

## Prelim Bits 02-11-2023 | UPSC Daily Current Affairs

### Champions of the Earth Award 2023

In 2023, UNEP's Champions of the Earth seeks innovations, solutions, actions and initiatives working to 'Beat Plastic Pollution'.

- It is the UN's highest environmental honour which is awarded annually.
- **Awarded by** - United Nations Environment Programme (UNEP)
- **Launch** - 2005
- **Recognition** - To leaders from government, civil society and private sector for their transformation impact on the environment
- **Categories** - It is celebrated under 4 categories.
- It has recognised 116 laureates (27 world leaders, 70 individuals, and 9 organisations).
- **2023 Award** - It focuses on initiatives addressing plastic pollution.

Categories	Reason	2023 Award	Reason
<b>Policy Leadership</b>	For global or national action for the environment	Josefina Belmonte Belmonte (Philippines)	For using local authorities in solving global environmental problems
<b>Inspiration and action</b>	For taking steps to inspire positive change to protect our world	Ellen MacArthur Foundation (UK)	For driving global shift towards lifecycle approach for plastics
		José Manuel Moller (Chile)	For reusing plastic to enable economic, social and environmental benefits
<b>Entrepreneurial vision</b>	For challenging status quo to build a cleaner future	Blue Circle (China's largest marine plastic waste programme)	For using blockchain technology for future environmental action
<b>Science and innovation</b>	For pushing boundaries of technology for profound environmental benefit	Council for Scientific & Industrial Research (South Africa)	For science based, data driven solutions to tackle plastic pollution

*By 2040, carbon emissions associated with plastics could account for nearly one-fifth of global greenhouse gas emissions.*

### References

1. [Down To Earth| Champions of the Earth 2023](#)
2. [UNEP| Champions of Earth Award](#)

## Wi-Fi 7 and Fixed Wireless Access (FWA)

Recently, Qualcomm announced that fiber and fixed wireless access are central to India's broadband expansion as it expects 10 Gbps to be the average speed by 2028.

- Wi-Fi is a wireless networking technology that allows electronic devices to interface with the Internet.
- **Wi-Fi 7** - Also known as *IEEE 802.11be Extremely High Throughput (EHT)*.
- It has better reliability and enhanced privacy and security.
- **Features** - **4.8× faster than Wi-Fi 6** and accelerates up to 46 Gbps
- **100× lower latency** ( 60% lesser than Wi-Fi 6)
- **5× network capacity** with 320 MHz and Multi-Link Operation (MLO - Enables devices to simultaneously send and receive data across different frequency bands and channels)
- **Works across all 3 bands** (2.4 GHz, 5 GHz, and 6 GHz)
- **Supports 4000 Quadrature Amplitude Modulation** (QAM- a method to transmit and receive data in radio-frequency waves).

## Fixed Wireless Access (FWA)

- It is a *type of 5G or 4G LTE wireless technology* which provide wireless broadband connectivity between 2 fixed points.
- It transmits data *using radio frequencies instead of cables*.
- It is available for both licensed and unlicensed spectrum.
- **Advantage** - As FWA does not need a physical connection into a building, *new geographies* can be covered, and *new customers* can be connected, much more *quickly and cheaply* than with fiber.
- **Disadvantages** - It has *limited transmission distance* and environmental factors can impact its performance.

*A digital desert is an area where there is little or no access to high speed internet.*

## References

[The Hindu| Wi-Fi 7 and Fixed Wireless Access \(FWA\)](#)

## Agartala-Akhaura Rail Link

*A new rail link connecting Northeast India with Bangladesh for a distance of 12.24 kms was inaugurated recently.*

- The project is part of India's "*Act East Policy*", which aims to promote economic cooperation and develop strategic ties with countries in the Asia-Pacific region.
- **Year** - Sanctioned in 2003 and signed by both countries in 2013
- **Transport** - It will start from Agartala (Tripura, India) to Akhaura (Bangladesh)
- Immigration checks will be held at *Nischintapur*, the Indian-Bangladesh border.
- 1st station on the Bangladesh side will be *Gangasagar*.

*Tripura shares an 856-km international border with Bangladesh, the second highest after West Bengal.*

- **Funding** - Rs 1255.10 crore (entirely funded by India)

Agartala-Akhaura Rail Link		
	In India	In Bangladesh
<b>Distance</b>	5.46 km	6.78 km
<b>Funding</b>	Ministry for Development of North East Region (DoNER)	Ministry of External Affairs (MEA) as 'Aid to Bangladesh'
<b>Constructed by</b>	Indian Railway Construction International Ltd. (IRCON), a public sector unit under the Indian Railways	Texmaco, a private Indian firm

- **Significance** - It will boost tourism, trade, and people-to-people exchanges between India and Bangladesh.
- Faster connectivity between Agartala and Kolkata by reducing the distance from 1600 km to 500 km and the travel time from 31 hours to 10 hours.



*Existing train link between West Bengal (India) and Bangladesh* were Bandhan Express, Maitree Express and Mitali Express.

## References

[Indian Express| Agartala-Akhaura Rail Link](#)

## Payment Aggregator Cross Border (PA-CB)

*Recently, the Reserve Bank of India (RBI) announced that it would directly regulate entities facilitating cross border payment transactions.*

- **Payment Aggregators** - Entities that enable e-commerce sites and merchants to accept various instruments from customers to complete their payment obligations without the need for the merchants to create their own systems.
- **Payment Aggregator-Cross Border (PA-CB)** - Entities that facilitate cross-border online payments for import and export of permissible goods and services.
- **Categories of PA-CB**
  - Export-only PA-CB
  - Import-only PA-CB
  - Export and import PA-CB

## New RBI regulation

- **Authorised Dealer (AD) Category-I banks** - They do not require separate approval for PA-CB activity.
- **Existing Non-banks providing PA-CB services** - They must apply to the RBI for authorisation by April 30, 2024 and must register with the Financial Intelligence Unit-India (FIU-IND).
- They shall have a minimum net worth of Rs. 15 crore at the time of applying and Rs. 25 crore by March 31, 2026.

*Net worth is the value of the assets a corporation owns, minus the liabilities they owe.*

- **New non-bank PA-CBs** - They should have a minimum net worth of Rs 15 crore at the time of applying and Rs. 25 crore by the end of the 3<sup>rd</sup> financial year of authorisation.
- **Other conditions** - The maximum value per unit of goods / services sold/purchased shall be Rs. 25, 00,000.
- If the per unit goods/ services imported exceeds Rs 2.5 lakh, then the PA-CB concerned must undertake due diligence of the buyer.
- Customer due diligence should be undertaken by the merchant.
- Proceeds from the Export Collection Account (ECA) shall be settled only in the account of such merchants.

## Reference

[The Hindu Business Line| Payment Aggregator Cross Border \(PA-CB\)](#)

## Asteroid 'Dinkinesh'/Lucy spacecraft

The National Aeronautics and Space Administration's (NASA) Lucy spacecraft is on an epic 6-billion-kilometre-long journey to study the Jupiter Trojan asteroids.

- **Discovery** - It was discovered in 1999 by the LINEAR survey, and recently identified as a potential fly-by target for the Lucy mission.
- **Orbit** - It orbits the Sun in the main belt of asteroids between the orbits of Mars and Jupiter.
- **Width** - It is less than 1 kilometre wide.
- **Composition** - Dinkinesh is an S-type asteroid, i.e., it is composed mainly of silicates and some metal.
- **Instrument** - The observations were made by Lucy's high-resolution camera, the Lucy Long Range Reconnaissance Imager ( L'LORRI instrument ).
- Dinkinesh will be the ***first asteroid*** that Lucy will visit on its 12-year-long journey.

## Lucy Spacecraft

- Lucy mission was launched on October, 2021.
- **Agency** - NASA, U.S.
- **Aim** - To observe the Jupiter Trojan asteroids (huge group of small bodies that orbit the Sun in two "swarms.")
- Lucy will first fly by Dinkinesh and another asteroid in the main belt called Donaldjohnson in 2025.
- **WISE** - NASA's *Wide-field Infrared Survey Explorer (WISE)* is supporting the flyby.
- It provides updated estimates of the asteroid's size and albedo - a measurement of surface reflectivity that could help scientists better understand the nature of some near-Earth objects.

## References

1. [The Indian Express | Asteroid 'Dinkinesh' to get a visitor today](#)
2. [NASA | NASA's WISE Used to Preview Lucy Mission](#)
3. [Space | Lucy spacecraft successfully completes 1st flyby](#)

## Other Important News

### Houthis

- The Houthis are a large clan belonging to the Zaidi Shia sect, in Yemen's northwestern Saada province.
- The Houthi movement, officially called Ansar Allah (Supporters of God), began in the 1990s against the dictatorship of Yemeni President Ali Abdullah Saleh.
- Today, the Houthis are one faction in a bloody civil war that has raged in Yemen since 2014.
- They currently control territory in the west and northwest of Yemen, including the capital Sana'a. They have waded into the ongoing conflict in Palestine recently.

### Rubber Board

- Executive Director of the Rubber Board has launched the 4<sup>th</sup> edition of the Virtual Trade Fair (VTF) recently.
- The Rubber Board is a **statutory body** constituted by the Government of India, under the Rubber Act 1947, for the overall development of the rubber industry in the country.
- The Rubber Board is under the administrative control of the Ministry of Commerce and Industry.
- **Head Office** - Kottayam, Kerala.

### WHO SEARO Chair

- Bangladesh PM Sheikh Hasina's daughter, Saima Wazed, was nominated as the next Regional Director for the World Health Organization's South-East Asia region recently.
- The nomination will be submitted to the WHO Executive Board during its 154th session, which is scheduled to take place on January 22-27 in Geneva, Switzerland.
- **WHO Regional Committee for South-East Asia Region (SEARO) Member countries**
  - Bangladesh, Bhutan, DPR (North) Korea, India, Indonesia, Maldives, Nepal, Sri Lanka, Thailand, and Timor-Leste, Myanmar.

### Chicxulub impact

- It was a 100 million megaton blast that occurred 66 million years ago.
- It was caused by an asteroid or comet that crashed into Earth off the coast of Mexico.
- The impact generated a core of superheated plasma that was over 10,000 degrees, wiped out 75% of all species on Earth, created a 2-year cloud of dust that caused an extreme and abrupt shift in climate.

### Crab Nebula

- The explosion of a star, a supernova recorded in the year 1,054 AD led to the creation of the Crab Nebula, a supernova remnant.
- Now, the James Webb Space Telescope has looked at the nebula that is located 65,000 light-years away in the **constellation Taurus**, revealing exquisite new details.
- The Crab Nebula is one of the brightest supernova remnants in the sky, is also known as **Messier 1 (M1)**.

