

Carbon Capture Utilisation and Storage (CCUS), the technology for decarbonising emissions from high polluting sectors such as steel, cement, oil, gas, petrochemicals, chemicals and fertilizers, has a critical role to play for the country to halve carbon dioxide emissions by 2050, says a report on the policy framework of the CCUS prepared by the NITI Aayog and MN Dastur & Company. The report, released on Tuesday by NITI Aayog Vice Chairman Suman K. Bery, said the CCUS technology would help in promoting the low carbon hydrogen economy and in removal of the CO₂ stock from the atmosphere.

The Indian Army is currently engaged in bilateral exercises with five countries under way both inside and outside the country meant to improve interoperability. The 18th edition of India-U.S. Army exercise 'Yudh Abhyas' which is under way at Auli in Uttarakhand, about 100 km from the Line of Actual Control. Other exercises such as Ex Austra Hind with Australia are under way at Mahajan field firing ranges in Rajasthan from November 28 to December 11 and Ex Agni Warrior with Singapore at Deolali from November 13 to December 03. The outgoing exercises are Ex Harimau Shakti with Malaysia from November 28 to December 12 and Ex Garuda Shakti with Indonesia, between Special Forces began on November 21. Ex KazInd with Kazakhstan is scheduled in mid-December.

The Chilume Educational Cultural and Rural Development Trust has been accused of collecting personal information from the public, under the guise of spreading awareness, by impersonating BBMP officials. The personal information of the voters, including Aadhaar number, phone number and voter ID number, was uploaded on an app developed by the Trust and not on the Election Commission's voter registration app (Garuda). Activist and electoral rolls analyst P.G. Bhat said that while a probe would act as deterrence, he was sceptical about data recovery.

Betting in parts of Manipur has literally gone wild. Police and forest officials in the State's Ukhrul town have been scanning "gambling dens" following reports of wild animals — dead or alive — being offered as prizes for raffle draws. Ukhrul is about 80 km northeast of the State capital Imphal. Wildlife activists based in the town said there have been instances of people buying raffle draw tickets ranging from ₹100 to ₹500 to try their luck to win exotic meat. The larger or rarer the bird or animal or body part, the higher the price of the ticket.

Supreme Court on Tuesday said that increasing the number of judges will not demolish the perennial problem of pendency, noting that it is already difficult finding good lawyers to accept the call to the Bench in High Courts. The

RBI RELUCTANT TO ISSUE NON-BANK FINANCE COMPANY (NBFC) LICENCES TO FINTECHS

1. It is being reported that several FinTechs are making representations to RBI to secure NBFC licence but RBI has put it on hold for considering: Issues relating to ownership of FinTechs, especially pertaining to origin of capital flowing into these companies.
2. Practice of charging exorbitant rate of interest by FinTechs. FinTech is broadly used to describe emerging technological innovations in the financial services sector, with ever increasing reliance on information technology. Indian FinTech industry was valued at \$ 50-60 Bn in FY20 and is estimated at ~\$ 150 Bn by 2025.
3. Most prominent FinTech innovations can be categorised into Payments, Clearing & Settlement; Deposits, Lending & capital raising; Market provisioning; Investment management and Data Analytics & Risk Management. Benefits of FinTech are efficiency improvements, risk and cost reduction and greater financial inclusion.
4. In India, Fintech can provide workable solutions to the problems faced by traditional financial institutions such as low penetration, scarce credit history and cash driven transaction economy.
5. **Key challenges:** difficulty of regulating an evolving technology with different use cases, monitoring activity outside the regulated sector, identifying new risks arising from technology.

CHINA DEVELOPS PERENNIAL RICE VARIETIES

1. Rice variety named PR23 does not need to be planted every year and can yield eight consecutive harvests across four years (as these plants with stronger roots grow back vigorously after each harvest).
2. **Key benefits of perennial rice varieties**-Reduce cost of inputs as it requires less labour, seeds and chemical inputs (saved 58% in labour and 49% in other input costs). Remarkable environmental benefits such as soils accumulating close to a ton of organic carbon (per hectare per year) along with increase in water availability to plant. Counter the impact of climate change on food security and rural incomes.
3. **Concerns raised:** needs one to two more herbicide treatments than regular rice, more work to resow the perennial rice when its yield falters etc. Earlier, Indian Agricultural Research Institute also launched an herbicide-tolerant rice that can be directly sown into soil, cutting expenditure on water and farm workers.
4. **Rice cultivation in India:** India is world's second largest rice producer, after China, and largest exporter. It is a kharif crop. Needs high temperature (21 to 37° C throughout life period of crop), high humidity, prolonged sunshine, and an assured supply of water. Soils with good water retention capacity with high amount of clay and organic matter are ideal.

INDIA'S FIRST PRIVATE LAUNCH PAD UNVEILED AT SRIHARIKOTA

1. Facility has been designed by Agnikul (a start-up) and executed in support with ISRO and IN-SPACe (Indian National Space Promotion and Authorization Centre). It is specifically built to support liquid-stage controlled launches while also addressing ISRO's need for monitoring key flight safety parameters during launches.
2. **Indian space sector was opened up to the private sector in 2020 to: Meet Growing demand:** ISRO alone can't cater to the rising demand for space-based applications and services within India. Enable ISRO to fulfil its strategic objectives and focus on core research. Increase India's share in global space market (currently it is only 2% in the global space sector). Secure our space capabilities and make them more robust. Expand satellite-based services.
3. **Steps to promote private sector**-Launch of Indian Space Association (ISpA) to help boost space technology in India. IN-SPACe: A single-point interface between ISRO and private companies. New Space India Limited (NSIL) to facilitate use of R&D carried out by ISRO for commercial purposes through Indian industry partners.

IN A FIRST, ROLLS-ROYCE SUCCESSFULLY TESTS HYDROGEN-POWERED JET ENGINE

1. Test was aimed at proving that hydrogen fuel can safely and efficiently deliver power for small-mid size aircraft from the mid-2030s onwards. Green hydrogen, created by wind and tidal power, was used. A hydrogen internal combustion engine (ICE) works on the same

court said that a public interest litigation (PIL) petition seeking to “double” the number of judges in the High Courts and the district judiciary was a rather “simplistic” solution to arrears. At one point, Chief Justice of India D.Y. Chandrachud asked petitioner advocate Ashwini Kumar Upadhyay whether he wanted the Supreme Court to increase its judicial strength to 70 from the current 34.

Singapore Airlines will get a 25.1% stake in Air India and make an investment of ₹2,059 crore in the Tata owned airline as part of an agreement to merge their joint venture Vistara with the larger Indian carrier. The merger will allow the Tata group to consolidate the different airlines it owns under an enlarged Air India group.

Filmmaker Nadav Lapid has “abused” Indian hospitality by referring to the film *The Kashmir Files* as “propaganda” and “vulgar”, the Israel’s Ambassador to India has said. In an “open letter” to Mr. Lapid, the Israeli envoy, Naor Gilon, equated the film on the exile of the Pandit community from the Kashmir Valley with Steven Spielberg’s Holocaust classic *Schindler’s List* and urged the filmmaker to “justify” his criticism of the film.

500 migrant worker deaths for the Qatar World Cup 2022, according to the secretary general of Qatar’s Supreme Committee for Delivery and Legacy. He said that, “One death is a death too many”. Many human rights groups have claimed a death toll of more than 6,000 since the country was set to host the Cup.

India has emerged as a regional power and net security provider in the Indo-Pacific as its capacity to provide humanitarian assistance and disaster relief to its citizens and regional partners has grown, Defence Minister Rajnath Singh said.

The Supreme Court on Monday modified its status quo order on felling trees in the Aarey Colony, allowing Mumbai Metro Rail Corporation Ltd. (MMRCL) to pursue its application before the Tree Authority for permission to cut 84 trees for a train ramp at its metro car shed project.

West Bengal Chief Minister Mamata Banerjee on Tuesday said her government was creating a new district of Sundarbans and working on a master plan with the Centre to prevent river erosion in the region.

principles as a traditional ICE, except that it uses hydrogen in place of a petroleum-based fuel.

2. Burning the hydrogen fuel produces the energy needed to drive the engine. A hydrogen ICE is not the same as a hydrogen fuel cell, which has been used in some electric vehicles. In hydrogen fuel cell, hydrogen powers the cells leading to creation of electricity that will drive the vehicle’s engine.
3. **Benefits of hydrogen ICE**-Near zero-carbon fuel of the future. Wider flammability range (temperature band within which hydrogen can be combusted) allows for a wider range of fuel-air mixtures. Greater thermal efficiency than hydrocarbon fuel engines. Able to operate with lower grade hydrogen. Challenges in using hydrogen as a fuel: difficult to transport, risk of engine backfire and premature ignition etc.

MINISTRY OF DEFENCE HOLDS 4TH INDIA-FRANCE ANNUAL DEFENCE DIALOGUE

1. Key areas of discussion included defence industrial cooperation with a focus on ‘Make in India’, strengthening of maritime cooperation and increasing the scope of bilateral exercises. Both sides also committed to enhance cooperation in bilateral, regional, and multilateral fora, with a focus on the Indo-Pacific region.
2. **Significance of India-France Cooperation**-Defence modernization: A market to procure increasingly critical military technologies as India struggles with its indigenous defence industries. India is a vast market for defence sales for France.
3. **Cooperation in space activities**: such as use of outer space assets in developing maritime domain awareness, satellite navigation, space transportation, human exploration of space etc. New economic opportunities: With France, India is looking towards manufacturing and export of emerging and critical defence technologies to newer markets. Greater role in Indo-Pacific: Growing assertiveness of China, increasing strategic competition between China and US have produced major transformations and disruptions throughout the region. Territories in Indo-Pacific accounts for 93% of France’s exclusive economic zone (EEZ).
4. **Initiatives taken for cooperation in Indo-Pacific**-Indo-Pacific Trilateral Development Cooperation Fund. India-France-UAE trilateral framework and India-France-Australia Trilateral mechanism for deepening cooperation. Reciprocal Logistics Support Agreement. Indo-Pacific Natural Parks Partnership.

RECALIBRATION LIKELY FOR CENTRAL SCHEMES

1. NITI Aayog and Economic Advisory Council to Prime Minister are jointly reviewing all central sector (CS) and centrally-sponsored schemes (CSS).
2. **Need for reviewing the schemes**-A large number of Schemes results in spreading resources thin and thereby adversely impact desired outcomes. Adversely affect outcomes as ‘One-Size-Fits All’ approach of CSS gives less flexibility to states in implementing.
3. Many schemes overlap and most of the schemes do not have a sunset clause and their outcomes can’t be measured easily. Many schemes require burdensome matching requirements from states which becomes an issue especially for states with lower fiscal capacity.



“Most of the advice you received was good to be passed on, you too can do the same.”

DR. KHAN
(KSG)