

14 Mar 2021: UPSC Exam Comprehensive News Analysis

TABLE OF CONTENTS

A. GS 1 Related

B. GS 2 Related

INTERNATIONAL RELATIONS

1. [Modi, Gotabaya speak ahead of Geneva vote](#)

HEALTH

1. [Pollution linked to virus spread: Vardhan](#)

C. GS 3 Related

ENVIRONMENT AND ECOLOGY

1. [Gregarious bamboo flowering in Wayanad poses threat](#)
2. [Framework for testing water launched](#)

SCIENCE AND TECHNOLOGY

1. [Optical monitoring of power line health](#)
2. [Martian 'blueberries' find a parallel on Earth](#)

D. GS 4 Related

E. Editorials

POLITY AND GOVERNANCE

1. [Relooking the Mandal verdict and quota cap](#)

ECONOMY

1. [Retrospective laws and the Cairn tax dispute](#)

F. Prelims Facts

1. [Ayushman Bharat campaign picks up pace](#)
2. [Size of egg cells](#)

G. Tidbits

1. ['Focus on growth than inflation'](#)

H. UPSC Prelims Practice Questions

I. UPSC Mains Practice Questions

A. GS 1 Related

Nothing here for today!!!

B. GS 2 Related

Category: INTERNATIONAL RELATIONS

1. Modi, Gotabaya speak ahead of Geneva vote

Context:

- Prime Minister Narendra Modi and Sri Lankan President Gotabaya Rajapaksa reviewed “topical developments” during a recent telephone call.

Background:

Strained bilateral ties:

- Colombo’s recent policy choices on key infrastructure projects, including a decision to **boot India out of a Colombo Port terminal project** and an **approval for a Chinese energy project on the northern islands**, close to the Tamil Nadu coast have strained bilateral ties between India and Sri Lanka.
- India had conveyed deep displeasure on this move by Sri Lanka.

Details:

UNHRC vote:

- The **Human Rights Council would be voting on a resolution on Sri Lanka’s human rights record**.
 - A report by the Office of the United Nations High Commissioner for Human Rights noting that Sri Lanka is “on alarming path towards recurrence of grave human rights violations” with respect to the **Tamil minority issues**.
- The Sri Lankan administration is counting on India’s support, which is a member of the UNHRC.
- Though it is widely predicted that India might abstain in the voting process, given India’s own principle against country-specific resolutions and growing geopolitical concerns in the strategic island nation. India could still play a crucial role in negotiations among members of the council, and potentially play a decisive role.
- China, which is also currently a member of the 47 member UNHRC, has assured Sri Lanka of its support.

Economic assistance:

- **Sri Lanka is faced with a major economic challenge**, as it prepares to repay over \$4 billion of its outstanding debt by next year.
- Sri Lanka has previously sought \$1-billion **currency swap facility** to boost its foreign reserves that are under enormous strain since the pandemic struck. India is yet to respond. Sri Lanka’s **debt freeze request** made over a year ago, too, awaits India’s response.

- Recently, China is said to have approved a 10 billion yuan (\$1.54 billion) currency swap. Also in March 2020, China granted an 'urgent' \$500 million loan to Sri Lanka to cope with the economic stress of the novel coronavirus.

Conclusion:

- The recent discussions assumes significance amid strained bilateral ties between the two neighbours. India should try to revive its relation with Sri Lanka given the importance of Sri Lanka to **India's "Neighbourhood First" policy** and also provides an opportunity for India to **counter the growing Chinese influence in India's immediate neighbourhood.**

Category: HEALTH

1. Pollution linked to virus spread: Vardhan

Context:

- Union Health Minister's statement on the **health risks associated with pollution.**

Details:

Ambient air pollution:

- Ambient air pollution is a known risk factor for adverse health outcomes, like **chronic cardio-respiratory morbidities**. The presence of these morbidities renders the affected population more vulnerable to COVID-19.
- There is emerging evidence to suggest that exposure to **ambient air pollutants, especially PM2.5 and NO2, contribute to the spread and virulence of SARS-CoV-2 infections.**
 - Closed indoor spaces provide ideal environments for viral transmission due to the lack of ventilation preventing the dilution of viral particles, and the absence of ultraviolet rays which can potentially inactivate the virus.
- According to the World Health Organization's report of 2018 over **91% of the global population reside in areas where ambient air pollution levels exceed the normal limits prescribed by the WHO**, resulting in around 4.2 million annual deaths.

Water pollution:

- The Lancet Commission on Pollution and Health estimates that 1.8 million deaths worldwide are related to "water" (mainly **microbiological contamination**) and 0.5 million deaths occur due to **chemical pollution of water** and soil by heavy metals and other man-made chemicals.

Plastic pollution:

- Plastic debris is a major source of water pollution. Given its ubiquitous prevalence, persistence, accumulation in aquatic food **chains**, and adverse effects on aquatic organisms and potentially to human health it has become an **important environmental problem.**

Conclusion:

- Research targeted at estimating the burden of pollution and consequent health effects, is essential to design and implement suitable intervention strategies that will enable the achievement of the **sustainable development goals associated with health**.

C. GS 3 Related

Category: ENVIRONMENT AND ECOLOGY

1. Gregarious bamboo flowering in Wayanad poses threat

Context:

- The **gregarious flowering of bamboo inside the Wayanad Wildlife Sanctuary (WWS)** and the nearby Mudumalai Tiger Reserve and Gudalur forest division in Tamil Nadu.

Background:

Life cycle of bamboo:

- Thorny bamboo (*Bamboosa bambos*) is a **monocarpic (flowering occurs only once in the life cycle) plant** belonging to the Poaceae family (grass family), and its flowering cycle varies from 40 to 60 years.
- The Bamboo flower and die.
- Profuse natural regeneration occurs from seeds after gregarious flowering. **Seeds have no dormancy**, and they can undergo germination under favourable conditions soon after seed fall. **Protection from fire and grazing is essential for proper establishment of seedlings.**

Details:

- Bamboo groves in the Wayanad Wildlife Sanctuary, have fully bloomed marking the mass destruction of bamboo groves.
- The **bamboo groves** in the Wayanad forest are the **mainstay of herbivores like elephants, wild gaur in the Nilgiri biosphere during summer**.
 - Nilgiri biosphere is a major tiger and elephant habitat.
- With the advent of the season, migration of wild animals starts from the adjacent sanctuaries in Karnataka and Tamil Nadu to Wayanad due to shortage of fodder and water.

Concerns:

- The gregarious flowering may **adversely affect migration** in the Nilgiri biosphere.
- The mass destruction of the bamboo groves by affecting the food chain may pose a **threat to wildlife and ecology of the region**.
- The seeds could germinate into new shoots provided they have a favourable environment. **Forest fires and grazing could disturb the germination process.**

2. Framework for testing water launched

Context:

- The drinking water quality testing, monitoring and surveillance framework and guidelines.

Details:

- The guidelines are part of the water quality monitoring framework rolled out by the **Jal Jeevan Mission**.
 - Of the ₹3.6 lakh crore Jal Jeevan budget, 2% has been earmarked for quality monitoring.
- The guidelines mandate a network of NABL accredited labs to be set up in every State, district and block over the next year. At the panchayat level, teams of women in the village water and sanitation committees will be given field testing kits.
- Detailed testing protocols and standards have been laid out to check for chemical and biological contaminants.
- The various parameters that could be tested include the water sample's **pH level, turbidity, alkalinity, hardness, presence of chloride, sulphate, iron, arsenic, fluoride, nitrate and coliform bacteria**.
- All results of testing will be fed into the **Water Quality Information Management System**.

Significance:

- The guidelines cap tariffs to ensure that they remain within reach of common man. Hence, citizens can now get the water quality in their taps tested at reasonable rates.
- The samples tested by members of the public, as well as government officials, will create a **nationwide database of water quality**.
 - According to a 2018 assessment by the Central Groundwater Board, Chemical and biological contaminants are present in more than half of all blocks in India.
- A local official will be deputed to take remedial action in case of contamination.

Challenges:

- Lack of adequate accredited testing laboratories.

Category: SCIENCE AND TECHNOLOGY

1. Optical monitoring of power line health

Context:

- Researchers at IIT Madras have demonstrated that by using Raman thermometry on fibre optic cables, they can achieve monitoring of power transmission cables.

Raman thermometry:

- In the **Raman effect**, when light is scattered off an object, say a molecule, two bands are observed, with higher and lower frequency than the original light, called the **Stokes and anti-Stokes bands**, respectively.
- By studying the relative intensity of the two bands, it is possible to estimate the temperature of the object which scatters the light. This principle is used in Raman Thermometry.

- Any current flowing through a conductor would cause a temperature rise due to the Joule heating effect. Hence the flow of current through the power cables results in heating of the power cables.

Significance:

- The use of Raman thermometry technique allows the operators to get the **results for actual temperature measurements over tens of kilometres**.
- Alternative methods of measuring the temperature of power cables include using a thermal camera to manually monitor their length, which is cumbersome. The present method devised by the team is **both economical and provides real-time information**.

2. Martian 'blueberries' find a parallel on Earth

Context:

- NASA successfully landed its **Perseverance rover on Mars**.

Background:

- In **2004, NASA's Mars exploration rover 'Opportunity' found several small spheres on Mars, informally named Martian blueberries**. The study of the mineralogy noted that they were made of iron oxide compounds called haematites.
 - Similar haematite concretions have been found in Kutch, Gujarat. These have been called the **Jhuran formation**.

Inference:

- Haematite concretion is normally formed through precipitation from aqueous fluids. The presence of haematites suggests that there was **water present on Mars**. Water is believed to have disappeared from Mars rocks about three billion years ago.
- Haematite is known to form in oxidising environments. The Martian blueberries also indicate that the **planet had an atmosphere with oxygen as haematites need oxygen to stabilise**. Available evidence suggests that there was indeed more oxygen than the present day levels.

Conclusion:

- Studies from the newly landed Perseverance rover may help find new clues and signs of life and other organic compounds, thus helping us paint a detailed picture of the history of Mars.

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: POLITY AND GOVERNANCE

1. Relooking the Mandal verdict and quota cap

Context:

- The Supreme Court has decided to examine whether its judgment in the Indra Sawhney case of 1992 which fixed reservation for the marginalised and the poor in government jobs and educational institutions at 50% needs a relook.

This issue has been previously covered in the following article:

[UPSC CNA 09th March 2021](#)

Category: ECONOMY

1. Retrospective laws and the Cairn tax dispute

Context:

- In the ruling by a three-member tribunal at the Permanent Court of Arbitration against India in the tax dispute with the U.K.-based oil and gas company Cairn Energy Plc and a subsidiary, Cairn UK Holdings Ltd, the tribunal ordered India to pay about \$1.4 billion to the company.
- Cairn Energy has successfully moved courts in five countries, including the United States, Netherlands, France Canada and the United Kingdom, to recognise its claim as per the arbitration award.

This issue has been covered previously in the following articles:

[UPSC CNA 27th Jan 2021](#)

F. Prelims Facts

1. Ayushman Bharat campaign picks up pace

- The “**Aap Ke Dwar Ayushman**” campaign of the **National Health Authority (NHA)** recorded more than 4.7 lakh beneficiary verifications in a single day
- The aim of the campaign is to create large-scale awareness about the **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) health insurance scheme**, especially in rural and interior parts, while also verifying beneficiaries residing in the remotest areas.
 - The AB-PMJAY scheme provides cashless healthcare services of up to **₹5 lakh per family per year**.

2. Size of egg cells

- **Egg cells are the largest cells in the body.**
- A new study deciphers how these cells grow to such sizes. ‘Nurse’ cells, connected to the oocyte, dump their contents into the oocyte (egg cell), thereby causing it to expand

G. Tidbits

1. ‘Focus on growth than inflation’

- Chief Economic Advisor (CEA) Krishnamurthy Subramanian has said that the country requires growth at this juncture, even with economic trade-offs. He has reiterated the **need to focus on economic growth**.

- CEA's comment on economic priorities coming ahead of policy framework review. The comments coming **ahead of the revision of policy framework** and inflation targets for the Monetary Policy Committee (MPC) headed by the RBI Governor gains significance.
 - This would be the first review for the Reserve Bank of India since it was tasked with a mandated **inflation target of 4% with a 2% deviation in either direction in June 2016**, when it adopted a **flexible inflation targeting model**.

H. UPSC Prelims Practice Questions

Q1. Which of the following statement/s is/are correct with respect to Mudumalai National Park?

1. It is part of the Western Ghats Nilgiri Sub-Cluster.
2. It is also a declared tiger reserve

Options:

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

Answer: c

Explanation:

- The Mudumalai National Park and Wildlife Sanctuary also a declared tiger reserve, lies on the northwestern side of the Nilgiri Hills in Tamil Nadu, India. It shares its boundaries with the states of Karnataka and Kerala.
- The protected area is home to several endangered and vulnerable species including Indian elephant, Bengal tiger, gaur and Indian leopard. There are at least 266 species of birds in the sanctuary, including critically endangered Indian white-rumped vulture and long-billed vulture.
- The Western Ghats Nilgiri Sub-Cluster of 6,000 square kilometres including all of Mudumalai National Park, is under consideration by the UNESCO World Heritage Committee for selection as a World Heritage Site.

Q2. Which of the following statement/s is/are correct with respect to the United Nations Human Rights Council (UNHRC)?

1. It has 47 members elected for staggered three-year terms on a regional group basis.
2. It is headquartered at Geneva, Switzerland.
3. India is currently a member.

Options:

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

Answer: c

Explanation:

- The United Nations Human Rights Council (UNHRC) is a United Nations body whose mission is to promote and protect human rights around the world. The UNHRC has 47 members elected for staggered three-year terms on a regional group basis. The headquarters of UNHRC is in Geneva, Switzerland.
- The UNHRC was established by the UN General Assembly to replace the UN Commission on Human Rights. The UNHRC works closely with the Office of the High Commissioner for Human Rights (OHCHR) and engages the UN's special procedures.

Q3. Which of the following statement/s is/are correctly matched?

1. Raman effect: when light is scattered off an object, two bands are observed, with higher and lower frequency than the original light, called the Stokes and anti-Stokes bands, respectively.
2. Joule effect: Any current flowing through a conductor would cause a temperature rise.
3. Meissner effect: It is the expulsion of a magnetic field from a superconductor during its transition to the superconducting state when it is cooled below the critical temperature.

Options:

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

Answer: c

Explanation:

Self-explanatory

Q4. Which of the following is the largest cell in the human body?

- a. Egg cell
- b. Bone cell
- c. Nerve cell
- d. Fat cells

Answer: a

Explanation:

- Egg cells are the largest cells in the body.
- A new study deciphers how these cells grow to such sizes. 'Nurse' cells, connected to the oocyte, dump their contents into the oocyte (egg cell), thereby causing it to expand

I. UPSC Mains Practice Questions

1. Colombo's recent policy choices on key infrastructure projects, have strained bilateral ties between India and Sri Lanka. Discuss what should be India's response given the importance of Sri Lanka to India's "Neighbourhood First" policy. (10 marks, 150 words)[GS-2,International Relations]
2. Environmental pollution is one of the biggest challenges in the achievement of the sustainable development goals associated with health. Analyze. (10 marks, 150 words)[GS-3,Environment and Ecology]

