Prelim Bits 29-07-2022 | UPSC Daily Current Affairs

Cryptojacking

According to the 'Cyber Threat Report' by the cybersecurity firm SonicWall, 'Cryptojacking' attacks on computer systems have gone up by 30% to 66.7 million in the first half of 2022 compared to the first half of 2021.

- **Coin mining** is a legitimate, competitive process used to release new crypto coins into circulation or to verify new transactions.
- It involves solving complex computational problems to generate blocks of verified transactions that gets added to the blockchain.
- The reward for the first miner who successfully manages to update the crypto ledger through this route is crypto coins.
- But the race to crack this 64-digit hexadecimal number code needs considerable computing power involving state-of-the-art hardware, and electrical power to keep the systems involved up and running.
- This is where the cryptojackers co-opt devices, servers, and cloud infrastructure, and use their resources for mining. The use of 'stolen' or cryptojacked resources slashes the cost involved in mining.
- **Cryptojacking** is a type of cybercrime that involves the unauthorized use of people's computing devices (computers, smartphones, tablets, or even servers) by cybercriminals to illicitly mine for cryptocurrency.
- Like many forms of cybercrime, the motive is profit, but unlike other threats, it is designed to stay completely hidden from the victim.

> *Unlike ransomware, which announces its presence and relies heavily on communication with victims, cryptojacking can succeed without the victim ever being aware of it.*

- In most cases, the malicious programme is installed when the user clicks on an unsafe link, or visits an infected website - and unknowingly provides access to their Internet-connected device.
- **Problems** - Cryptojacking is hard to detect and the victims of these attacks are mostly unaware that their systems have been compromised.
- The primary impact of cryptojacking is performance-related - device slowing down, heating up, or the battery draining faster than usual.
- It can also increase costs for the individuals and businesses affected because coin mining uses high levels of electricity and computing power.

Reference

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India International Bullion Exchange

Prime Minister launched India's first bullion exchange - India International Bullion Exchange (IIBX) - at Gujarat's GIFT City (Gujarat International Finance Tec-City).

- The India International Bullion Exchange (IIBX) was announced in the Union Budget 2020.
- The exchange shall work as a standard-setting tool for the quality of the bullion.
- The IIBX allows the enrolled jewelers,
    1. To trade gold and silver on the exchange,
    2. Set up necessary infrastructure to store physical gold and silver.
- The eligible qualified jewellers in India will be permitted to **import gold** through the IIBX, for the first time, since the liberalisation of gold imports through nominated banks and agencies in 1990s.
- **Structure** - The bullion exchange will be operated by an entity known as the India International Bullion Holding IFSC (International Financial Services Centre) Limited (IIBH), a joint collaboration involving the
    1. Central Despository Services (India) Limited,
    2. India INX International Exchange Limited (India INX),
    3. Multi Commodity Exchange of India Ltd (MCX),
    4. National Securities Depository Limited (NSDL) and
    5. National Stock Exchange of India Ltd (NSE).
- This holding company later operationalised IIBX, Bullion Clearing Corporation and Bullion Depository in IFSC.
- The IFSCA (Bullion Exchange) Regulations, 2020 was notified for trading of precious metals, including gold and silver. These regulations also cover bullion exchange, clearing corporation, depository and vaults.
- **Membership** - To become qualified jewellers, entities require a minimum net worth of Rs 25 crore and 90% of the average annual turnover in the last 3 financial years through deals in precious metals.
- Apart from qualified jewellers, non-resident Indians and institutions will also be able to participate on the IIBX after registering with the International Financial Services Centres Authority (IFSCA).
- In the medium term, institutions such as Funds for Gold ETF are also expected to participate.
- **Process to become a Trading Member** - Jewellers will be able to transact on IIBX as trading members or as clients of a trading member.
- To become a trading member, a qualified jeweller may establish a branch or a subsidiary in IFSC and apply to the IFSCA.
- A qualified jeweller based in India and not having physical presence in the IFSC may apply for a limited-purpose trading membership.
- [Limited-purpose trading membership is where the entity can only trade on its own

account and no client onboarding shall be permitted.]

- The IIBX will submit a report to IFSCA on a monthly basis providing details of transactions in bullion by qualified jewellers, including details of products traded, quantity, value, quantity of gold imported etc.
- **Working** - Registered jewellers will have to become a trading partner or a client of an existing trading member to trade in the exchange.
- A branch or a subsidiary needs to be opened with IFSC for the same.
- The jewellers who do not have a physical presence in India will also be able to transact the metals, but they will not be allowed to connect with a client under them.
- **Products for trading** - In the early stage, gold 1 kg with 995 purity and gold 100 g with 999 purity will be traded with a T+0 settlement (100% upfront margin).
- Later on, the products will be extended for T+2 (contracts with margin payments), where settlement of funds happens two business days after the order is executed.
- A separate segment for UAE gold or gold with large bars (12.5 kg) may trade in future on the IIBX.
- Silver products will also be made available in later phases.

Reference

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3. https://www.iibx.co.in/static/about.aspx
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Samudrayaan Mission

Recently, scientists tested a basic version of the human-carrying shell of the Samudrayaan mission, off the Chennai coast.

> *The National Institute of Ocean Technology (NIOT), Chennai is an autonomous institute under the Ministry of Earth Science (MoES).*

- In 2019, the National Institute of Ocean Technology (NIOT) announced the Samudrayaan Mission (Deep Ocean mission) mission - India's first manned ocean mission.
- It is aimed to develop a self-propelled manned submersible vehicle to carry 3 human beings to a water depth of 6000 m in the ocean for deep ocean exploration with a suite of scientific sensors and tools like,
    1. Autonomous Coring System (ACS),
    2. Autonomous Underwater Vehicle (AUV) and
    3. Deep Sea Mining System (DSM).
- This submersible will conduct deep-ocean exploration for resources such as gas hydrates, polymetallic manganese nodules, hydro-thermal sulphides, and cobalt crusts,

which are found at 1000 to 5500 m depths.
- This manned submersible has an endurance of 12 hours of operational period and 96 hours in case of emergency.
- It will allow scientific personnel to observe and understand unexplored deep sea areas by direct interventions.
- The projected timeline is 5 years for the period 2020-2021 to 2025-2026.
- To know more about Deep Ocean Mission, click here and here.

Reference

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2. https://zeenews.india.com/india/samudrayaan-indias-first-manned-deep-sea-probe-to-travel-6-km-underwater-2406799.html
3. https://www.republicworld.com/technology-news/science/what-is-indias-samudrayaan-project-all-about-the-deep-ocean-mission-launched-by-centre.html

11th Agriculture Census

The Union Minister for Agriculture and Farmers Welfare has launched the Eleventh Agricultural Census (2021-22) in the country.

- For the first time, in the 11th Agricultural Census, the data will be collected through smart phones and tablets.
- The fieldwork of the Eleventh Agricultural Census (2021-22) will start in August 2022.
- The agricultural census is the main source of information on a variety of parameters, such as the number and area of operational holdings, their size, class-wise distribution, land use, tenancy and cropping pattern, etc.
- The basic unit of data collection in Agriculture Census is the **operational holding**.
- The Agriculture Census is conducted **every 5 years** by the Department of Agriculture, Cooperation and Farmers Welfare under the Ministry of Agriculture and Farmers Welfare.
- The first edition of the census was conducted in 1970-71.
- The tenth edition of the census was conducted with the reference year 2015-16.
- **Similar Links** - Livestock Census, 20th Livestock Census in India

Reference

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3. https://agcensus.nic.in/acindia.html

UNAIDS Report 2022

The UNAIDS has recently released a report titled 'In Danger', which is by the Joint UN Programme on HIV and AIDS.

In 2021, there were 1.5 million new HIV infections and 650,000 AIDS-related deaths. This translates to 4,000 new HIV infections every day.

That's 4,000 people who will need to be tested, started on treatment, avoid infecting their partners, and stay on treatment for the rest of their lives. It also translates to 1,800 deaths every day due to AIDS (one death every minute).

- **Globally,** the campaign against HIV has been hit hard globally in the last two years by the Covid pandemic and other global crises because of resource crunch.
- The number of new infections dropped only 3.6% between 2020 and 2021, the smallest annual decline in new HIV infections since 2016.
- If current trends continue, we expect that, in 2025, we will have 1.2 million people newly infected with HIV in that year.
- These data show the global AIDS response in severe danger.
- **India** has seen reductions in HIV infections compared to the rising trend in Asia and the Pacific.
- It said that India - which is among 30 tuberculosis-HIV high-burden nations - is among the eight countries that saw a decline in tuberculosis-related deaths among people living with HIV.
- India also figured among the two countries which saw some of the most significant reductions in HIV infections even amidst Covid-19 and other crises.
- However, the report said that India saw an 8% decline in providing TB preventive therapy to people living with HIV in 2019 and 2020.
- The two other countries were South Africa and the United Republic of Tanzania, which saw treatment fall by 30%.

Reference

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