

11 Oct 2020: UPSC Exam Comprehensive News Analysis

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B. GS 2 Related

Category: INTERNATIONAL RELATIONS

1. [Leading the global fight against hunger](#)

Context:

- The [United Nations \(UN\)](#) humanitarian organisation, the **World Food Programme** has been awarded 2020’s Nobel Peace Prize.

Background:

- The World War II experience illustrated the fact that childhood hunger and peace were incompatible and there had been efforts to address the issue of global hunger since then through proposals for a UN headed multilateral effort to provide food aid wherever it was needed.
- In 1961, the Kennedy administration of the U.S. led the efforts at the UN to establish the [World Food Programme](#) **headquartered at Rome, Italy**. Initially, it had a mandate of three years.
- By 1965, the world food programme had proved its worth to the world after responding to multiple crises and was enshrined as **a fully-fledged UN programme**.

Achievements:

- The World Food Programme has been engaged in delivering food and other assistance to those in need around the world.
 - The WFP has now grown to become the **world's largest humanitarian agency providing aid to almost 100 million people in more than 80 countries**.
- The organisation has widened its operational remit and is now a leading provider of not just emergency food aid but also an agency **engaged in supporting the nutritional requirements of communities through food assistance programmes**. These include school meals projects, provision of cash and vouchers as a complement to in-kind food distributions.
- It commands one of the **biggest non-military and non-commercial logistics operations worldwide** and is engaged in delivering food and other assistance to those needing aid as well as developmental support, including in some of the remotest and often conflict-stricken parts of the globe.
 - The organisation has also developed the capabilities to serve as the frontline telecommunications and logistical support provider to all UN agencies and NGOs in crisis situations.

Challenges:

- The World Food Programme is **funded entirely by donors** ranging from governments, companies and individuals. This sometimes places the agencies at a disadvantageous position at the mercy of the donors.
- The **ongoing conflicts in Syria, Yemen and Afghanistan, the growing challenges posed by climate change and the fallout of the COVID-19 pandemic** have pushed millions of people to the brink of starvation. This would require the agency to enhance its operational resources to meet such high demands.

Criticisms:

- There are concerns that the aid it provides **hurts local farmers and traders as it destabilizes whatever rudimentary market conditions** that may be prevailing by making it hard for small local producers to compete.

Conclusion:

- According to one estimate around, **690 million people are affected by hunger globally**. This goes against the spirit of humanism as these people have the right to live peacefully and without hunger.
- **Without peace, we cannot achieve the global goal of zero hunger; and while there is hunger, there would never be a peaceful world.**

Category: HEALTH

1. 'We need community-based mental health services'

Context:

- The article analyzes the underlying discrimination against people suffering from mental health.

Background:

- The available data shows that **one out of six or seven people in the world have a mental health problem or illness.**

Concerns:

Discriminatory practices:

- There are a host of laws that discriminate against people with mental health issues.
- The marriage laws, whether it is the Hindu Marriage Act, 1955, or the Special Marriage Act, 1954, **provides for mental illness as a ground for divorce** even though other health issues like HIV, leprosy are not considered grounds for divorce
- **Under the Representation of the People Act, 1951, a person with a mental health problem is denied voting.** The legislation says that a person with an 'unsound mind' is ineligible. The electoral officers across the country have interpreted that 'unsound mind' means mental illness.

Associated stigma:

- The issue is that there is a **stigma attached to mental health.** This acts as a hindrance to people suffering from mental health challenges to seek medical help in times of need

Continued neglect:

- Statistics show that **less than 1% of the health budget goes towards mental health, while the available data shows that mental health issues constitute 8-10% of the health burden.**
- There is also a severe shortage of mental health professionals.

Way forward:

- There is the urgent need to provide **more community-based mental health services** as they have been found to be more effective, less costly and easily accessible.
- There is a need to **remove the discriminatory provisions** in some existing laws.

C. GS 3 Related

Category: ENVIRONMENT AND ECOLOGY

1. Scientists welcome these winged 'infiltrators'

Context:

- Two new species, one of butterfly and dragonfly each have been added to the list of indigenous species in India.

Details:

Spialia zebra:

- The butterfly species, *Spialia zebra*, was found in Dungarpur district of Rajasthan.
- This butterfly is predominantly found in Pakistan-occupied Kashmir, Khyber-Pakhtunkhwa and Punjab province of Pakistan.
- The new finding marks the first-ever recording of this species far south of its known habitat.

Atratothemis Reelsi:

- The dragonfly species *Atratothemis Reelsi* was recorded in southern **Arunachal Pradesh's Namdapha Tiger Reserve**.
- The new finding marks the first-ever recording of this species, about 1,170 km west of its previously known nearest locality of Xiaoqikong Park in China's Guizhou Province.

Significance:

- The finding of the Pakistani butterfly and Chinese dragonfly marks the first time in India. **These two new species have been included in lists of indigenous species.** The species will add to the species richness in India.
 - The *Spialia zebra* butterfly would add to the richness of **Rajasthan's Phulwari ki Nal Wildlife Sanctuary and Sita Mata Wildlife Sanctuary**.
 - Similarly, the newly discovered dragonfly augurs well for the biodiversity of the eastern Himalayan region.

Additional information:

- The **Butterfly Research Centre of India is located at Bhimtal in Uttarakhand**.
- India has 1,328 recorded species of butterflies.

2. Shrinking spaces for winged visitors a cause for concern

Context:

- As part of the World Migratory Bird Day celebrations, experts from Mumbai came together to discuss ways to protect **lesser flamingos**.

Background:

- The lesser flamingo (*Phoeniconaias minor*) is a species of flamingo occurring in **sub-Saharan Africa and north-western India**.



- The lesser flamingo is the **smallest species of flamingo**, though it is a tall and large bird by most standards.
- The lesser flamingo is the most numerous species of flamingo.
- This species **feeds primarily on Spirulina** algae which grow only in very alkaline lakes. Although blue-green in colour, the algae contain the photosynthetic pigments that give the birds their pink colour. Their deep bill is specialised for filtering tiny food items.
- The lesser flamingos have been **reported extensively in and around Mumbai** given the presence of wetlands in the area.

Concerns:

- Environmentalists and experts estimate that **the habitat for flamingos and wetland birds has shrunk to 20% of the previously available area in and around Mumbai.**
 - Almost 2,000 hectares of wetlands were lost for the Navi Mumbai International Airport and JNPT expansion work.
- The flamingos have been forced to feed within a tiny piece of land owing to the continuous destruction of wetlands and development activities in the city. This does not augur well for the lesser flamingo population as these birds will have to compete for the limited resources available in the region.
 - The **Thane Creek Flamingo Sanctuary** is believed to be the last refuge for the around 1.5 lakh birds in Mumbai

Way forward:

- There is the need to bring the issue of protecting biodiversity to the forefront and this would require active citizen participation as well.

1. RBI appeals to SC to allow NPA classification

Context:

- The Reserve Bank of India's ([RBI](#)) affidavit in the Supreme Court in reply to the Supreme Court's request for details on the plans to help the borrowers affected by the pandemic.

Background:

- The [Supreme Court](#) had passed a stay on the classification of loans as non-performing based on pleas by borrowers whose income or revenue was hit by the COVID-19 pandemic.

Details:

RBI's stand:

- RBI has appealed to the Supreme Court to let banks classify loans as non-performing.
- The Reserve Bank of India has warned that failure to immediately lift the interim stay on banks classifying any loan as a [non-performing asset \(NPA\)](#), apart from **undermining the central bank's regulatory mandate would also greatly harm the nation's financial system.**
- The RBI has detailed the measures it has put in place to address stress in the financial system.
 - To help borrower's weather pandemic-related stress, the RBI has let banks offer a **moratorium on loan payments for up to six months and permitted a one-time restructuring of accounts.**
- RBI has warned against providing any further leeway for the borrowers as it believes it could lead to adverse incentives and unintended consequences.

Government's stand:

- In a separate affidavit filed by the Central government has stated that it would not be possible to further supplement the already announced relief packages.
 - The government has stated that it would **waive the compound interest on loans up to Rs. 20 million under a separate [COVID-19](#) support plan**, in a move that will bring relief to borrowers who were demanding the waiver of what they call "interest on interest," charged by lenders to those who used the moratorium.
- The government believes that any further leeway to the borrowers could prove detrimental to the overall economic scenario, and the health of the banking sector.

Industries reaction:

- Industry representatives have termed the RBI's and central government's affidavit in the Supreme Court as a blow to the interest of the micro, small and medium-sized enterprises ([MSMEs](#)).
- They have pointed out the difficult position of the MSMEs which are having to pay for the fixed costs though the revenue stream has stopped for them. This has had a detrimental impact on their financial health.
- The industry consortium has suggested the following measures to the Centre.
 - The estimated Rs. 3.5 lakh crore due to MSMEs from large industries, PSUs, SPSUs and central/State governments should be paid immediately.

- The Centre should consider waiving income tax for the current year for those earning less than Rs. 15 lakh to help **spur middle-income individuals to spend and increase demand**.
- The small enterprises with turnover of less than Rs. 5 crore must be exempted from collection or levy of GST till at least March 2020 to help them offer competitive prices on their produce.
- The States and the Centre need to spend at least 75% of their budgeted procurements for FY21 before December 2020 to **boost order books and create job opportunities in the MSMEs**.

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: SCIENCE AND TECHNOLOGY

1. 'Genetic scissors' and rewriting the code of life

Context:

- The 2020 Nobel Prizes for Chemistry has been awarded to two women scientists Jennifer Doudna and Emmanuelle Charpentier “for the development of the CRISPR/Cas9 genetic method for [genome editing](#)”.

Background:

What is CRISPR/Cas9?

- CRISPR stands for **Clustered Regularly Interspaced Short Palindromic Repeats**.
- The CRISPR are a **part of bacteria's immunological systems** that help them in recognising threatening viruses. When they detect a [virus](#), the bacteria produce customised RNA, which contains Cas (CRISPR-associated) genes that are used to produce enzymes such as Cas-9. These enzymes are used to chop the DNA of the virus and destroy them.

Significance:

- The CRISPR/Cas9 system allows for adding, altering and deleting the genomic code in living beings and hence could lead to the emergence of novel biological applications by making it easier to edit genes.
- Using the tool, researchers can change the DNA of animals, plants and microorganisms with precision.
- Other genome editing systems like TALENs and Zinc-Finger Nucleases can do similar jobs, but the CRISPR method is **more adaptable and easier to use**.

Applications:

Tackling diseases:

Treatment:

- Recently a person **with hereditary blindness** became the first to have a CRISPR/Cas-9-based therapy directly injected into her body.
- Similarly two patients with **beta thalassemia** and one with **sickle cell disease** have been cured after their bone marrow stem cells were edited using CRISPR techniques.
- There are efforts to begin work on treatments for amyotrophic lateral sclerosis.
- The system holds promise for treating complex diseases, such as cancer, heart diseases, mental illnesses, and the human immunodeficiency virus (HIV) infection.

Testing:

- There have been cases where CRISPR technology has been employed in the battle against the COVID-19 too, to develop a test to detect infections.
- The CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB) in Delhi developed a **COVID-19 testing kit**, nicknamed '**Feluda**', based on the CRISPR/Cas9 system.

Research benefits:

- The technology allows researchers to find out what genes do, move mutations that are identified and associated with the disease into systems where they can be studied and tested for treatment, or where they can be tested in combinations with other mutations.

Concerns:

Medical ethics and misuse:

- There are concerns over the **possibility of the tool being misused**.
- The 2018 application of CRISPR/Cas9 by Chinese researcher to create 'gene-edited twins' Lula and Nana via in-vitro fertilisation has invited widespread criticism for breaking a number of medical rules and ethics.

Accuracy:

- There are also concerns over a host of other **unintended mutations** that can be triggered in gene editing exercises. The technology has still not reached the level of precision required to be sure that it does not cause unintentional side effects.
- There are concerns that such mutations could spread to humanity more widely in due course.

For more information refer to: [CNA 8TH Oct 2020](#).

2. The Milky Way's secret

Context:

- 2020 Nobel Prize in physics has been awarded to Roger Penrose, Reinhard Genzel and Andrea M. Ghez for their work on black holes.

Details:

For information on this topic refer to: [CNA 7th Oct 2020](#).

Important terminologies:

Event Horizon:

- It is defined as a notional boundary around a black hole beyond which no light or other radiation can escape.

Quasars:

- A quasar is an extremely luminous active galactic nucleus (AGN), in which a super massive black hole with very high mass is surrounded by a gaseous accretion disk.
- **Quasars** are found in the centres of some galaxies and powered by gas spiralling at high velocity into an extremely large black hole.
- Quasars give off enormous amounts of energy.

Sagittarius A*:

- Sagittarius A* is a bright and very compact astronomical radio source at the Galactic Centre of the Milky Way. Sagittarius A* is the location of a super massive black hole, similar to those at the centres of most, if not all, spiral galaxies and elliptical galaxies.

3. The seminal discovery of the Hepatitis C virus

This topic has been dealt with in the following articles:

1. [CNA 6th Oct 2020](#).
2. [CNA 7th Oct 2020](#)

F. Tidbits

1. Biological plant-virus 'arms race' uncovered

- A new study with researchers from the National Centre of Biological Sciences (NCBS-TIFR), Bengaluru has indicated how plants and viruses constantly evolve to outdo one another.
- The study has discovered a new step in this evolutionary race between the virus called Synedrella Yellow Vein Clearing Virus and the plants it attacks.
 - This virus is a representative of the Begomovirus family of viruses that **can infect economically important plants like tobacco and tomato** and are a major reason for crop loss. Apparently, in infected fields, up to 60% of horticultural crops are lost due to begomoviral infection.
- The new observations add to the **understanding of the plant-pathogen interactions and could provide newer tools to identify and generate plants that can resist viruses.**

G. Prelims Facts

1. Navy to hold PASSEX with U.S. carrier

- Indian Navy will hold a Passage Exercise (PASSEX) with U.S. Navy aircraft carrier, USS Ronald Reagan as it transits through the Indian Ocean. The PASSEX is likely to be held in the waters off Kochi.
- A similar PASSEX exercise was held with the U.S. Navy's Nimitz carrier strike group near the Andaman and Nicobar Islands as it was transiting the Indian Ocean in July.

2. Assam to submit a report on ST status by Oct. 30

- Assam is considering granting [Scheduled Tribe \(ST\)](#) status to six communities of the state.
- The six communities are Chutia, Koch-Rajbongshi, Matak, Moran, Tai-Ahom and 'Tea Tribe', some of which are categorised as Other Backward Classes.

H. UPSC Prelims Practice Questions

1. Which of the following statement/s is/are correct with respect to The System of Air Quality and Weather Forecasting and Research (SAFAR)?

1. It aims to measure the location specific air quality of the cities.
2. It is an initiative under the Ministry of Environment, Forest and Climate Change.

Options:

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

CHECK ANSWERS:-

Answer: a

Explanation:

- The System of Air Quality and Weather Forecasting and Research (SAFAR) is a national initiative introduced by the Ministry of Earth Sciences (MoES) to measure the air quality of a metropolitan city.
- The system is indigenously developed by the Indian Institute of Tropical Meteorology (IITM), Pune and is operationalized by the India Meteorological Department (IMD).
- It provides a real-time air quality index on a 24x7 basis with colour-coded indicators. It also provides a 72 hour advance forecast.

2. Which of the following statement/s is/are correct with respect to the World Food Programme?

1. It is a specialized agency of the United Nations.
2. It was established in the year 2005, in the aftermath of the Indian Ocean Tsunami.

Options:

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

CHECK ANSWERS:-

Answer: d

Explanation:

- The World Food Programme was founded in the year 1961.
- Initially, it had a mandate of three years. But by 1965, the world food programme had proved its worth to the world after responding to multiple crises and was enshrined as a fully fledged UN programme. Unlike the Food and Agriculture Organization, the WFP is not a specialized agency of the UN.

3. Which of the following statement/s is/are correct with respect to lesser flamingos?

- 1. They are found spread across the continents of Africa, South America and Asia.
- 2. The Spirulina algae on which they primarily feed on is the reason for their pink colour.

Options:

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

CHECK ANSWERS:-

Answer: b

Explanation:

- - The lesser flamingo (*Phoeniconaias minor*) is a species of flamingo occurring in sub-Saharan Africa and north-western India.



- The lesser flamingo is the smallest species of flamingo, though it is a tall and large bird by most standards.
- This species feeds primarily on Spirulina algae which grow only in very alkaline lakes. Although blue-green in colour, the algae contain the photosynthetic pigments that give the birds their pink colour.

4. Which of the following countries border Kyrgyzstan?

1. Tajikistan
2. Afghanistan
3. Uzbekistan
4. Kazakhstan
5. China
6. Turkmenistan

Options:

- a. 1,2,3,4 and 6
- b. 1,3,4,5 and 6
- c. 1,3,4 and 5
- d. 1,2,3,4,5 and 6

CHECK ANSWERS:-

Answer: c

Explanation:

Self- Explanatory.

I. UPSC Mains Practice Questions

1. Discuss how the CRISPR/Cas9 system offers immense potential for the emergence of novel biological applications by making it easier to edit genes. Also evaluate the associated concerns with this method. (15 marks, 250 words)(GS Paper 3/Science and Technology)
2. Discuss the challenges faced by the people suffering from mental health problem or illness. Also suggest what measures are required in this direction. (10 marks, 150 words)(GS Paper 2/Health)