

16th December, 2021 Current Affairs

1. India's first Green Hydrogen Micro grid Projects:

Key Highlights:

- The project has been awarded at the Simhadri plant of NTPC Ltd. in Andhra Pradesh.
- NTPC will involve in "Standalone Fuel-cell based Microgrid along with hydrogen production using electrolyzer" project at NTPC Simhadri.
- India has also planned to call bids to build 4 gigawatt (GW) of electrolyzer capacity under its energy security strategy.



Green Hydrogen Mobility project:

For a green hydrogen mobility project, NTPC Renewable Energy Limited (NTPC REL) has also signed a pact with Union territory of Ladakh.

This project will be executed by NTPC in association with the NVVN.

How Green Hydrogen is produced?

Green hydrogen is produced by separating water into hydrogen and oxygen using an electrolyzer, which is powered by renewable energy sources like wind and solar. Green Hydrogen as fuel can be a game-changer for India's energy security. India currently imports 85% of its oil and 53% of gas requirements.

Importance of the project:

- This project will act as a precursor to large scale hydrogen energy storage projects. It will also be useful to study and deploy multiple microgrids in several off-grid and strategic locations in India.
- This project has been designed in-house by NTPC.
- It would open doors for decarbonising the far-off regions in India like Ladakh, Jammu & Kashmir (J&K).

- Project has been implemented in line with the vision of Prime Minister Narendra Modi to become carbon neutral by 2070 and make Ladakh a carbon-neutral territory.

Installed Capacity of NTPC:

Across 70 power projects, NTPC has an installed capacity of around 67.907 GW. 18 GW projects are under construction. NTPC has aimed to generate 60 GW renewable energy capacity by 2032 from the current capacity of 4.7 GW.

Simhadri Super Thermal Power Plant:

It is a coal-fired power plant, established in Visakhapatnam city of Andhra Pradesh. It is one of the coal fired power plants of NTPC. Coal for this power plant is sourced from Kalinga Block of Talcher Coal fields in Odisha. It is a national asset, and power generated is shared between multiple states.

2. Typhoon Rai has hit Philippines:

Recently, Typhoon Rai hit the south-eastern part of the Philippines, bringing heavy rains and flooding causing displacement of thousands over a large area.

Key Highlights:

- Rai typhoon was the 15th major weather disturbance that hit the country in year 2021.
- It intensified speedily and classified as a super typhoon, with sustained winds of 120 miles per hour. It had the gusts of up to 168 miles per hour.
- This designation is similar to a Category 5 hurricane in United States.



About Typhoon Rai:

Typhoon Rai is called as Typhoon Odette in the Philippines. It is currently a powerful tropical cyclone, which impacted the Philippines after passing near the island of Palau. It became the first Category 5 super typhoon in December month. It later weakened steadily, as it traversed Visayas and exited into the Sulu Sea.

About the Sulu Sea:

Sulu Sea is a water body in south-western area of the Philippines. The sea comprises of a number of islands, they are as follows:

- Cuyo Islands
- Cagayan Islands
- Mapun Islands
- Turtle Islands

About the Philippines:

Philippines is an archipelagic country, located in Southeast Asia. It is situated in western Pacific Ocean. It comprises of around 7,640 islands. These islands are broadly categorized into three main geographical divisions- Luzon, Visayas, and Mindanao. The Philippines shares boundaries with South China Sea, Philippine Sea and Celebes Sea as well as shares maritime borders with Taiwan, Japan, Palau, Indonesia, Malaysia and Brunei.

3. SEBI has proposed on Algo Trading:

According to brokerage houses, proposal by SEBI to treat all orders emanating from application programming interface (API) as algorithmic or algo order might hamper the growth of such trading in India.



Key Facts:

- Algo trading refers to any order which is generated using automated execution logic.
- The algo trading system monitors the live stock prices, automatically and initiates an order when all the criteria are met.
- This system frees the trader from monitoring the live stock prices and initiate manual order placement.

What are the concerns raised by Brokerage houses?

Brokerage houses are of the view that, there is a requirement to regulate nascent algo market, especially in the light of media reporting on a number of cases of retail clients who lost money based on false promises made by some vendors. However, to tackle the few bad cases, SEBI's regulation is putting in hurdles which in turn can restrict the growth of algo trading in India. It would become difficult for brokers to provide APIs, if conditions mentioned in consultation paper are implemented.

What is Algorithmic Trading?

Algorithmic Trading is a method to execute orders using automated pre-programmed trading instructions accounting for variables like price, time, and volume. Such trading leverages the speed and computational resources of computers relative to human traders. This trading has been gaining traction with retail as well as institutional traders. It is used by investment banks, mutual funds, pension funds and hedge funds. According to a 2019 study, around 92% of trading in Forex market was performed by trading algorithms.

About Securities and Exchange Board of India (SEBI):

SEBI is the regulatory body for securities & commodity market in India. It works under the ownership of Ministry of Finance. SEBI was founded as non-statutory body on April 12, 1988. It was given Statutory Powers & became autonomous body on January 30, 1992 by the SEBI Act, 1992.

4. PM Modi has been conferred with highest civilian honour of Bhutan:

Recently, Prime Minister Narendra Modi has been conferred with Bhutan's highest civilian award called Ngadag Pel gi Khorlo.

Key Highlights:

- He was conferred with the award on the occasion of Bhutan's National Day.
- National Day of Bhutan is observed on December 17.



- It marks the crowning of Ugyen Wangchuck as first Druk Gyalpo of modern Bhutan.
- On the occasion, celebrations were held at Changlimithang Stadium.
- Celebration includes a public address by the Druk Gyalpo as well as a procession including a statue of Ugyen Wangchuck, honouring the first Druk Gyalpo and independent Bhutanese nation.

About the Druk Gyalpo:

The Druk Gyalpo is the head of state of Bhutan. Bhutan is also known as Drukyl, in the Dzongkha language. It translates to "The Land of Thunder Dragon". Kings of Bhutan are called as Druk Gyalpo (Dragon King) while, Bhutanese people call themselves Drukpa (people of Druk).

Present sovereign of Bhutan:

Present Sovereign of Bhutan is Jigme Khesar Mangyel Wangchuck. He is the 5th Druk Gyalpo. He wears the Raven Crown, the official crown worn by the kings of Bhutan.

5. India has launched the SMART:

Recently, India has successfully launched Supersonic Missile Assisted Release of Torpedo System (SMART) from Abdul Kalam Island, off the Odisha coast.

Key Highlights:

- During the mission, full range capability of the missile was successfully demonstrated.
- This SMART system has been designed for enhancing anti-submarine warfare capability far beyond the conventional range of torpedo.
- This was a textbook launch, in which entire trajectory of the test was monitored by the electro optic telemetry system and several range radars, including down range instrumentation & down range ships.
- SMART carried a torpedo, release mechanisms and parachute delivery system.



- It was launched from a ground mobile launcher and can cover a range of distances.
- The Defence Research and Development Organization (DRDO) has developed the weapon for Indian Navy.

About Supersonic Missile Assisted Torpedo (SMART):

SMART is a next-generation, missile based standoff torpedo delivery system. It has been designed to enhance the anti-submarine warfare capability. Missile will work beyond the conventional range of the torpedo. It is a canister-based missile system comprising of advanced two-staged solid propulsion, precision inertial navigation and electromechanical actuators.

Recent Tests by DRDO:

DRDO successfully flight-tested indigenously developed helicopter-launched stand-off anti-tank (SANT) missile on December 11, 2021, in Pokhran firing ranges of Rajasthan. Missile can neutralise targets in a range up to 10 kms. Before this launch, DRDO also conducted a series of successful tests on Extended Range Pinaka rocket system (Pinaka-ER).

About Defence Research and Development Organisation (DRDO):

DRDO is the apex agency, working under the Department of Defence Research and Development of Ministry of Defence. It is charged with military's research and development. The agency is headquartered in Delhi. It was established in 1958.

6. Myanmar: NU Government officially accepted Tether cryptocurrency:

Myanmar's shadow government has allowed the use of world's largest cryptocurrency called Tether.

Key Highlights:

Tether Cryptocurrency will be used as an official currency.

This move will make it easier to raise funds and make payments.



Background:

The National Unity Government (NUG) comprises of pro-democracy groups and some members from Myanmar's civilian administration, which was overthrown in a military coup recently. The NUG has been working to raise funds for its revolution of toppling the ruling military government in Myanmar. In the other move, the Military government has outlawed and designated NUG as a terrorist.

About Tether:

Tether is a cryptocurrency, which is hosted on the Ethereum blockchain. Its tokens are issued by Tether Limited. Tether limited is controlled by owners of Bitfinex. Tether is called a stablecoin, since it was originally designed to always be worth US\$1 and maintain \$1.00 in reserves. It can be transferred in a similar way as cryptocurrencies such as Bitcoin. Thus, it becomes difficult for governments and other authorities to track or prevent payments.

Market Value of Tether:

Market value of Tether is \$76bn.

Controversy surrounding Tether:

Tether Limited as well as Tether cryptocurrency are controversial because of alleged role of Tether Limited in manipulating the price of Bitcoin, and its failure to provide a promised audit on adequate reserves backing the Tether token.

What is Cryptocurrency?

Cryptocurrency is a collection of binary data, working as a medium of exchange.

Cryptocurrency are not found in physical form like paper money. It is typically not issued by a central authority. It usually uses decentralized control, as opposed to central bank digital currency (CBDC). It is a tradable digital asset or digital money.

Bitcoin was the first decentralized cryptocurrency, which was released in 2009.

Bitcoin was invented in 2008.

7. National Summit on Agro and Food Processing:

Recently, Prime Minister Narendra Modi has addressed the valedictory session of “National Summit on Agro & Food Processing”.



PM to address farmers during **National Summit on Agro and Food Processing** on 16th December

Key Highlights:

- During his address, Prime Minister has presented the detailed contours of Natural Farming.
- This summit was organised to emphasize on natural farming and to deliver message to farmers in far flung areas of India.

About National Summit on Agro & Food Processing:

- This summit was organised as part of “Vibrant Gujarat Summit” which was held in Anand, Gujarat from December 14 to December 16.
- Conference has witnessed and attended by 5000 farmers.
- 80 central institutes of Indian Council of Agricultural Research (ICAR), ATMA network in states and Krishi Vigyan Kendras have also connected farmers to witness that event live.
- During the event, farmers got to know and learn about practice and benefits of Natural Farming.

Government’s measure to transform agriculture:

Government has initiated several measures for transforming agriculture with the objective of increasing farmer’s income, in last six years.

Government has also been taking efforts to promote & support initiatives for reducing cost, accessing market and maintaining the sustainability of system.

About Zero Budget Natural Farming:

Government has also implemented ‘Zero Budget Natural Farming’ as a promising tool for minimizing the dependence of farmers on purchased inputs and reducing the cost of agriculture by using traditional field-based technologies. It emphasizes on shifting agriculture practices from mono-crops to diversified multi-crops

system. Cow and its dung & urine play an important role in making inputs like Beejamrit, Jivamrit and Ghanjivamrit, on the farm.

8. Asian Development Outlook report- Update:

The Asian Development Bank released its Asian Development Outlook Report and reduced its growth forecasts for developing Asia for year 2021.



Key Highlights:

- This move came in line with the uncertainty that new Omicron coronavirus variant has brought.
- ADB now sees 2021 gross domestic product (GDP) growth of 7.0% for developing Asia, as opposed to 7.1% forecast.
- For 2022, it forecasted the growth of 5.3%.
- Most of developing Asia's subregions are expected to grow slower than previous forecast in 2021.

ADB on China's growth:

ADB has projected China's growth as 8.0% in 2021 and will slow down to 5.3% in 2022. China's economy, which staged an impressive rebound from last year's pandemic slump, has lost momentum in recent months as it grapples with surging prices, a slowing manufacturing sector, debt problems in the property market and persistent COVID-19 outbreaks.

ADB on India's growth

The ADB has reduced its 2021 growth forecast to 9.7% for India as opposed to the 10.0% estimate of September 2021. However, 2022 growth forecast has been unchanged.

About Asian Development Outlook:

Asian Development Outlook is an annual publication by Asian Development Bank (ADB). The outlook offers economic analysis and forecasts. It also examines the

social development issues, for Asian countries. The report is published in March or April, while an update on it is published in September. It is prepared by staff of ADB's regional departments, and field offices, in coordination with the Economic Research and Regional Cooperation Department.

About Asian Development Bank (ADB):

ADB is a regional development bank. It was established on December 19, 1966. It is headquartered in Philippines. ADB also maintains 31 field offices worldwide, for promoting social and economic development in Asia. Currently, it has 68 members.