

### FINANCIAL INTELLIGENCE UNIT INDIA

Recently, as part of compliance action against the offshore entities, Financial Intelligence Unit India (FIU IND) has issued compliance Show Cause Notices to nine offshore Virtual Digital Assets Service Providers (VDA SPs) under the Prevention of Money Laundering Act, 2002 (PMLA).



#### About the Financial Intelligence Unit India:

- It was set up by the **Government of India in 2004**.
- It is the central national agency responsible for receiving, processing, analyzing and disseminating information relating to suspect financial transactions.
- It is an independent body reporting directly to **the Economic Intelligence Council (EIC)** headed by the **Finance Minister**.

#### Functions of FIU-IND

- **Collection of Information:** Act as the central reception point for receiving Cash Transaction reports (CTRs), **Non-Profit Organisation Transaction Report (NTRs)**, Cross Border Wire Transfer Reports (CBWTRs), Reports on Purchase or Sale of Immovable Property (IPRs) and Suspicious Transaction Reports (STRs) from various reporting entities.
- **Analysis of Information:** Analyze received information in order to uncover patterns of transactions suggesting suspicion of money laundering and related crimes.
- **Sharing of Information:** Share information with national intelligence/law enforcement agencies, national regulatory authorities and foreign Financial Intelligence Units.
- **Act as Central Repository:** Establish and maintain national data base on the basis of reports received from reporting entities.

- **Coordination:** Coordinate and strengthen collection and sharing of financial intelligence through an effective national, regional and global network to combat money laundering and related crimes.
- **Research and Analysis:** Monitor and identify strategic key areas on money laundering trends, typologies and developments.

## What are Virtual Digital Assets?

- According to the Income Tax Act, 'virtual digital asset' refers to any **information, code, number, or token** (not being Indian currency or foreign currency) generated through **cryptographic means** and blockchain technologies.
- It can be **transferred, stored, or traded electronically** and its definition specifically includes a non-fungible token (NFT) or any other token of similar nature, by whatever name is called.

## WHAT IS eSOIL?

Researchers have developed a new electronic soil that was found to increase the growth of barley seedlings by 50 per cent in a new study.



### About the eSoil:

- In hydroponic environments, eSoil is a **low-power bioelectronic growth substrate** that can electrically stimulate the root system and growth environment of plants.
- This novel substrate is environmentally friendly, being **derived from cellulose and a conductive polymer called PEDOT**. It offers a **low energy, safe alternative** to previous methods that required high voltage and non-biodegradable materials.
- It uses low energy and minimizes resource consumption. Its active material is an **organic mixed-ionic electronic conductor**.

## How does eSoil work?

- When the roots of barley seedlings were electrically stimulated for 15 days, they showed a 50% increase in growth using eSoil.
- This research promotes more effective and sustainable development while increasing the variety of crops that can be grown hydroponically.
- In hydroponics, plants are grown without soil, requiring only water, nutrients and a substrate - something for their roots to attach to.
- This closed system **allows water to be recirculated**, ensuring that each seedling receives exactly the nutrients it needs.
- As a result, **very little water is used** and all the nutrients remain in the system - something that is not possible with conventional farming.
- **Benefit:** It can help in areas with little arable land and harsh environmental conditions.

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## EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT (EBRD)

The European Bank for Reconstruction and Development (EBRD) recently approved a 4-billion-euro capital increase that will enable the bank to double its Ukraine investments.



European Bank  
for Reconstruction and Development

About the European Bank for Reconstruction and Development (EBRD):

- It is an **international financial institution** with the mandate to promote transition towards a sustainable, open-market economy and to foster innovation.
- The EBRD was **created in April 1991 to help Eastern European and ex-Soviet countries transition into democracies** by developing **free-market economies** after the fall of communism.
- **Headquarters: London**
- It **provides project financing mainly for private enterprises**, usually together with other commercial lending partners, **in countries that are committed to**, and apply, **democratic principles**.

- It also works with public partners to support privatization, restructuring, and improvement of municipal services.
- It does this by financing investments, providing business services, and getting involved in high-level policy dialogue in these countries to **support the private sector development**.
- It **prioritizes support** for countries in **Central and West Asia, and North Africa**.
- It focuses on advancing developmental goals in finance and policy reform.
- The organization also **promotes environmentally sustainable development** and **gender equality** and promises to be fully transparent.

### Membership:

- The EBRD is owned by **72 countries**, the **European Union** and the **European Investment Bank**.
- **Each shareholder is represented individually on the Board of Governors** of the EBRD, which has **overall authority** over the Bank and is **responsible for approving its overall strategic direction**.
- **India became the EBRD's 69th shareholder** when it joined the Bank in July 2018.

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## QATAR COMMUTES 8 FORMER INDIAN NAVY MEN'S DEATH SENTENCE

### Why in news?

- The Court of Appeal of Qatar commuted the death sentence of eight former Indian Navy personnel.
- These personnel were arrested last year in connection with an alleged case of espionage.

### Background of the case

- **Arrest of eight navy personnel**
  - On August 30, 2022, eight former Indian Navy personnel, along with two others, were arrested on undeclared charges.
    - They were put in solitary confinement.

- **Charges against the men**
  - The officers were jailed on charges that have not been made public.
  - However, as per the media reports, the eight Indians had been charged with spying for Israel.
- **Navy veterans were awarded death penalty**
  - In March 2023, the last of multiple bail pleas filed for the veterans was rejected.
  - The trial began later that month and on October 26, 2023, the death sentence was handed to all eight men.
- **Appeal filed by India**
  - In November 2023, the MEA announced it had filed an appeal and that its legal team had details of the charges.
  - The Indian ambassador in Doha also met them in prison on December 3.
  - This consular access came days after PM Modi met Qatar's Emir Sheikh Tamim bin Hamad Al-Thani on the sidelines of the COP28 summit in Dubai on December 1.

## What avenues have been available to India?

- One has been the legal challenge, which has been admitted and helped reduce the sentence for now as a first step.
- At the same time, India has been employing diplomatic channels to reach out to the Qataris.
- The families also filed a mercy plea with the Emir of Qatar, who is known to give out pardons during Ramadan and Eid.
  - This was also being pursued by the Indian government's help.

## JAMES WEBB SPACE TELESCOPE (JWST)



After its first full calendar year of operation, astronomers are using the James Webb Space Telescope (JWST) to look for life on thousands of newly discovered planets.

## About the James Webb Space Telescope (JWST):

- JWST was built in **collaboration between NASA, the European Space Agency (ESA), and the Canadian Space Agency.**
- It was **launched in December 2021.**
- It is the **largest and most powerful space telescope** to date.
- It **orbits around** a point in space called the **L2 Lagrange point** (a **gravitationally stable location** in space). It is approximately **1.5 million km beyond Earth's orbit** and is one of the five points in the orbital plane **of the Earth-Sun system.**
- It will focus on **four main areas: the first light in the universe, the assembly of galaxies** in the early universe, the **birth of stars** and protoplanetary systems, **and planets** (including the origins of life).

## Instruments:

- Its instruments are designed to work **primarily in the infrared range** of the electromagnetic spectrum, with some capability in the visible range.
- It comprises the **Optical Telescope Element (OTE), the Integrated Science Instrument Module (ISIM), the sunshield, and the spacecraft bus.**
- The **OTE is the eye** of the Observatory. It **consists of the mirrors** and the backplane. The OTE **gathers the light coming from space** and provides it to the science instruments located in the ISIM. The backplane is like the "spine" of Webb. It supports the mirrors.
- The **ISIM contains Webb's cameras and instruments.** It integrates four major instruments and numerous subsystems into one payload.
- **The sunshield** separates the observatory into a warm sun-facing side (spacecraft bus) and a cold anti-sun side (OTE and ISIM). The sunshield **keeps the heat** of the Sun, Earth, and spacecraft bus electronics **away from the OTE and ISIM so that these pieces of the Observatory can be kept very cold.**



- The **spacecraft bus provides support functions** for the operation of the Observatory.
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## WHAT IS THE CHAMELEON TROJAN?

Cybersecurity researchers recently identified a potent variant of the infamous ‘Chameleon Trojan’ malware, posing a substantial risk to Android device users.



### About the Chameleon Trojan:

- It is a **malware** that has the **ability to disable biometric authentication** methods, including fingerprint and face unlock, to sneakily access sensitive information.
- **Working:**
  - The malware strategically **attaches itself to legitimate Android applications**, such as the widely used Google Chrome, effectively avoiding immediate detection.
  - **Operating discreetly in the background**, Chameleon Trojan can **disable biometric security measures, specifically targeting PINs**.
  - The malware bundles are reportedly **undetectable during runtime, enabling it to outsmart Google Protect alerts and circumvent security software** on the compromised device.
  - This stealthy approach allows the Trojan to operate without any worries, **evading immediate countermeasures**.
  - Its **modus operandi varies depending on the Android version**.
  - **Once active**, Chameleon Trojan **steals on-screen content, elevates its own permissions**, and can even use gestures to **capture PINs and passwords** entered by users to unlock their devices.
  - The **stolen PIN** is then **employed to unlock the device** in the background, enabling the malware to **access sensitive information** such as credit card passwords and login credentials.

- The malware also **collects information** on users' **app usage habits**, launching attacks when the device is least likely to be in use.
  - **To safeguard** against the Chameleon Trojan, it is crucial to **avoid installing Android apps from unofficial sources**. Additionally, users should refrain from enabling the 'Accessibility service' for unknown apps.
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## DEBATE ON ARTIFICIAL INTELLIGENCE & COPYRIGHT

### Why in News?

- The New York Times has sued OpenAI – the firm behind generative Artificial Intelligence (AI) platform ChatGPT – and Microsoft for unlawful use of the paper's copyrighted content.

### About OpenAI:

- OpenAI is an Artificial Intelligence research company.
- The company is best known for creating '**ChatGPT**', which is an AI conversational chatbot.
- Users can ask questions on just about anything to ChatGPT and the chatbot will respond accurately with answers, stories and essays.
- It can even help programmers write software code.

### Debate over ChatGPT's Source for Data:

- Software products like ChatGPT are based on what AI researchers call '**Large Language Models**' (LLMs).
  - LLMs require enormous amounts of information to train their systems.
- If chat bots or digital assistants need to be able to understand the questions that humans throw at them, they need to study human language patterns.
- Tech companies that work on LLMs like Google, Meta or OpenAI are secretive about what kind of training data they use.



- Tech companies use software called ‘**crawlers**’ to scan web pages, hoover up content and put it together in a dataset that can be used to train their LLMs.
- This led to news outlets like the New York Times (NYT) voice concerns over copyright violations. The NYT and other news outlets blocked a web crawler known as **GPT bot**.
  - Through GPT bot, OpenAI used to scrape data.
- The outlets told OpenAI that the **company can no longer use their published material and their journalism, to train their chat bots.**

### Reason Behind News Outlets’ Decision:

- Search engines like Google or Bing also use web crawlers to index websites and present relevant results when users search for topics.
  - However, these search engines represent a mutually beneficial relationship.
  - Google, for instance, takes a snippet of a news article (a headline, a blurb and perhaps a couple of sentences) and reproduces them to make its search results useful.
  - And while Google profits off of that content, it also directs a significant amount of user traffic to news websites.
  - On the other hand, **OpenAI provides no benefit, monetary or otherwise, to news companies.**
  - **It simply collects publicly available data and uses it for the company’s own purposes.**
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