

24 Oct 2021: UPSC Exam Comprehensive News Analysis

TABLE OF CONTENTS

A. GS 1 Related

B. GS 2 Related

INTERNATIONAL RELATIONS

1. [Rising trade, tensions point to India's China conundrum](#)

C. GS 3 Related

ENVIRONMENT AND ECOLOGY

1. [Restless mountains, shattered lives](#)

D. GS 4 Related

E. Editorials

GEOGRAPHY

1. [Why is India facing bouts of extreme weather?](#)

ENVIRONMENT AND ECOLOGY

1. [Is genetically modified rice grown in India?](#)

F. Prelims Facts

1. [New light on how insulin signalling affects tissue health](#)
2. [India-made spray linked to rare illness in U.S.](#)
3. [What is 'conscious possession' of drugs?](#)

G. Tidbits

1. ['Cybersecurity will remain a top priority for firms this year'](#)
2. [CJI stresses on judicial infrastructure](#)

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. Rising trade, tensions point to India's China conundrum

Background:

- India's trade with China has risen to record levels in 2021 and is set to cross the \$100-billion mark for the first time. The two-way trade has registered a massive year-on-year growth.
- Trade ties have boomed to record levels during the past year despite the **border crisis along the Line of Actual Control** which erupted with China's unprecedented mobilisation of troops. The talks between military commanders have also ended in a deadlock with both sides trading accusations.
- **On the investment front, India has imposed certain curbs on Chinese companies** and the massive inflow of Chinese funds into the tech sector has been stopped. In the telecom sector, the Chinese firms have been kept out of 5G trials.
- Thus there seem to be **two seemingly contradictory trends in the bilateral relations between India and China.**

Significance for India:

Economic potential:

- Given the **huge economic market** by China, the India-China relationship has a huge potential for trade ties for Indian companies.
- The **pharmaceutical sector** in particular has huge potential yet to be realised.
 - Recently, Hyderabad-based Dr. Reddy's Laboratories became the first Indian pharmaceutical firm permitted to launch an anti-cancer drug in the lucrative China market. This is being hailed as a breakthrough for the Indian pharmaceutical industry in China.

Concerns for India:

Strategic concerns:

- Trade ties booming to record levels amid persistent border crisis with China does not augur well for India's strategic interests. The deepening commercial relations pose challenges for **India which is looking to recalibrate relations with China** amid the border crisis.

Import dependency of India:

- **India's imports from China has reached record levels.** India has imported in large quantities items like electrical machinery, active pharmaceutical ingredients (APIs), medical supplies such as ventilators and PPEs, solar components and auto components.

- India also imports up to 70% of APIs from China, more than 90% of solar components and a large share of auto components as well.
- **India's trade deficit in bilateral trade relations has only increased over the years.**

Hurdles to market access:

- India's goods and services face a number of **market access impediments including non-tariff barriers** in critical segments like agricultural products, pharmaceuticals, IT/ITES, etc.

C. GS 3 Related

Category: ENVIRONMENT AND ECOLOGY

1. Restless mountains, shattered lives

Context:

- **Flash floods and landslides** in the aftermath of heavy rains in the hilly regions of the Western Ghats in **central Kerala districts** of Kottayam, Idukki and Pathanamthitta has resulted in the loss of lives and property.

Western Ghats:

- The Western Ghats is a mountain chain that runs almost parallel to India's western coast. It runs to a **length of 1,600 km, starting from the mouth of the river Tapti near the border of Gujarat and Maharashtra to Kanyakumari**, the southernmost tip of India in Tamil Nadu.
- It stretches over the **six states** of Tamil Nadu, Karnataka, Kerala, Goa, Maharashtra and Gujarat.
- It is recognised as one of the world's **biodiversity hotspots** and some sites of the Western Ghats were inscribed into **UNESCO's World Heritage Site list** in 2012 by the United Nations Education, Scientific and Cultural Organisation (UNESCO).

Significance of Western Ghats:

Biological diversity:

- The Western Ghats is home to a **vast biological diversity** of flora, fauna, bird, amphibian, reptile and fish species including hundreds of globally threatened species. Many of these species are also endemic to the region.
 - Though covering an area of 180,000 sq.km, or just under 6 per cent of the land area of India, the Western Ghats contain more than 30 per cent of all the plant, fish, herpeto-fauna, bird, and mammal species found in India.
 - The Western Ghats include a **diversity of medicinal plants and important genetic resources** such as the wild relatives of grains, fruit and spices.
- The Western Ghats is also recognised as containing **the most important and significant natural habitats for in-situ conservation of biological diversity**, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

Economical:

- The Western Ghats are rich in **mineral resources** like iron, manganese and bauxite ores in parts of their ranges.
- The Western Ghats host important **plantation crops** like pepper and cardamom, which are native to the evergreen forests of the Western Ghats. It also hosts large scale plantations of tea, coffee, oil palm and rubber.
- The forests of Western Ghats are an **important source of timber** and support a large number of **forest-based industries** such as paper, plywood, poly-fibres and matchwood.
- The forest-based communities of the Western Ghats have been deriving sustenance from the forest by collecting **non-timber forest produce (NTFP)**.
- The Western Ghats host a number of **tourist destinations** drawing tourists not only from India but also from foreign nations and thus they contribute to the economy of the host states.

Hydrological significance:

- The Western Ghats perform **important hydrological and watershed functions**. Approximately 245 million people live in the peninsular Indian states that receive most of their water supply from rivers originating in the Western Ghats. Thus, the soil and water of this region sustain the livelihoods of millions of people.
 - It feeds a large number of perennial rivers of peninsular India including the three major eastward-flowing rivers Godavari, Krishna, and Kaveri.

Influence on the climatic condition:

- The mountains act as a **barrier to the rain-laden southwest monsoon winds** in late summer in India and thus have a significant impact on the monsoonal rainfall distribution and intensity in India.

Importance in climate action:

- The forests of Western Ghats play a significant and important ecological function in the **sequestration of atmospheric CO₂** and hence have an important role in climate change.
- They account for a substantial proportion of carbon sequestration from the Indian forests.

Threats to Western Ghats ecology:

- **Developmental activities:** Large dam projects in the Western Ghats have resulted in significant environmental damage. This has led to large scale deforestation and submergence of pristine forests. Also, the **conversion of forest land into agricultural land or for commercial purposes** like tourism has resulted in shrinkage of the habitat for the endemic species of the region. This has had significant negative effects on biodiversity.
- **Resource extraction:** Illegal logging for timber and livestock grazing within and bordering protected areas by high densities of livestock is leading to habitat degradation across the Western Ghats.
- **Mining activity:** Environmentally unsustainable **mining activities** have increased the vulnerability of the fragile ecosystem to landslides and environmental pollution. **Sand mining** is of particular concern.
- **Climate change:** Global warming and climate change have led to big variations in the duration and intensity of rainfalls in the region. This is giving rise to increased instances and intensity of extreme weather events in the region.

Important committees:

Madhav Gadgil committee:

- The Ministry of Environment & Forests had constituted the Western Ghats Ecology Expert Panel (WGEEP) under the Chairmanship of Madhav Gadgil in 2010 to recommend measures for the management of the ecologically sensitive Western Ghats region.
- The panel took a **strong stance in favour of ecological conservation efforts** of the Western Ghats region.
- It **designated the entire Western Ghats as an Ecologically Sensitive Area (ESA)**.
- It recommended the establishment of a **Western Ghats Ecology Authority**, as a statutory authority under the Ministry of Environment and Forests, with the powers under Section 3 of the [Environment \(Protection\) Act, 1986](#).
- It sought to have strict **regulation of developmental activities like dam construction, mining**.
- It specified a **bottom-up approach for governance of the environment** with the establishment of fully empowered Biodiversity Management Committees in all local bodies.

Kasturirangan Committee:

- The Gadgil committee report was criticised for being too environment friendly and impractical to implement. The states opposed the report based on the stand that it would hamper the development process of the states. In this context, the Kasturirangan committee was constituted to examine the WGEEP report.
- Its mandate was to give special attention to “the preservation of the precious biodiversity” and “the rights, needs and development aspirations of the local and indigenous people”.
- The Kasturirangan committee **took a more moderate stance on the conservation issue**. Unlike Gadgil Committee, it designated only 37% of the Western Ghats as ESA. It sought to regulate developmental activities mainly in the ESA only.

Details:

- Kerala has witnessed back to back natural calamities like flooding, landslides over the past few years.
- The increasing extreme climate events have resulted in large-scale disasters and destabilised the already vulnerable districts along the Western Ghats. About 40% of Western Ghat ranges lie in Kerala, which makes the State particularly vulnerable to the ecological changes in the mountain chain.
- Flash floods and landslides in the Western Ghats region of Kerala has brought into focus the **fragile ecosystem of the Western Ghats mountain chain** and raised serious questions on the conservation of the region. The environmentalists argue that this calls for urgent conservation action.
- As the Gadgil Committee reiterated, **human interference and unscientific land use had worsened the already damaged ecosystem of the Western Ghats**.

Conclusion:

- A **balance between conservation efforts and development** should be sought. The focus should be on sustainable economic growth.
- There is the need for exempting areas of very high susceptibility in the Western Ghats from any types of constructions while urging the government and the local communities to increase the vegetative cover as a first defence against the landslide vulnerability with a high emphasis on nature-based solutions.

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: Geography

1. Why is India facing bouts of extreme weather?

Background:

- **Kerala and Uttarakhand have received incessant rainfall in October** leading to doubts over the **potential role of climate change behind these extreme weather events.**
 - According to the India Meteorological Department (IMD), the Kerala and Mahe region have received substantial excess rainfall in the month of October.
 - Uttarakhand too has recorded record rainfall in October, with several districts reporting 24-hour highs that exceeded the figures from over a century.
- In both these States and other states as well, over the last few years, there have been **variations in the pattern and intensity of rainfall.**

Causative factors:

- There are different factors which could be contributing to torrential rains in Kerala and Uttarakhand.

Presence of low pressure regions:

- There have been **two rain-bearing 'low pressure systems' that are active in the Arabian Sea as well as the Bay of Bengal.** The low pressure system in the Arabian Sea has contributed significantly to the heavy rain in Kerala. Winds from the Bay of Bengal low pressure system have been reaching as far as Uttarakhand and contributing to rainfall in northern parts of India.

Western Disturbances:

- String western disturbances are contributing to heavy rain in northern India.
 - **Western disturbances are periodic influxes of moisture-laden clouds from the Mediterranean** which are **common during winter.**

Delay in retreat of the southwest monsoons:

- This year, the monsoon began its retreat on October 6 and though it was expected to fully retreat by October 16, it is **yet to completely withdraw**, with the associated clouds still lingering on and thus contributing to continued rainfall activity.
 - October is the month when the southwest monsoon entirely retreats from India.
- The IMD's latest assessment is that the monsoon will completely withdraw by October 26.

For related information refer to the following article:

[CNA 26th September 2021.](#)

Impact of global warming:

- The generation of low pressure systems and the western disturbances are connected to the larger pattern of global warming.
- **Global warming is leading to increased sea temperatures** in general giving rise to enhanced cyclonic activities. **The heating effect has been more intense in the Arabian Sea**, thus leading to significant cyclonic activity in the Arabian Sea region.

For more information on this topic refer to the following article:

[CNA 19th May 2021.](#)

- Overall elevated temperatures are contributing to **warmer waters in the Arctic Ocean** and is subsequently **drawing colder air from the poles with greater intensity**. This added to the **increased moisture in the atmosphere** is leading to more intense western disturbance activity over north India.
- **As air temperature increases, air can hold more water molecules.**

Manifestation of climate change:

- Warming oceans are contributing to **intense spells of rainfall in pockets followed by long rainless spells**. This is being considered as one of the most visible manifestations of climate change.
 - India was forecasted to receive below-normal rainfall until August.
 - However global meteorological factors changed and caused a torrential September that largely compensated for the monsoon deficit.
 - The record high rainfall in the month of October also marks a deviation from the traditionally lower amount of rainfall associated with October month of the monsoonal rainfall in India.

Category: ENVIRONMENT AND ECOLOGY

1. Is genetically modified rice grown in India?

Context:

- A French manufacturer of rice flour has claimed that it has found unauthorised genetically modified rice in a consignment of 500 tonnes of broken rice imported from India in June 2021.
 - European Union does not permit any use of GM rice

GM crops:

- **GM foods are derived from plants whose genes are artificially modified**, usually by inserting genetic material from another organism, **in order to give it a new property**, such as increased yield, tolerance to a herbicide, resistance to disease or drought, or to improve its nutritional value.
 - Example- **Golden rice** involves the insertion of genes from daffodils and maize plants as well from a soil bacterium to create a grain that is enriched with Vitamin A.

For more related information on the topic of GM crops refer to the following article:

[Genetically Modified Crops.](#)

GM crop cultivation in India:

- **India has approved commercial cultivation of only one GM crop, Bt cotton.**
- **No GM food crop has ever been approved for commercial cultivation in India.** Only confined field trials have been allowed for some 20 GM crops in India.

Details:

- Indian authorities are investigating the allegations and have clarified that such contamination was unlikely as **India does not allow domestic commercial cultivation of GM rice.**
- Environmental activists allege that plants or seeds from the GM rice field trials could have contaminated non-GM crops, noting that illegal varieties of GM cotton and brinjal are freely circulating among sections of Indian farmers.

Concerns:

- The recent development could **impact the lucrative export of rice from India.**
 - **India is the world's top rice exporter, earning Rs. 65,000 crore through export of rice.**
- A similar situation had played out in 2006 in the U.S. when trace amounts of a GM rice variety were found in shipments ready for exports from the U.S. Trading partners such as Japan, Russia and the EU had suspended rice imports from the U.S., impacting the farmers involved in the cultivation of rice.

For more related information on this topic refer to the following article:

F. Prelims Facts

1. New light on how insulin signalling affects tissue health

- **Insulin is a peptide hormone secreted by the beta cells of the pancreas.** It is commonly associated with the ability to regulate **glucose metabolism**. It regulates the metabolism of carbohydrates, fats and protein by promoting the absorption of glucose from the blood into the liver, fat and skeletal muscle cells.
- Studies have shown that Insulin **plays a role in the growth and maintenance of tissues.**
- A new study now has thrown light on how insulin amounts shape the flow of information through the signalling network. Abnormalities in insulin signalling impact the health and survival of the organisms. This understanding can be used to **identify targets for therapy.**

2. India-made spray linked to rare illness in U.S.

Context:

- A made-in-India aromatherapy spray is being pulled off retail giant Walmart's shelves in the United States after a medical investigation linked it to melioidosis.

Melioidosis:

- **Melioidosis, also called Whitmore's disease,** is an infectious disease that can infect humans or animals. The disease is caused by the **bacterium *Burkholderia pseudomallei***. It is predominately a disease of tropical climates, especially in Southeast Asia and northern Australia where it is widespread.

3. What is 'conscious possession' of drugs?

NDPS act, 1985:

- The **Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985** treats drug offences very seriously and penalties are stiff.
- **Production, manufacture, possession, sale, purchase, transport, import inter-State, export inter-State or use** of narcotic drugs and psychotropic substances involves imprisonment or a fine or both.
- Penalties depend on the quantity of drugs involved. The Centre has **notified the small and commercial quantities for each drug**.
- Abetment and criminal conspiracy and even an attempt to commit an offence under the Act attracts the same punishment as the offence itself.
- **Addicts volunteering for treatment enjoy immunity from prosecution.**
- The NDPS Act mandates the formation of a central authority to exercise its powers and functions under the statute. The government constituted the **Narcotics Control Bureau in 1986**, to coordinate with other departments and ministries to fight illicit traffic in drugs and drug abuse.

Article 47 of the Indian Constitution:

- Article 47 of The Constitution of India is one of the **Directive Principles** which directs the State to raise the level of nutrition and the standard of living and to **improve public health** as among its primary duties and, in particular, the State shall endeavour to bring about **prohibition of intoxicating drinks and drugs which are injurious to health**

G. Tidbits

1. 'Cybersecurity will remain a top priority for firms this year'

- The transition to work from anywhere and erosion of the traditional network perimeters have combined to create an **unprecedented threat level** to endpoint devices, users, and applications **in the digital spaces**.
- As the range of threats broadens and new vulnerabilities develop, **cybersecurity will remain a high priority for corporates going ahead**.
- The article suggests the following measures with respect to cyber security.
 - The key to making a security architecture effective and capable of detecting and preventing attacks is to create a **proactive security framework** that enables different layers to interact with each other and exchange contextual insights in real-time to prevent attacks.
 - Given the increased instances of identity theft, there is a need **to strengthen identity security** by scaling VPNs and multi-factor authentication (MFA) to verify each user's identity before allowing them access to the network or sensitive data.
 - There must be a **holistic approach to cyber security**. Cyber security must be built-in, not bolted on. It must be deployed everywhere from the network to data to devices to users.
 - Significant **innovations in cybersecurity** through **SASE** (secure access service edge), **XDR** (extended detection and response), and **zero trust integration** must be the way forward.

2. CJI stresses on judicial infrastructure

- Chief Justice of India N.V. Ramana has urged the Union Minister of Law and Justice to ensure statutory backing for the creation of the **National Judicial Infrastructure Authority of India (NJIAI)** in the upcoming winter session of Parliament.
- The Chief Justice highlighted the **severe lacunae in judicial infrastructure for courts in India**, making it difficult to effectively perform their function.
 - There is a shortage of court halls and even basic facilities like toilets and drinking water access. There is also a gross shortage of record rooms and video-conferencing facilities.
- The Chief Justice emphasized the **importance of judicial infrastructure in improving access to justice**.
 - According to international research published in 2018, **failure to deliver timely justice cost India as much as 9% of its annual GDP**.

H. UPSC Prelims Practice Questions

Q.1 Which of the following statements are correct?

1. In Assam, Brahmaputra valley is dominated by Assamese speakers and Barak valley is dominated by Bengali speakers.
2. The Barak Valley is located in the southern region of Assam.

Which of these statements are correct?

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

Answer: c

Explanation:

- The Barak Valley is located in the southern region of Assam. It is dominated by Bengali speakers unlike the Brahmaputra valley which is dominated by Assamese speakers.



Q.2 Which of the following statements are incorrect?

1. Melioidosis, also called Whitmore's disease, is an infectious disease that can infect humans or animals.
2. The disease is caused by the bacterium *Burkholderia pseudomallei*.
3. It is a soil-dwelling bacterium endemic to temperate regions.
4. It is also recognized as a bioterrorism agent.

Options:-

- a. 1 only
- b. 1 and 2 only
- c. 3 only
- d. 3 and 4 only

Answer: c

Explanation:

- Melioidosis, also called Whitmore's disease, is an infectious disease that can infect humans or animals.
- The disease is caused by the bacterium *Burkholderia pseudomallei*.
- It is predominately a disease of tropical climates, especially in Southeast Asia and northern Australia where it is widespread.
- It is also recognized as a bioterrorism agent.

Q.3 With reference to COVID-19 and vaccines, how is 'hybrid immunity' acquired:

- Through natural infection and herd immunity
- Through natural infection and a single dose of vaccine
- Through two doses of vaccine and herd immunity
- Through one dose of vaccine, natural immunity and herd immunity

Answer: b

Explanation:

- Hybrid immunity is acquired through natural infection and a single dose of vaccine.
- A new study has shown that a combination of natural infection with a single dose of vaccine (hybrid immunity) provides greater immunity than either natural infection without vaccination or full vaccination in infection-naïve individuals.

Q.4 The creation of National Judicial Infrastructure Authority of India (NJIAI) was first proposed by-

- 2nd Administrative Reforms Commission
- NITI Aayog
- 48th Chief Justice of India N.V.Ramana
- 21st Law Commission of India

Answer: c

Explanation:

- The serving 48th Chief Justice of India, N.V. Ramana had proposed the National Judicial Infrastructure Corporation in March, 2021 to develop judicial infrastructure in trial courts.

Q.5 The Tsugaru Strait connects

- a. Andaman Sea with South China Sea
- b. South China Sea with Gulf of Thailand
- c. South China Sea with Philippine Sea
- d. Sea of Japan with Pacific Ocean

Answer: d

Explanation:

- The Tsugaru Strait is a strait between Honshu and Hokkaido islands in northern Japan connecting the Sea of Japan with the Pacific Ocean.



Q.6 The Bangabandhu Friendship Exhibition Centre in Bangladesh has been funded by:

- a. India
- b. EU
- c. China
- d. Japan

Answer: c

Explanation:

- Bangabandhu International Conference Center formerly known as Bangladesh China Friendship Conference Center is an international conference center located in Dhaka.
- It has been funded by China.

Q.7 Which of the following statements are incorrect?

1.
 1. Melioidosis, also called Whitmore's disease, is an infectious disease that can infect humans or animals.
 2. The disease is caused by the bacterium Burkholderia pseudomallei.
 3. It is a soil-dwelling bacterium endemic to temperate regions.
 4. It is also recognized as a bioterrorism agent.

Options:-

- a. 1 only
- b. 1 and 2 only
- c. 3 only
- d. 3 and 4 only

Answer: c

Explanation:

- Melioidosis, also called Whitmore's disease, is an infectious disease that can infect humans or animals.
- The disease is caused by the bacterium Burkholderia pseudomallei.

- It is predominately a disease of tropical climates, especially in Southeast Asia and northern Australia where it is widespread.
- It is also recognized as a bioterrorism agent.

Q.8 What best describes the term ‘Hot Jupiters’?

- Extremely high temperature on Jupiter as it approaches the Sun
- Hot and gaseous moons of the planet Jupiter
- Jupiter like planets beyond the solar system with similar mass, structure and orbit
- A class of gas giant exoplanets similar to Jupiter but have very short orbital periods due to their close proximity to their stars and high surface-atmosphere temperatures

Answer: d

Explanation:

- Hot Jupiters are gas giant planets closely bound to their stars.
- They are a class of gas giant exoplanets similar to Jupiter but have very short orbital periods due to their close proximity to their stars and high surface-atmosphere temperatures

Q.9 With reference to the history of India, ‘ulgulan’ or the great tumult is the description of the which of the following?

- The revolt of 1857
- The Mappila rebellion of 1921
- The Indigo revolt of 1859-1860
- Birsa Munda’s revolt of 1899-1900

Answer: d

Explanation:

- Munda Rebellion is one of the prominent 19th century tribal rebellions in the subcontinent. Birsa Munda led this movement in the region of south Ranchi in 1899-1900.
- Aimed at establishing Munda Raj or Munda rule in this region, revolt came to be known as The Ulgulan or “the Great Tumult”.

I. UPSC Mains Practice Questions

1. Examine the reasons why India is facing bouts of extreme weather? (15 marks, 250 words)(GS Paper 3/Environment and Ecology)
2. Flash floods and back-to-back landslips in Kerala bring into focus, once again, the fragile ecosystem of the Western Ghats. Critically evaluate. (15 marks, 250 words) (GS Paper 3/Environment and Ecology)

Read the previous CNA [here](#).

