence, reflect the diversity, demonstrate professional competence and integrity.
- Instead of selecting the number of judges required against a certain number of vacancies, the collegium must provide a panel of possible names to the President to appoint in order of preference and other valid criteria. Judiciary should balance accountability as well as independence provided by the Constitution.

C. GS 3 Related

Category: ENVIRONMENT AND ECOLOGY

1. Spraying Solution to stem stubble burning

Context:

- A Bengaluru-based agritech firm "nurture.farm" is providing technology to aid farmers to spray decomposers over an unprecedented 5 lakh acres. This would reduce the need for stubble burning in the regions, which have been consistently undertaking stubble burning after the harvest.

Boom Sprayer: How it works?

- The boom sprayer looks like a tractor and its definitive features are two 20-feet booms that spread out like outstretched wings. On them are equally spaced nozzles that spray bio-decomposers on the freshly harvested rice field.
- The decomposers are a powder mixed in the water meant to accelerate the process of turning rice stubble into compost.
- With the boom sprayer, an acre can be sprayed in 7 minutes whereas manually it takes half a day.

Issues associated:

- Data from the National Aeronautics and Space Administration suggests that there is no discernible difference in the number of fires this year when compared to the same time last year.
- There is heavy rainfall in September over north India which has already led to the delayed harvesting and reduced the time available for sowing the winter wheat. This would lead to more potential fires to clear the fields quickly.
- The wind direction and the smoke residue in the air will be more apparent in Delhi's air quality further worsening the same.

Recent Measures towards curbing Stubble Burning

- The Central Government outlined claims by several State governments to address crop burning.
- For about 25,000 farmers in Punjab and Haryana, the decomposer spraying will be free.
- Haryana has reportedly allocated ₹200 crores to disincentivize farmers from crop burning and Uttar Pradesh will be spraying a decomposer using cow dung manure over 1 million acres.

2. Himachal Pradesh getting less snow: Study

Context:

- A recent study conducted jointly by the State Centre on Climate Change and Space Applications Centre (ISRO) Ahmedabad, using Advanced Wide Field Sensor (AWiFS) satellite data has revealed that all major river basins including Satluj, Ravi, Chenab, and Beas have witnessed an overall decrease of 18.5% in area under snow in 2020-21 winters in comparison to 2019-20.

Identifiable Causes of the loss of Snow:

Natural Cause

1. The prime reason is the changes in the global climate pattern which has led to the reduction in the precipitation trend.
2. The average temperature has also risen in the region faster than the peninsular region.
3. On average relatively more moisture is being carried towards the Himalayas. But there is a lack of conditions for sub-zero temperature, hence snowfall is declining as global warming has led to a rise in temperature.

Man-Made Cause

- Unsustainable rapid deforestation
- Unregulated construction activities
- Increase in air and soil pollution in the region.

Impact of Loss of Snow Cover

- In Himachal Pradesh, about one-third of the geographical area remains under thick snow cover during the winter season.
- The snow cover helps in controlling the accumulation and ablations patterns of the glaciated regions.
- Major rivers such as Chenab, Beas, Parvati, Baspa, Spiti, Ravi, Satluj and their perennial tributaries originating from the Himalayas depend upon the seasonal snow cover for their discharge dependability.
- The spatial distribution of snow ensures sustainable measurement of the hydrological table at the basin.

Recommendations:

- Developed countries with legacy emissions need to effect deep emission cuts. Developing nations should also commit themselves to steeper emissions cuts based on the promise of support from developed countries.
- The developing countries should be supported adequately in their climate action endeavors in the form of easy access to low carbon technologies through technology transfer and adequate funding for mitigation and adaptation.

3. Explaining the global warming phenomenon

Context:

The Nobel Prize for Physics for 2021 has been awarded to climatologists Syukuro Manabe and Klaus Hasselmann, and physicist Giorgio Parisi for their groundbreaking contributions in the understanding of complex physical systems.

Details:

- The Nobel
    - The Nobel Prize is being given to climatologists for the first time since its inception in 1901.
    - The prize-winning work done by the laureates are in different areas but they fall under the umbrella of complex systems, climate on the one hand, and spin liquids on the other and so are broadly linked to one another.
- Syukuro Manabe's Work
    - Syukuro Manabe and collaborators made pioneering attempts at modelling atmospheric warming due to the increase in carbon dioxide in the 1950s and 1960s.
    - Manabe's model pinned the quantitative impact of warming due to carbon dioxide and he estimated that a doubling of carbon dioxide would lead to a temperature rise of 2 degrees.
    - His model confirmed that the rise in temperature was due to the increase in carbon dioxide instead of the Sun's radiation.

- Klaus Hasselmann's Work
    - He built a stochastic climate model that connects climate and weather as he used a connection between the randomly varying weather patterns and inferred from these the signal of climate.
    - As per the information released by the Nobel Academy, Klaus Hasselmann later developed methods to identify the human fifingerprintt on climate change.
    - The models that he built carried information about warming due to solar radiation, greenhouse gases, and other causes, each of which could be separated.
- Giorgio Parisi's Work
    - Parisi was able to identify a structure to the replicas by a replica trick and describe it mathematically.
        - Replica trick is a mathematical technique in which many copies of the system i.e. replicas are processed at the same time to calculate meaningful quantities out of spin glasses.
    - This led to the method being used eventually to solve problems in the field of complex systems including not only physics but solving problems in mathematics, biology, neuroscience.

Significance:

- The works of the three scientists cover phenomenon that is diverse from the spans length scales ranging from centimetres to the size of the planet and the description of what goes on at a microscopic level.
- As there is a solid physics basis to climate science, their work would amplify the understanding of the complex physical system that has many interacting elements, and they often show chaotic or dynamic behaviour.

Inference:

- A comprehensive understanding of the complex physical system would throw light on its dynamic physical behaviours and would further associate with the solutions to the problems of Climate Science that mankind urgently needs.

Other Important Concepts:

- Green-house Effect
    - Green-house effect is the atmospheric absorption of some part of the outgoing radiation when the incoming short-wavelength radiation from the Sun is absorbed by the Earth and re-emitted outwards as long-wavelength radiation.
    - Though the greenhouse effect also has a positive impact as it keeps the surface of the earth warm and makes life possible. But the increase in the percentage of greenhouse gases in the atmosphere can rise the warming to a degree that is harmful to life.
    - A Swedish scientist Svante Arrhenius estimated around the close of the 19th century if the carbon dioxide in the atmosphere double, this would cause its temperature to increase by 5-6 degrees.

- Weather & Climate
    - Weather refers to the day-to-day variations in temperature and rainfall.
    - Climate describes long-time effects and also seasonal and average behaviour over a long time.

Read more on this topic from:

UPSC Comprehensive News Analysis of 09th Oct 2021

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: ENVIRONMENT AND ECOLOGY

1. Green Pacts inked at India, Denmark Summit

Context:

- India and Denmark signed two agreements on research in climate change, while another MoU on setting up a “green hydrogen” electrolyzer plant.
- This was the first summit-level visit to India since the COVID pandemic and the first State visit by a Danish leader since a bilateral freeze on ties a decade ago.
- This is in continuance to the joint declaration of the “Green Strategic Partnership” that India and Denmark forged after a virtual summit between PMs Modi and Frederiksen in September 2020.

Areas of Cooperation:

- There are agreements to pursue joint cooperation in the field of health technology and agriculture. Joint ventures on food safety, cold chains, food processing, and water management are to be finalized.
- Agreement between the Council of Scientific and Industrial Research and the Geological Survey of Denmark to conduct groundwater mapping.
- MoU between the Indian Institute of Science and Danfoss Industries to set up a research center on carbon-based cooling systems.
- The commercial MoU between Reliance Industries Limited and Stiesdal Fuel Technologies will work on the development of a “Hydrogen Electrolyser” for zero-carbon hydrogen to be manufactured in India.
- There are plans to build four factories for the production of solar PV modules, electrolyzers, fuel cells, and storage batteries in Gujarat.
- The two leaders also discussed the situation in Afghanistan and shared common concerns on terrorism, the rights of women and minorities, and the need for an inclusive government.

Significance of Green Hydrogen

- **Environmental**: Reduction of Carbon Footprint, Achievement of INDC targets, net-zero emissions by 2050, and limit global temperature rises to 1.5C.
- **Profitable**: Could supply up to 25% of the world's energy needs by 2050 and become a US$10 trillion addressable market by 2050.
- Production costs have fallen by 40% since 2015 and are expected to fall by a further 40% through 2025.
- Potential demand for imported hydrogen in China, Japan, South Korea, and Singapore could reach $9.5 billion by 2030.
- Energy Security can be ensured in a sustainable manner.
- Reduce India's dependency on crude oil, helping stabilize the Current Account Deficit.

Other Measures taken by India

- National Hydrogen Energy Mission was formally announced in the Union budget for 2020-21.
- India also plans to extend the production-linked incentive (PLI) scheme for manufacturing electrolyzers, which are used for producing green hydrogen.
- India is scheduled to host a two-day summit on green hydrogen, with countries like Brazil, Russia, China, and South Africa set to take part in it

F. Prelims Facts

1. Andhra Pradesh nabs sanders smugglers

- The Personnel of the Special Enforcement Bureau (SEB) arrested the persons involved in the smuggling of Red Sanders wood and seized 66 logs along with a container lorry and an SUV worth ₹60 lakh.

About Red Sanders/Red Sandalwood /Saunders Wood

- Found in southern Eastern Ghats mountain range of South India.
- This tree is valued for the rich red color of its wood. The wood is not aromatic.
- The tree is not to be confused with the aromatic Santalum sandalwood trees that grow natively in South India.
- Red sandalwood has been used for making the bridge and also the neck of the Japanese musical instrument Shamisen and in furniture in China for its porch appearance.

G. Tidbits

1. Vayalar award for Benyamin

- Manthalirile 20 Communist Varshangal,' a novel by Benyamin, has been selected for the 45th Vayalar Ramavarma Memorial Literary Award.

About the award:

- The award is instituted by the Vayalar Ramavarma Memorial Trust.

- It carries a purse of ₹1 lakh.
- A bronze statuette crafted by the sculptor Kanayi Kunhiraman; and citation.

About the author:

- Benyamin, born Benny Daniel, hails from Kulanada, Pathanamthitta.
- He is a recipient of the Kerala Sahithya Akademi Award, the Crossword Book Award, the JCB Prize for Literature, and the Muttathu Varkey Award.

2. Malabar Exercise Phase II

- The Malabar Exercise is among 4 participants: the Indian Navy, US Navy (USN), Japanese Maritime Self Defence Force (JMSDF), and the Royal Australian Navy (RAN).
- Phase- II is expected to commence next week.
- The Phase-I of Malabar, also its 25th edition, was hosted by the U.S. and held off Guam from August 26-29.
- The Malabar Exercise provides an opportunity for participating navies to derive benefit from each other's expertise and experiences.
- This is the first military engagement of the quadrilateral nations since the unveiling of the AUKUS coalition.

3. Brain Cell Atlas

- It is published by a consortium of researchers supported by the U.S. National Institutes of Health's BRAIN mission. The studies are published in 'Nature' (journal).
- The studies aim to understand the role of neural networks in controlling our minds and bodies.
- The studies will map the 160 billion neurons and glia in the brain.
- It focuses on the motor cortex cells of the brains of mice, marmosets, and humans.

4. World Mental Health Day

- World Mental Health Day is observed on 10 October every year. This day tries to create awareness about mental health issues.
- **Theme:** 'Mental Health in an Unequal World.'
- As per recent surveys around 14% of the population or 1 out of 7 individuals suffer from a psychological disorder.
- The most common mental health disorders are depressive disorders, anxiety disorders, and substance abuse.

H. UPSC Prelims Practice Questions

Q1. Which of the given statement/s is/are correct:

1. China's Chang'e-5 brought back lunar samples from Oceanus Procellarum region of the moon.
2. Among the objectives of Chang'e-5 to study about the volcanic activity on the surface of the moon.

3. The United States of America, the Soviet Union, China and India are the only countries to have successfully brought back lunar samples to Earth.

Options:

a. 1 and 3 only
b. 2 and 3 only
c. 1 and 2 only
d. None of the above

Answer: c

Explanation:

- The Chang'e- 5 is China's lunar mission probe that touched down on a previously unvisited part of a massive lava plain, the Oceanus Procellarum or "Oceans of Storms," bringing back lunar samples.
- One of the main objectives of Chang'e-5, was to find out how long the moon remained volcanically active. The Oceanus Procellarum region of the Moon is characterised by high concentrations of potassium, thorium, and uranium, elements that generate heat through long-lived radioactive decay.
- Only erstwhile Soviet Union and United States of America had previously brought back the lunar remains. Samples brought back by U.S. and Soviet missions were more than 2.9 billion years old. This is the third instance.
- India has not brought back any lunar remain sample yet.

Q2. Which among the following greatly depend on wind conditions during migration?

1. Globe skimmer dragonflies
2. Jacobin Cuckoo
3. Amur Falcon

Options:

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

Answer: d

Explanation:

- Recent study by Lund University, Sweden has found that it was possible for the dragonflies to migrate from India to East Africa and return to India. The globe skimmer dragonfly does not rely on fat stored in its body to fly such long distances. Instead, it takes advantage of favorable winds present during certain periods of the year.

- Jacobin Cuckoo (Clamator jacobinus) is one of the most iconic migrants in the Indian Subcontinent, and their arrival in north India is considered to herald the first monsoon rains. Although resident in South India, central and northern populations of this brood parasite migrate to Africa for the winter.
- Amur Falcons migrate from breeding grounds in eastern Asia to wintering grounds in southern Africa. Along the way, they fly 2,400 miles across the Indian Ocean.

Q3. Which of the given statement/s is/are correct?

1. Mahatma Gandhi's first Ashram in India was established on the banks of the river Sabarmati.
2. The meeting of the Working Committee of congress in 1930 at Sabarmati Ashram, invested Gandhiji with the power to launch the Civil Disobedience Movement at a time and place of his choice.

Options:

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

Answer: b

Explanation:

- The Kochrab Ashram was the first ashram in India organized by Mohandas Gandhi, the leader of the Indian independence movement, and was given to him by his friend, the barrister Jivanlal Desai.
- It was from here that Gandhi led the Dandi march also known as the Salt Satyagraha on 12 March 1930.
- The Congress Working Committee in 1930 held that Gandhiji should decide where to launch the Civil Disobedience Movement at a time and place of his choice.

Q4. Olivine is the most abundant component in the Earth's

a. Inner Core
b. Upper Mantle
c. Crust
d. Atmosphere

Answer: b

Explanation:

- The mineral olivine is a magnesium iron silicate with the chemical formula $(Mg^{2}+, Fe^{2}+)_2\ SiO_4$.
- It is a type of nesosilicate or orthosilicate.
- It is the primary component of the Earth's upper mantle

Q5. The Global Infrastructure Facility is a/an:

a. ASEAN initiative to upgrade infrastructure in Asia and financed by credit from the Asian Development Bank.
b. World Bank collaboration that facilitates the preparation and structuring of complex infrastructure Public-Private Partnerships (PPPs) to enable mobilization of private sector and institutional investor capital.
c. Collaboration among the major banks of the world working with the OECD and focused on expanding the set of infrastructure projects that have the potential to mobilize private investment.
d. UNCTAD funded initiative that seeks to finance and facilitate infrastructure development in the world.

Answer: b

- The World Bank Group on Thursday launched a new Global Infrastructure Facility (GIF) to ensure that billions of dollars are channelized to develop world-class infrastructure in emerging markets like India and developing economies.

I. UPSC Mains Practice Questions

1. Overall decrease in the area under snow in Himachal Pradesh will have devastating consequences on the region. Discuss. (10 Marks, 150 Words)[GS-3, Environment and Ecology]
2. Why are natural gas prices soaring? How will it affect the world and India? Examine. (10 Marks, 150 Words)[GS-3, Environment and Ecology]