

### NEWSPAPER HIGHLIGHT

Scientists have discovered what is believed to be the world's northernmost landmass — a yet to - be named island north of Greenland that could soon be swallowed up by seawaters. Researchers came upon the landmass on an expedition in July, and initially thought they had reached Oodaaq, up until now the northernmost island on the planet. Oodaaq is some 700 km south of the North Pole, while the new island is 780 m north of Oodaaq.

A new artificial intelligence tool is set to enable scientists to more accurately forecast Arctic sea ice conditions months into the future. The improved predictions could underpin new early warning systems that protect Arctic wildlife and coastal communities from the impacts of sea ice loss as per a report in Nature Communications.

Climate experts have shown there will be a significant future increase in the occurrence of slow moving intense rainstorms across Europe. The scientists estimate that these slow moving storms may be 14 times more frequent across land by the end of the century. It is these slow moving storms that have the potential for very high precipitation accumulations.

More than one billion years' worth of rocks have gone missing from the geologic record of Grand Canyon. A series of faulting events may have rocked the region during the breakup of an ancient supercontinent called Rodinia. This likely tore up the earth around the canyon, causing rocks and sediment to wash away and into the ocean.

Lone fruit flies quarantined in test tubes tend to sleep too little and eat too much after only about one week of social isolation. The findings, which describe how chronic separation from the group leads to changes in gene expression, neural activity, and behaviour in flies, provide one of the first robust animal models for studying the body's biological reaction to loneliness.

The Supreme Court has held that public employers, especially the police, should take care not to

### SOVEREIGN GOLD BOND SCHEME

- 1.The Reserve Bank of India (RBI) has announced the Sovereign Gold Bond Scheme 2021-22 Series VI, which will be open for subscription for the period August 30-September 3, 2021.
- 2.About the Sovereign Gold Bond Scheme: The sovereign gold bond was introduced by the Government in 2015. **Government introduced these bonds to help reduce India's over dependence on gold imports.** The move was also aimed at changing the habits of Indians from saving in physical form of gold to a paper form with Sovereign backing.
- 3.Eligibility: The bonds will be restricted for sale to resident Indian entities, including individuals, HUFs(Hindu Undivided Family), trusts, universities and charitable institutions. Denomination and tenor: The bonds will be denominated in multiples of gram(s) of gold with a basic unit of 1 gram. The tenor will be for a period of 8 years with exit option from the 5th year to be exercised on the interest payment dates. Minimum and Maximum limit: **The minimum permissible investment limit will be 1 gram of gold, while the maximum limit will be 4 kg for individual, 4 kg for Hindu Undivided Family and 20 kg for trusts and similar entities** per fiscal (April-March) notified by the government from time to time.
- 4.Joint Holder: In case of joint holding, the investment limit of 4 kg will be applied to the first applicant only. Collateral: Bonds can be used as collateral for loans. The loan-to-value (LTV) ratio is to be set equal to ordinary gold loan mandated by the Reserve Bank from time to time.

### INCENTIVES TO INDUSTRIES FOR USING STUBBLE

- 1.In an effort to check stubble burning menace during the paddy season, Punjab Government has announced a slew of measures. Highlights: **Certain categories of industries have been permitted to install paddy-straw-fired boilers to claim fiscal incentives.** Cumulative fiscal incentives of ₹25 crore have been provided to the first 50 existing industries on 'first come first serve' basis for using paddy straw as fuel in boilers. Non-fiscal incentives to industries are in terms of availability of 'Panchayat' land for storage of paddy straw with lease agreement upto 33 years. Balers would be made available on priority in areas where paddy straw is used as fuel in boilers.
- 2.Significance: The move would help in tackling the menace of stubble burning during harvesting of Kharif crops, thus also conserving the fertility of soil and saving the beneficial micro-organisms. What is stubble burning? **It is a common practice followed by farmers to prepare fields for sowing of wheat in November as there is little time left between the harvesting of paddy and sowing of wheat.** Impact: Stubble burning results in emission of harmful gases such carbon dioxide, sulphur dioxide, nitrogen dioxide along with particulate matter.
- 3.Why farmers opt for stubble burning? They do not have alternatives for utilising them effectively. **The farmers are ill-equipped to deal with waste because they cannot afford the new technology that is available to handle the waste material.** With less income due to crop damage, farmers are likely to be inclined to light up their fields to cut costs and not spend on scientific ways of stubble management.
- 4.Effects of Stubble Burning: Pollution: Open stubble burning emits large amounts of toxic pollutants in the atmosphere which contain **harmful gases like methane (CH<sub>4</sub>), Carbon Monoxide (CO), Volatile organic compound (VOC) and carcinogenic polycyclic aromatic hydrocarbons.** They may eventually cause smog. Soil Fertility: Burning husk on ground destroys the nutrients in the soil, making it less fertile. Heat Penetration: Heat generated by stubble burning penetrates into the soil, leading to the loss of moisture and useful microbes.
- 5.Alternative solutions that can avoid Stubble Burning: Promote paddy straw-based power plants. It will also create employment opportunities. Incorporation of crop residues in the soil can improve soil moisture and help activate the growth of soil microorganisms for better plant growth. Convert the removed residues into enriched organic manure through composting.

induct criminals into their rolls while brushing off their violent past as “petty misdemeanours” of youth quite common in rustic India. The court said certain types of repetitive crimes such as molestation of women, assault, trespass, etc., point to its casteist, hierarchical underbelly.

The augmentation of India’s security capabilities has ensured that the country has not suffered any terrorist attacks by sea route since the 2008 Mumbai terrorist attack, Defence Minister Rajnath Singh said. Commissioning the seventh Off-shore Patrol Vessel (OPV), ICGS Vighraha, built indigenously by Larsen & Toubro for the Coast Guard (ICG), the Minister said the Coast Guard was continuously enhancing the capacity of the nation.

To ensure seamless transfer of personal vehicles across States, the Road Transport Ministry has come up with Bharat Series (BHseries), a new registration mark for new vehicles. In this regard, the government has notified a new vehicle registration regime that will free vehicle owners from re-registration process when they shift from one State/Union Territory to another. “This vehicle registration facility will be available on voluntary basis to defense personnel, employees of central government/ State government/ central/ State public sector undertakings and private sector companies/organisations, which have their offices in four or more states/union territories.

Iran’s supreme leader Ayatollah Ali Khamenei on Saturday accused U.S. President Joe Biden’s administration of making the same demands as his predecessor Donald Trump in talks to revive a nuclear accord.

China’s Defence Ministry protested on Saturday the passage of a U.S. Navy warship and Coast Guard cutter through the waters between China and Taiwan, a self-governing island claimed by China. A statement posted on the Ministry’s website called the move provocative and said it shows that the U.S. is the biggest threat to peace and stability and creator of security risks in the 160-km wide Taiwan Strait.

Hurricane Ida intensified over warm Gulf of Mexico waters and took aim at the U.S. Gulf Coast, prompting tens of thousands in Louisiana and off-shore energy workers to flee to safety.

## KHORASAN PROVINCE

- 1.IS-K – Islamic State Khorasan Province – is the regional affiliate of the Islamic State group. It is the most extreme and violent of all the jihadist militant groups in Afghanistan.
- 2.IS-K was set up in January 2015 at the height of IS’s power in Iraq and Syria, before its self-declared caliphate was defeated and dismantled by a US-led coalition.
- 3.“Khorasan” refers to a historical region covering parts of modern-day Afghanistan and Pakistan.
- 4.The group initially included Pakistan until a separate Pakistan section was declared in May 2019.

## CHINA’S INTEREST IN AFGHANISTAN

- 1.Recently, following the withdrawal of US forces from Afghanistan, China has emerged as one of the first nations to develop diplomatic channels with the Taliban. This engagement emanates from China's economic and security interest in Afghanistan.
- 2.About China’s Economic Interest in Afghanistan: **Reserves of Lithium:** Afghanistan is probably home to what may be the world’s largest reserves of lithium. Lithium is the key ingredient of the large-capacity lithium-ion batteries that are widely used in electric vehicles and the renewable energy industry. China dominates Lithium-Ion Battery Production worldwide and it may seek long-term a contract with the Taliban to develop Afghanistan’s massive untapped lithium reserves in return for mining rights and ownership arrangements.
- 3.Mineral Deposits: Afghanistan is sitting on mineral deposits estimated to be worth up to \$3 trillion. **Afghanistan is rich in several resources such as gold, oil, bauxite, rare earths, chromium, copper, natural gas, uranium, coal, iron ore, lead, zinc, gemstones, talc, sulphur, travertine, gypsum and marble.**
- 4.China’s Belt and Road Initiative: China’s strategic Belt-and-Road Initiative (BRI) could get more reach if it is able to extend the initiative from Pakistan to Afghanistan, with a Peshawar-to-Kabul motorway.
- 5.Impact of China-Taliban Engagement on India: **A new route of BRI through Kabul would render India’s reluctance to join BRI less consequential.** With China-Taliban engagement, there can be formation of a new regional geopolitical axis between China-Pakistan-Taliban, which may go against the interests of India.

## ENVIRONMENT AND AGRICULTURAL MINISTERIAL MEETING: BRICS

- 1.The BRICS (Brazil, Russia, India, China and South Africa) Environment and Agriculture Ministers’ Meeting was held. BRICS brings together the major emerging economies of the world, hosting 41% of the world population, contributing 24% of the world Gross Domestic Product (GDP) and over 16% share in world trade. India is the chair of the BRICS grouping for 2021.
- 2.Area of Focus: **Air pollution, circular economy, combating marine plastic litter and single use plastic product pollution, forestry, including the prevention and mitigation of forest fires,** and conservation of biodiversity. Agreed to focus on cooperation on waste management.
- 3.New Delhi Statement on Environment was Adopted: It is aimed at furthering the spirit of Cooperation for Continuity, Consolidation and Consensus in Environment among the BRICS Nations, especially ahead of the COP15 Biodiversity meet and COP26 (Climate Change) later this year.
- 4.India’s Stand: Acknowledged that the Climate Change 2021 Report: **IPCC may be the last signal for taking concrete collective global actions against global environmental and climate challenges.** Actions should be guided by equity, national priorities and circumstances, and the principles of “Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC)”.

## NEW GUIDELINES FOR POULTRY FARMERS

- 1.According to new guidelines for poultry farmers, small and marginal poultry farmers in India will now have to take measures similar to their bigger counterparts to prevent environmental pollution. Till now, small poultry farms in India were exempt from environmental laws.
- 2.In 2020, the National Green Tribunal stated that the Central

**Supreme Court judge Justice D.Y. Chandrachud highlighted the necessity of speaking truth to power, be it even an “imperial power” or an “all powerful state”. “Democracy needs truth to survive. Democracy and truth go hand in hand. Speaking truth to power is a right of every citizen in a democracy. It is equally a duty,” Justice Chandrachud said in his address at the Sixth M.C. Chagla Memorial online lecture.**

**ISRO said it successfully conducted the first hot test of the System Demonstration Model (SDM) of the Gaganyaan Service Module Propulsion System at the test facility of Propulsion Complex at Mahendragiri in Tamil Nadu.**

Pollution Control Board (CPCB) should revisit the guidelines for keeping poultry farms in the green category and free from air, water and environmental protection laws.

**3.New Definition of Poultry Farmer: Small Farmers: 5,000-25,000 birds Medium Farmers: More than 25,000 and less than 1,00,000 birds Large Farmers: More than 1,00,000 birds.**Certificate of Consent Required: For establishing and operating a medium-sized poultry farm. This will have to be taken from the State Pollution Control Board or Committee under the Water Act, 1974 and the Air Act, 1981. Permission will be valid for 15 years.

**4.Reducing Pollution: Poultry farms should have a ventilated room to reduce the gaseous pollution from the birds. Also, care should be taken so that poultry faeces do not mix with running water or any other pesticide.** A farm should be set up 500 metres away from a residential area, 100 metres from rivers, lakes, canals and drinking water sources, 100 metres from national highways and 10-15 metres from village footpaths and rural roads.