

# 1. Annual Frontiers report

## Topic: environment and Ecology



**In News:** The United Nations Environment Programme (UNEP) has released its annual Frontiers report.

### More on the Topic:

- The Report identifies and offers solutions to three environmental issues that needs immediate attention of the governments and the public at large.
- The three issues addressed are **urban noise pollution, wildfires and phenological shifts.**
- **Urban Noise Pollution:** The noise pollution due to road traffic, railways, or leisure activities, impair human health and well-being.
- It can result in severe heart diseases and metabolic disorders with the very young, and mostly affect the elderly and marginalised communities near busy roads.
- **Wild Fire:** More dangerous fire-weather conditions are likely to increase due to rising concentrations of **atmospheric greenhouse gasses and the attendant escalation of wildfire risk factors.**
- Climate change can prompt extreme wildfires, generating lightning that can ignite other fires, far beyond the fire front and creating a so-called hazardous feedback loop.
- Such extreme events are disastrous for human health and the environment.
- **Phenological Shifts:** Climate change disrupts natural rhythms of plants and animals set by temperature, day length or rainfall. This leads to mismatches, such as when plants shift life cycle stages faster than herbivores.
- Phenology is the timing of recurring life cycle stages, driven by environmental forces, and how species interacting within an ecosystem respond to changing conditions.

### Way Ahead provided by the Report:

- Adoption of indigenous fire management techniques.
- Engaging vulnerable groups and designing a preventive method approach to wild fire.

- Enhance fire-fighting capabilities and strengthen community resilience-building programmes
- Focus on long-range weather forecasting.
- Focus on remote-sensing capabilities such as satellites, ground-based radar, lightning detection as well as data handling.

**Source: Down To Earth**

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## 2. Ayush Start up Challenge

### Topic: Polity and Governance

**In News:** The All India Institute of Ayurveda (AIIA) in association with Startup India has launched the 'Ayush Start-up Challenge' to encourage start-ups and individuals working on innovations in the field of Ayurveda and alternative healing.

#### More on the Topic:

- There are three entry categories for participating start-ups – Ayush Food Innovations, Ayush Bio-instrumentation (Hardware solutions) and Ayush IT Solutions (Software solutions). The winner in each category will receive a cash prize of Rs 1 lakh and the runner-up will get Rs 50,000.
- The market size of the AYUSH sector has grown by 17 % in 2014-20.
- In terms of global share, India has grown faster in the AYUSH market as compared to the world and accounts for about 2.8 % of the market.
- The Ayush market is currently estimated to be around USD 10 bn and it is projected to see a 50 % increase over the course of the next five years.



**Source: Indian Express**

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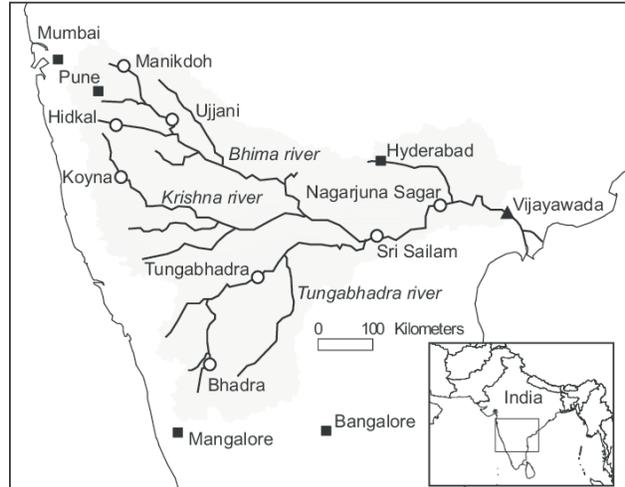
### 3. Krishna Water Dispute

**Topic: Polity and Governance**

**In News:** The Supreme Court asked if the States of Telangana, Andhra Pradesh and Karnataka could amicably settle their quarrel over the allocation of the Krishna river water.

**More on the Topic:**

- In 1969, the Krishna Water Disputes Tribunal (KWDT) was set up under the Inter-State River Water Dispute Act, 1956, and presented its report in 1973.
- At the same time, it was stipulated that the KWDT order may be reviewed or revised by a competent authority or tribunal any time after 31st May, 2000.
- The second KWDT was instituted in 2004. It delivered its report in 2010, which made allocations of the Krishna water at 65 % dependability and for surplus flows as follows: 81 TMC for Maharashtra, 177 TMC for Karnataka, and 190 TMC for Andhra Pradesh.
- After the KWDT’s 2010 report Andhra Pradesh challenged it through a Special Leave Petition before the Supreme Court in 2011.
- In 2013, the KWDT issued a ‘further report’, which was again challenged by Andhra Pradesh in the Supreme Court in 2014.
- After the creation of Telangana, Andhra Pradesh has asked that Telangana be included as a separate party at the KWDT and that the allocation of Krishna waters be reworked among four states, instead of three.
- **Krishna River:**
- The Krishna River is named after Mahabaleswar, which is located near Jor village in Maharashtra.
- It is the **second biggest river in peninsular India after the Godavari River.**
- **Drainage:** It runs from four states Maharashtra (303 km), North Karnataka (480 km) and the rest of its 1300 km journey in Telangana and Andhra Pradesh.



**Way Ahead:**

- There is a need for establishment of permanent tribunal with appellate jurisdiction of the Supreme Court over the tribunal’s decision.
- Policy makers should rethink **the strategy about water management**, not just within states, but at the national level keeping the water scenario in the next 30 years.
- There is need to amendment Article 262 and amendment to Inter-State Water Disputes Act.

- **Article 262 of the Constitution** provides for the adjudication of inter-state water disputes.
- Under this, Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution and control of waters of any inter-state river and river valley.
- **The Inter-State Water Disputes Act empowers** the Central government to set up an ad hoc tribunal for the adjudication of a dispute between two or more states in relation to the waters of an inter-state river or river valley.

Source: Indian Express

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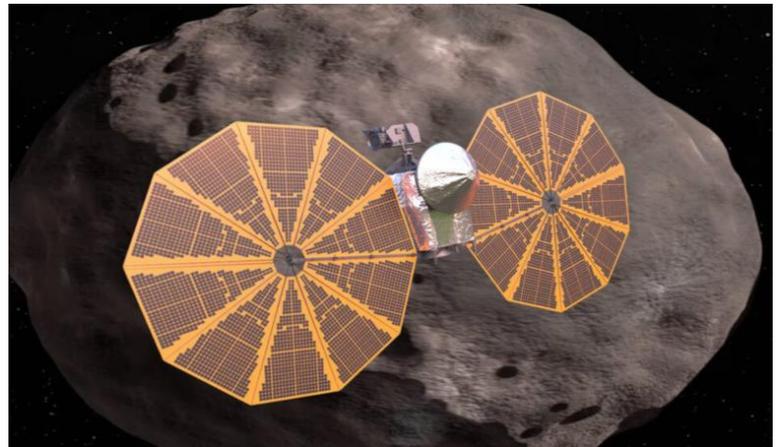
## 4. NASA Lucy Mission

**Topic: Science and Technology**

**In News:** Lucy mission will visit asteroid Eurybates.

**More on the Topic:**

- 'Lucy' Mission is NASA's first mission to explore the Jupiter Trojan asteroids.
- It is a solar-powered mission.
- It is estimated to be over 12 years long, during which the spacecraft will visit eight asteroids covering a distance of about 6.3 billion km to deepen the understanding of the "young solar system".
- The mission is designed to understand the composition of the diverse asteroids that are a part of the **Trojan asteroid swarms**, to determine the mass and densities of the materials and to look for and study the satellites and rings that may orbit the Trojan asteroids.
- The Trojan asteroids are believed to be formed from **the same material that led to the formation of planets** nearly 4 billion years ago when the solar system was formed.



Source: Indian Express

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## 5. Kisan Drones

### Topic: Science and Technology

**In News:** Prime Minister flagged off 100 Kisan drones as a part of the “Drone Kisan Yatra”.

#### More on the Topic:

- The Drone Kisan Yatra was launched with the aim to promote chemical-free farming in India.
- Kisan drones will be used for **crop assessment, digitization of land records, and spraying of insecticides and nutrients.**
- Inclusive drone development is one of the four priorities of the government moving forward.
- Under the “SWAMITVA scheme”, land records are being documented through drone technology. Also medicines, vaccines are being supplied to various parts of the country and it is also being used for sprinkling pesticides etc on crops.
- The development of these drones on a large scale is expected to bring new employment opportunities for the youth. The government recently banned the import of drones to encourage their manufacturing in India.



Source: PIB

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## 6. Non Fungible Tokens

### Topic: Economy

**In News:** Non fungible tokens (NFTs) are gaining popularity.

#### More on the Topic:

- The sales of NFTs surged \$25 billion in 2021 as the crypto asset exploded in popularity.
- Anything that can be converted into a digital form can be an NFT. Everything from





drawings, photos, videos, GIF, music, in-game items, selfies, and even a tweet can be turned into an NFT, which can then be traded online using cryptocurrency.

- What makes NFTs unique from other digital forms is that **it is backed by Blockchain technology.**
- Blockchain is a **distributed ledger** where all transactions are recorded. It is like bank passbook, except all your transactions are transparent and can be seen by anyone and cannot be changed or modified once recorded.

#### How is an NFT different from cryptocurrency?

- NFTs and cryptocurrencies are very different from each other. While both are built on Blockchain, that is where the similarity ends.
- Cryptocurrency is a currency and is fungible, meaning that it is interchangeable. For instance, if you hold one crypto token, say one Bitcoin, the next Bitcoin that you hold will also be of the same value. But NFTs are non-fungible, that means the value of one NFT is not equal to another.
- Every art is different from other, making it non fungible, and unique. Anyone who holds a cryptocurrency wallet can buy an NFT.

#### Concerns:

- In the recent past, **several incidents of NFT scams have been reported** including the emergence of fake marketplaces, unverified sellers often impersonating real artists and selling copies of their artworks for half price.
- In order to validate transactions, crypto mining is done, which **requires high powered computers that run at a very high capacity, affecting the environment ultimately.**

Source: Indian Express

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#### MCQs:

1. Which of the following statement/s is/are true?

1 National Green Tribunal (NGT) is a specialised body set up under the National Green Tribunal Act (2010)

2. The Tribunal has jurisdiction over all civil cases involving substantial question relating to environment including enforcement of any legal right relating to environment.

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

Ans c



**2. Which of the following are not a Fundamental Duty?**

- (a) To cherish and follow the noble ideals which inspired our national struggle for freedom;
- (b) To uphold and protect the sovereignty, unity, and integrity of India;
- (c) To protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures;
- (d) To provide early childhood care and education for all children until they complete the age of six years.

**Ans: d**

**3. LUCY mission is associated with?**

- (a) NASA
- (b) ESA
- (c) JAXA
- (d) ISRO

**Ans: a**

**4. Which of the following statement/s are true?**

**1. Academic Bank of Credit (ABC), proposed under the National Education Policy (NEP) 2020.**

**2. Under the ABC, students will be given multiple entry and exit options.**

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

**Ans c**

**5. XENON1T experiment is related to?**

- (a) Solar flares
- (b) Dark Energy



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(c) Neutrinos

(d) Comets

**Ans: b**