

# 05 Jul 2020: UPSC Exam Comprehensive News Analysis

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## A. GS 1 Related

*Nothing here for today!!!*

## B. GS 2 Related

### Category: HEALTH

#### 1. Infant mortality rate surged in M.P. in 2018

##### Context:

- Data accessed from the Office of the Registrar General India.

##### Background:

##### **Infant Mortality Rate:**

- Infant mortality rate (IMR) is the **number of deaths per 1,000 live births of children under one year of age**. The rate for a given region is the number of children dying under one year of age, divided by the number of live births during the year, multiplied by 1,000.

##### Details:

- **India's average IMR has dropped by one point to 32**. The country's average stands at 36 deaths for rural and 23 for urban areas.
- The infant mortality rate (IMR) in Madhya Pradesh has increased to 48 in 2018, stymying an improving annual trend for at least six years. **Madhya Pradesh has the country's worst IMR**.
- Kerala which has the lowest IMR among the bigger states has decreased its IMR by three points to 7.

##### Contributing factors:

- **Early neo-natal deaths** form the largest chunk of IMR in states like MP. Increasing **premature deliveries, infections**, birth asphyxiation and delay in securing treatment leading to complicated deliveries were the major causes for Infant mortality.
- A major concern is also **birth spacing** as in most cases two children were born within one-one and a half years against the advised gap of around three years. This may result in premature deliveries of low birth weight babies.
- The higher infant mortality was recorded in states where **high malnutrition levels** were a major cause.
- **Maternal health** also had a bearing on the IMR.
  - In 2015-2017, Madhya Pradesh registered a maternal mortality ratio of 188 per 1 lakh live births, against the country's average of 122.

##### Way forward:

- **Antenatal and postnatal care** are important aspects in bringing down infant mortalities

- According to the National Family Health Survey -4 (2015-16), only 11.4% mothers received full antenatal care implying that antenatal check-ups for pregnant women are very minimal.
- **Primary health system** needs to be ramped up to meet the demands of the people in the hinterlands.
- Paediatric intensive care units need to be set up in all districts to increase accessibility.
- There is a need to encourage community referrals and **ensuring timely treatment** by training workers at health and wellness centres.

## C. GS 3 Related

### Category: ECONOMY

#### 1. 'Mulling national logistics law'

##### Context:

- Proposal for the national logistics law.

##### Background:

- India's logistics sector is highly fragmented and the government aims to **reduce the logistics cost from the present 14% of the Gross Domestic Product to less than 10%.**

##### Details:

- The Commerce Ministry is considering replacing the **Multi-Modal Transportation of Goods Act (MMTG)** with a full-fledged national logistics law with a view to promote growth of the sector.
  - Multimodal transportation refers to a combination of more than one mode of movement, such as rail, road or sea, for end-to-end delivery of goods.
- A **National Logistics Efficiency and Advancement Predictability and Safety Act (NLEAPS)** is under consideration.

##### Significance:

- The new law aims to define what the logistics sector is and its various participants are. The new law **aims to create a light regulatory ecosystem.**
- The move assumes significance as high logistics cost impacts the competitiveness of domestic goods in the international market. Effective implementation of the policy would help provide an impetus to trade, **enhance export competitiveness, and improve India's ranking in the Logistics Performance Index.**

### Category: SCIENCE AND TECHNOLOGY

#### 1. Detecting RNA virus in saliva samples using Raman spectroscopy

##### Context:

- Use of **Raman Spectroscopy** for virus analysis.

### Background:

- Raman Spectroscopy is a **non-destructive chemical analysis technique** which provides detailed information about chemical structure, phase, crystallinity and molecular interactions. It is based upon the interaction of light with the chemical bonds within a material

### Details:

- The Mumbai-based Tata Memorial Centre has been trying to **use Raman Spectroscopy to detect RNA viruses present in saliva samples**. It aims to analyse non-infectious RNA viruses using conventional Raman Spectroscopy without using any additional reagent to enhance the signal.
- This tool, the first of its kind, takes raw data from a Raman Spectrometer analysis based on the 65-spectra signature and provides an objective output if viral RNA is present or absent in the sample.
- Since the tool can only identify RNA viruses and not identify the specific one, it can be used only for screening.

### Significance:

- This conceptual framework to detect RNA viruses in saliva could form the basis for field application of Raman Spectroscopy in managing viral outbreaks, such as the ongoing COVID-19 pandemic.
- A **portable Raman spectrophotometer** installed at the port of entry such as airports or any point of care can screen passengers within minutes.
- The advantage is that the tool can be taken to the field and people who test positive for RNA virus can be quarantined while another sample may be sent for validation using RT-PCR.

## **Category: ENVIRONMENT AND ECOLOGY**

### **1. How a fungus grows inside a bug, goes on to kill and feed on it**

#### Context:

- Researchers have found **Ophicordyceps nutans fungi**, for the first time in central India.

#### Details:

- Researchers have now found the fungi Ophicordyceps nutans for the first time in central India in **Kanger Valley National Park in Chhattisgarh**.
  - The Ophicordyceps nutans have been previously reported in India only from the Western Ghats.
- The fungus was found on the **host insect Halyomorpha Halys**.
  - Also called the stink bug, this insect is a pest to forest trees and agricultural crops. The stink bug is known to damage the flower and fruits of soybean, green beans, apple and pear.

#### **Life cycle of the fungi:**

- The life cycle of the fungi involves infecting the insect when alive, developing fungal mycelium inside its thorax, and when it is time for the spores to come out, kills the bug.
- The fruiting body sprouts out from between the insect's thorax and head, and it continues to take nutrition from the dead body. The fungi are very host-specific, so the spores travel and infect many more stink bugs.

### **Significance:**

- Previous studies have shown that these fungi can be used as a **biological pest control agent**.
  - Exploring these fungi as a pesticide will help **reduce the harmful effect of chemicals in agricultural fields**.
- Several species of the Ophiocordyceps fungi have **medicinal properties**.
  - Reports have shown that China has been traditionally using it. Also, in the Western Ghats, the local people use these fungi as an immune stimulator.
  - Studies from across the globe have noted that this fungus is **rich in biologically active metabolites**, vitamin C, phenolic compounds, and also has **anti-inflammatory and antioxidant properties**.
  - Some studies also claim that it contains a component called 'cordycepin' which has **anti-cancer properties**.

## **D. GS 4 Related**

*Nothing here for today!!!*

## **E. Editorials**

### **Category: POLITY AND GOVERNANCE**

#### **1. The impact of the Chinese apps ban**

#### **Context:**

- The Indian government's move to ban 59 apps of Chinese origin.

#### **Background:**

- The Indian government has banned 59 apps of Chinese origin, citing **data security and national sovereignty concerns**. These include popular ones such as TikTok, SHAREit, UC Browser, CamScanner, Helo, Weibo, WeChat and Club Factory.
- The government has invoked powers under **Section 69A of the Information Technology (IT) Act** read with the relevant provisions of the **Information Technology (Procedure and Safeguards for Blocking of Access of Information by Public) Rules 2009**.
  - The government seems to have adopted the **emergency route** under Section 69A of the IT Act to issue ban orders. The emergency route allows content to be blocked on the directions of the Secretary, Department of IT, who must record his reasons for doing so.

- The order of the Secretary, Department of IT, must be placed before the government committee within 48 hours. Based on the recommendations of this committee, the order can then be finalised or vacated.

### Details:

#### **Reasons for the ban:**

- The Ministry of Electronics and Information Technology has stated that its actions were based on reports and complaints about misuse of the apps for **stealing and surreptitiously transmitting users' data in an unauthorised manner to servers which have locations outside India.**
- The Ministry has stated that the decision to block the 59 apps was to **safeguard the sovereignty and integrity of India and protect data & privacy of the Indian users.**
- The Ministry is also said to have received “exhaustive recommendations” from the Home Ministry’s Indian Cyber Crime Coordination Centre for the ban.

#### **Impact on users:**

- Installed apps may continue to exist on mobile devices. But now that the latest versions of the apps have been removed from Google’s Play Store and Apple’s App Store, users will not be able to access updated versions in future.
- If a notice goes out to internet service providers asking that data flow from these apps be halted, that could impact the functioning of existing, installed apps.
- The banned apps have a large user base in India. Users of banned browsers or video apps may shift to similar offerings from other apps.

#### **Impact on Indian economy:**

- The move to ban the apps could **impact India in terms of investments and employment.** ByteDance Ltd., the parent company of Tiktok had proposals of investments worth \$1 billion in India. With the ban this will probably remain suspended, potentially impacting job creation.

#### **Impact on Chinese app providers:**

- It is most likely that the move was aimed at Chinese economic interests.
- The **potential loss of advertising revenue** impacts app-makers.
- Though TikTok’s Indian business yields cover a small proportion of its total revenue, but with **quicker user adoption** more recently, the stakes seem to be getting higher for the banned apps.

#### **China’s response to the ban:**

- China has claimed that India’s measure selectively and discriminatorily aims at certain Chinese apps on ambiguous grounds and runs against fair and transparent procedure requirements, abuses national security exceptions, and is **violative of the WTO rules.**
- China also argues that the move goes against the general trend of international trade and e-commerce, and is **not conducive to consumer interests and the market competition in India.**

## Legality of the move:

- The legal order that empowers the designated authority to implement the ban is yet to be made public.
- Though Rule 16 of the Blocking rules requires strict confidentiality to be maintained regarding blocking requests, complaints received, and actions taken, the government ought to disclose the orders passed (subject to relevant redactions that may be required) in the **interests of transparency and accountability**.
- Also, and as recognised by the Supreme Court recently in the **Anuradha Bhasin case**, publishing such orders is the only way in which the reasons and rationale for the decision can be judged.

For more information on this issue refer: [CNA 2<sup>nd</sup> July 2020](#).

## Category: ECONOMY

### 1. Why has Indian Railways opened doors for private players?

#### Context:

- Issue of **expansion and the modernisation of Indian Railways** by opening up to the private sector.

#### Background:

- According to data maintained by the World Bank, in 2018 India had 68,443 route kilometres of railways. It is among the **four largest rail networks in the world**, along with the United States, China, and Russia.

#### Challenges:

- According to the Railway Board estimates around five crore intending passengers could not be accommodated during 2019-20 for want of capacity, and there was **13% travel demand in excess of supply** during summer and festival seasons.
- Without an expansion, and with growth of road travel, the **share of the Railways would steadily decline in coming years**.
- The steady shift of passenger and freight operations from the Railways to other modes of travel was **affecting economic growth, by as much as 4.5% of GDP-equivalent**.

#### Bibek Debroy committee:

- In 2015, the **expert panel chaired by Bibek Debroy** and constituted by the Ministry of Railways, recommended **liberalisation and not privatisation** in order to allow entry of new operators to encourage growth and improve services.
- It also made it clear that a regulatory mechanism was a prerequisite to promote healthy competition and protect the interests of all stakeholders.

#### Details:

- Indian Railways has launched the process of **opening up train operations to private entities on select routes**. Indian Railways has invited Request for Qualifications proposals, for scrutiny of vendor capabilities to bring modern trains for operations on existing rail infrastructure.
- The Railway Board has set a tentative schedule for private train operations, expected to **begin in 2023** and in 12 clusters.

### **Significance of the move:**

- From a passenger perspective, this could **mean more train services**, particularly between big cities.
- Though the present proposal is only for a fraction of the total train operations — 5% of the 2,800 Mail and Express services operated by Indian Railways, The overall objective, however, is to **introduce a new train travel experience for passengers** who are used to travelling by aircraft and air-conditioned buses. This could help revive positive sentiment towards rail travel and help increase the revenues for the railways.
- The present move could help bring **in new-generation trains and attract investments of around Rs. 30,000 crore**.
  - As per available estimates, a one rupee push in the railway sector would have a forward linkage effect of increasing output in other sectors by Rs. 2.50.
- The move will allow the government to **monetize its expensive fixed assets** such as track, signalling and stations.
- Despite having the fourth largest network of railway tracks, India still has lower rail density, indicating the scope for expansion. Private investments could help realize this potential.

### **Way forward:**

- An important aspect of the proposal would be the provision of the **independent regulator**. Only an independent regulator could incentivize and embolden the private players to enter the sector.
- The Government of India has notified the resolution to set up a **Rail Development Authority** as a “recommendatory/advisory” body, advising government on, among other things, promoting competition, efficiency and economy, and protecting consumer interests.
- The attractive parts of the railways could be opened for private exploitation.
  - Train services operated by Indian Railways cover several classes of passengers, meeting the social service obligation to connect remote locations, and adopting the philosophy of cross-subsidy for passengers in low-cost trains through higher freight tariffs.
  - Private operators **should not be expected to shoulder the burden of universal service norms, and may focus on revenue**.



## F. Tidbits

### 1. Gotabaya sets up committee to look into Colombo Port concerns

- In May 2019, the then Sri Lankan administration had signed a Memorandum of Cooperation with **India and Japan to jointly develop and operate the East Container Terminal at the Colombo Port**. Under the arrangement, the Sri Lanka Ports Authority (SLPA) would be holding 100 % ownership.
- The East Container Terminal was adjacent to the Chinese-run Colombo International Container Terminal (CICT) at the Colombo Port.
- Following concerns raised by workers and some Opposition parties over the ECT terminal at the Colombo Port, Sri Lankan President has appointed a panel to look into the issue.

### 2. Nearly 78% of COVID-19 patients in India are under 50: IDSP data

- The data from the **Integrated Disease Surveillance Programme (IDSP)** notes that in India, 60% of COVID-19 patients had at least one co-morbidity and nearly 78% were under 50, says
- The data though considered less than 1,00,000 of the confirmed positive cases offers glimpses into the unique characteristics of the spread of the disease.
- Occurrence of hypertension and diabetes appeared to play a limited role as far as testing positive for the disease is concerned.
- Previous studies have shown that the **overall prevalence of hypertension was 29% and of diabetes around 11%**.
- The **IDSP is a unit of the National Centre for Disease Control**.

## G. Prelims Facts

### 1. A sponge-like single-cell ancestor

- During the early phases of earth's formation years, an environment devoid of oxygen, and high in methane, was not fit for animal life, though it could 'host' **microorganisms** which could **cope with the incoming sunlight and use it to generate energy for living**. This was around 3.4 billion years ago, about 1 billion year after the Earth itself was born. In the process, these microorganisms generated the gaseous waste product called oxygen.
- About 2 billion year later, as a consequence of the '**great oxidation event**', the amount of oxygen on Earth became an important component of the Earth's surface, and amenable for animal life.
- Using this **oxygen as external energy, animal cells began to produce their food for growth and multiply**. In order to do so, their body anatomy and biology also changed accordingly.
- Over time, animal cells also evolved to produce increased amounts of molecules called reactive oxygen species (ROS), which are involved in many essential cell activities but toxic at high levels.
- Increasing complexity necessitated a substantial increase in the genome size of the animal with concomitant increase in all transactions in the cell: DNA, the genetic material in the cells of the various organs, their transcription of the information to messenger RNA (mRNAs), then translation of these into

the amino acid sequences that make individual proteins in the cells through what are called tRNAs — at least one per amino acid.

## 2. U.S. moves two aircraft carriers to South China Sea

- The United States is sending **two aircraft carriers (USS Ronald Reagan and USS Nimitz)** to the South China Sea at the same time China is conducting military exercises in the contested waterway.
- China had recently announced drills near the **Paracel Islands, which are claimed by both Vietnam and China.**
- Vietnam and the Philippines criticised the planned Chinese drills, warning they could create tension in the region and impact Beijing's relationship with its neighbours.
- China claims 90% of the potentially energy-rich (extensive oil and gas reserves) South China Sea, but Brunei, Malaysia, the Philippines, Taiwan and Vietnam also lay claim to parts of it, through which about \$3 trillion of trade passes each year.

## 3. Pathogens and prediction

- The **G4 EA H1N1** is a new strain of the swine flu virus.
- G4, which has the characteristics of the 2009 H1N1 virus and the 1918 pandemic flu, has not yet been shown to infect humans but it is **exhibiting “reassortment capabilities”.**
- **WHO's Global Outbreak Alert and Response Network (GOARN)** has been at the forefront of initiatives for disease surveillance.

## H. UPSC Prelims Practice Questions

Q1. Which of the following statement/sis/are correct?

1. Infant mortality rate (IMR) is the number of deaths per 1,000 live births of children under five years of age.
2. India's average IMR for rural areas is higher as compared to urban areas.
3. Madhya Pradesh has the highest IMR among Indian states.

**Options:**

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

**Answer: b**

**Explanation:**

- Infant mortality rate (IMR) is the number of deaths per 1,000 live births of children under one year of age.

- India's average IMR has dropped by one point to 32. The country's average stands at 36 deaths for rural and 23 for urban areas.
- The infant mortality rate (IMR) in Madhya Pradesh has increased to 48 in 2018, stymying an improving annual trend for at least six years. Madhya Pradesh has the country's worst IMR.
- Kerala which has the lowest IMR among the bigger states has decreased its IMR by three points to 7.

**Q2. The Logistics performance index is released by which of the following?**

- a. World Bank
- b. World Economic Forum
- c. World Trade Organization
- d. UNCTAD

**Answer: a**

**Explanation:**

- The Logistics Performance Index (LPI) is a benchmarking tool created by the World Bank to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance.
- It is the weighted average of the country scores on six key dimensions: efficiency of the clearance process by border control agencies; quality of trade and transport related infrastructure; ease of arranging competitively priced shipments; competence and quality of logistics services (e.g., transport operators, customs brokers); ability to track and trace consignments; timeliness of shipments in reaching destination within the scheduled or expected delivery time.
- The Logistics Performance Index is reported by the World Bank in every two years.
- The LPI is based on a worldwide survey of stakeholders on the ground providing feedback on the logistics "friendliness" of the countries in which they operate and those with which they trade.

**Q3. The Kanger Valley National Park is situated in which of the following state?**

- a. Jharkhand
- b. Madhya Pradesh
- c. Chhattisgarh
- d. Uttarakhand

**Answer: c**

**Explanation:**

- Kanger Ghati National Park (also called Kanger Valley National Park) is located in the Bastar region of Chhattisgarh.
- The park derives its name from the Kanger River, which flows through it.

- The Kanger Valley National Park is noted for its highly heterogeneous land formations ranging from low flat and gentle areas to steep slopes, plateaus, valleys and stream courses.

**Q4. Which of the following correctly describes the term 'Ophiocordyceps' ?**

- a. Algae
- b. Arthropod
- c. Bacteria
- d. Fungi

**Answer: d**

**Explanation:**

- Ophiocordyceps are a type of fungi.

## I. UPSC Mains Practice Questions

1. Despite considerable progress in reducing Infant Mortality rate (IMR) in India, the set targets seem difficult to achieve. Identify the causative factors for the high IMR in India and suggest remedial measures. (10 marks, 150 words)
2. In the light of the move by the Indian Railways to open up train operations to private entities on select routes, discuss the significance of this move and evaluate the challenges therein. (15 marks, 250 words)