

KSG: NEWSPAPER CRUX

7TH NOVEMBER 2022

Delegates at COP-27 climate summit in Egypt(Sharm-al-Sheikh) agreed to put the delicate issue of whether rich nations should compensate poor countries most vulnerable to climate change on the formal agenda for the first time. For over a decade, wealthy nations have rejected talks on funds they give to help poor countries cope with the consequences of global warming.

1.15 degree Celsius, by which the global mean temperature in 2022 is above the preindustrial (1850-1900) average. This makes the eight years from 2015 the warmest on record, according to the World Meteorological Organisation report. The rate of sea level rise has also doubled since 1993 and has risen by nearly 10 mm to a new record high this year.

Demanding that the old pension scheme (OPS) be restored, a federation of Central government employees' unions has written to the Cabinet Secretary, stating that the current National Pension System (NPS) was a disaster for retiring employees in their old age. The federation, in a letter, said a defence establishment official who recently retired after more than 13 years of service received only 15% of the assured pension he would have otherwise got under the OPS. Under the NPS, the official with a basic pay of ₹30,500 received ₹2,417 as monthly pension as against the ₹15,250 he would have received under the OPS.

In view of neighbouring Kerala launching what it calls the digital resurvey of its land on November 1, the Tamil Nadu government has asked its officials in the Departments of Revenue and Forest to monitor the developments in areas along the inter State borders. The digital resurvey assumes significance since a few claims over land remain unsettled both ways over the years and some areas in Neyyar and Shenbagavalli and structures like the Mullaperiyar dam in Kerala are under the control of the Tamil Nadu government.

Keeping alive a tradition dating back to the reign of the Kachhwaha rulers, a family in the Walled City of Jaipur makes an indelible black ink, or kali syahi, used 250 years ago for writing royal firmans (decrees) and ledgers. The fourth generation of the family now produces the ink every Deepavali. While the erstwhile royal

SODIUM-ION (NA-ION) BASED BATTERY TECHNOLOGY MIGHT SOON BE A VIABLE ALTERNATIVE TO LITHIUM-BASED ONES

1.The University of Houston developed an electrolyte which makes it significantly more viable to produce sodium ion-based batteries commercially and on a larger scale. Sodium-ion (Na-ion) batteries are solid-state batteries, and use solids instead of liquids to ferry ions through their core.

2.It has three components: A negatively charged anode made up of hard carbons; A positively charged cathode constituting sodium-containing layered materials; Electrolyte that allows electrons to move.

As compared to Lithium ion battery, Sodium-ion battery-Replaces the polymer separator used in lithium-ion batteries with a solid-state separator, which is more energy dense.

3.Lowers charging time and improve life by eliminating the need to have lithium diffuse into the carbon particles as in conventional lithium-ion cells.

4.Potential of Sodium Battery-Natural abundance of sodium resource.Greener and sustainable battery system.Lesser cost of extracting than lower than lithium (least 20 percent).Contain non-flammable solid electrolytes that exhibit high safety.

5.Issue with Li-ion battery-High Environmental cost by way of mining, Needs a protective circuit to keep it running safely. Expensive with reserves localized only in certain parts of Chile, Australia, Argentina, and China. Extremely reactive.

TELE-LAW SERVICE TO BE MADE FREE OF COST FOR CITIZENS

1.A Memorandum of Understanding has been signed between Department of Justice and National Legal Services Authority (NALSA) on Integrated Delivery of Legal Services.As per the agreement, NALSA will provide services of 700 lawyers, in each district exclusively for Tele-Law program.

2.These empanelled lawyers would also act as referral lawyers and assist in strengthening the mechanism for dispute avoidance and dispute resolution at the pre-litigation stage. Launched in 2017 by the Department of Justice (Ministry of Law & Justice), Tele-Law initiative is a reliable and efficient e-interface and pre-litigation tool.

3.Tele-Law mainstreams legal aid to the marginalized seeking legal help by connecting them with the Panel Lawyers through the tele/video-conferencing infrastructure available at Common Service Centres (CSCs) across 1 lakh Gram Panchayats.

4.About NALSA-Constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society and to organize Lok Adalats for amicable settlement of disputes. The Chief Justice of India is the Patron-in-Chief. NALSA is housed at Supreme Court of India. Under the act, State and District Legal Services Authorities are also constituted.

MINISTRY OF POWER NOTIFIES 'GREEN ENERGY OPEN ACCESS' RULES

1.Objective of the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022 is to accelerate our renewable energy programmes.

2.Salient features of the rule-Green Open Access is allowed to any consumer and the limit of Open Access Transaction has been reduced from 1 MW to 100 kW for green energy, to enable small consumers also to purchase renewable power through open access.Consumers are entitled to demand supply of Green Power from Discoms.Commercial and Industrial consumers are allowed to purchase green power on voluntarily basis.

3.There shall be a uniform Renewable Purchase Obligation (RPO), on all obligated entities in area of a distribution licensees. Green Hydrogen/Green Ammonia has also been included for fulfilment of its RPO.Consumers will be given Green Certificates if they consume green power.

4.Significance-Ensure the access to affordable, reliable, sustainable and green energy for all. Promote generation,

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family used the ink for its official transactions, the businessmen of the princely State used it to write their accounts. Even universities established after Independence awarded degrees written with this ink. The ink was believed to ward off evil and bring prosperity to its users.

Rs. 30.88 lakh crore, the currency with the public as of October 21 which is 71.84% higher than the level for the fortnight ended November 4, 2016, illustrating that cash usage is still robust even six years after demonetisation. Cash usage has been rising, even as digital alternatives for payments have become very popular.

50 million, the number of Bharat Biotech's Covaxin doses set to expire early next year as there are no takers. Due to a lack of product demand, the production stoppage of Covaxin was initiated by Bharat Biotech earlier this year, even though the vaccine maker had established manufacturing to reach an annualised capacity of one billion doses at the end of 2021.

16 percentage by which the number of paddy stubble burning incidents rose to 2,817 in Punjab on November 5 over the previous day. Between September 15 and November 5 this year, a total of 29,400 stubble-burning events were detected in Punjab alone, followed by 2,530 events in Haryana, 2,246 in Madhya Pradesh, 927 in U.P., 587 in Rajasthan and nine in Delhi.

The Enforcement Directorate (ED) is investigating multiple cases of online gaming fraud, including those against companies run by some China based entities through dummy Indian directors, involving transactions worth about ₹4,000 crore. In the case pertaining to Chinese entities, the agency is pursuing the money trails of 1,815 suspect accounts. It alleges that two companies named Linkyun Technology Private Ltd. and Dokypay Technology Private Ltd. were involved in duping the users to the tune of ₹1,146 crore.

The Commission for Air Quality Management (CAQM) on Sunday revoked its November 3 order that called for emergency measures such as a ban on the entry of trucks into Delhi and plying of non-BS VI diesel-run light motor vehicles imposed

purchase and consumption of green energy including energy from waste to energy plants. Enable simplified procedure for Open access to green power. Help in achieving India's commitment of 500 GW of non-fossil fuel by 2030.

LANDLORD PORT

1. Landlord port model is characterized by its mixed public-private orientation. Under this, the port authority acts as regulatory body and as landlord, while port operations (especially cargo handling) are carried out by private companies. It aims at decentralizing decision making and to infuse professionalism in governance of major ports.

2. About JNP-JNP is at Navi Mumbai (Maharashtra), commissioned in 1989. It is a container handling port accounting for around 50% of the total containerized cargo volume. Ports in India are classified as Major (under Union govt) and Minor Ports (under state govt) as per the Indian Ports Act, 1908.

SCIENTISTS SOLVE THE CASE OF THE KARAKORAM ANOMALY

1. Karakoram Anomaly (KA) is the stability or abnormal growth of glaciers in the central Karakoram, in contrast to the retreat of glaciers in nearby mountainous ranges of the Himalayas and other mountainous ranges of the world. A recent study conducted by researchers has postulated new theory to explain the reasons of glaciers in Karakoram Range are resisting glacial melt due to global warming. While previous studies highlighted role of temperature in establishing and sustaining anomaly, it is for the first-time highlighted impact of precipitation in feeding the anomaly.

2. Reasons of KA-Revival of western disturbances (WDs) has been instrumental in triggering and sustaining KA. Contribution of WDs in terms of snowfall volume over core glacier regions of Karakoram have increased by about 27% in recent decades, while precipitation received from non-WD sources have significantly decreased by around 17%.

3. Winter precipitation associated with WDs over Karakoram-Himalayas as one key drivers behind its emergence. HKH region is a critically important natural global asset that extent up to 3500 km over 8 countries i.e., Afghanistan in the west to Myanmar in the east and crossing Pakistan, India, China, Nepal, Bhutan, and Bangladesh.

IRAN, BELARUS TO BE NEWEST SHANGHAI COOPERATION ORGANISATION (SCO) MEMBERS

1. Decision on the same shall be taken at the SCO summit in Samarkand, Uzbekistan, in September. The decision to admit Iran was made in last year's Dushanbe summit and Belarus has submitted its application.

2. At the meet, India also shared the 'Draft Program for Promotion of Industrial Cooperation among Business Worlds of SCO Member States and the Regulations for the Organization and Organizing of Exhibition Programs'. This is the first expansion of the SCO after India and Pakistan were admitted to the grouping in 2017.

3. Significance of SCO Expansion-An expanded membership will confer greater legitimacy on the SCO and yield security and economic benefits for its members. Improve the connectivity and integration of the broader region.

4. The Beijing-headquartered SCO is an eight-member economic and security bloc consisting of China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, India and Pakistan. SCO's main goals are strengthening mutual trust, effective cooperation in politics, trade, the economy, research etc. India will host the SCO summit next year, and Varanasi has been selected as the SCO region's first "Tourism and Cultural Capital."

NEW PATHWAY TO REGULATE NITRATE ABSORPTION IN PLANTS

1. Researchers from National Centre of Biological Sciences, Tata Institute of Fundamental Research have studied a target gene of miR444 (micro-RNA) called MADS27 in both rice (monocot) and tobacco (dicot) plants. Regulatory miR444 switch is known to turn off at least five genes called MADS box transcription factor

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under Stage IV of the Graded Response Action Plan. This was done as the air quality improved with favourable wind conditions.

The Union government has issued an alert on the illegal stay of Bangladeshi nationals in India. The Directors General of Police of the States and Union Territories have been told to take appropriate action on the illegal immigrants who sneaked into the country along the Bangladesh border in West Bengal and settled across the country, sources said.

genes. MADS box binds to their favourite specific DNA sequences and switches the neighbouring genes on.

2.Three-pronged effect of Gene MADS27-Regulates nitrate absorption by switching “on” proteins involved in this process.It leads to better development of roots by regulating auxin hormone production and transport.Helps in the abiotic stress tolerance by keeping the main stress player proteins on.

3.Impact of nitrate imbalance-Without nitrates, the amount of chlorophyll in leaves reduces i.e. leaves turn pale green or yellow colour. Reduces the farmers' crop yield. Excess nitrogen causes iron deficiency in plant leaves.

4.Nitrogen is one of the most important macronutrients for plant development.Plants absorb nitrogen from soil in the form of nitrates and ammonium.Nitrates play a role in controlling genome-wide gene expression that in turn regulates root system architecture, flowering time, leaf development, etc.