

My Notes....

NATIONAL

DRAFT OF NCRF RELEASED

The **policy to integrate this credit system**, the **draft National Credit Framework (NCrF)**, was put in public domain by Education Minister Dharmendra Pradhan on 19 October 2022. It has been drafted by an **11-member committee** headed by **National Council of Vocational Education and Training (NCVET)** chairperson **Nirmaljeet Singh Kalsi**.

What are 'credits' in the education system?

- Credits** are essentially a “**recognition that a learner has completed a prior course of learning**, corresponding to a qualification at a given level”, according to the draft document. In other words, **it is a way of quantifying learning outcomes**.
- Credit frameworks** are guidelines to be followed by **schools, colleges and universities** in adopting the credit system.
- For example, the **National Higher Education Qualification Framework (NHEQF)** lays out the guidelines for higher educational institutions that want to implement the credit system.
- The **proposed NCrF** seeks to **integrate all the frameworks under one umbrella**. Moreover, it also brings the entire school education system under the **ambit of credits for the first time**.
- So far, **only the National Institute of Open Schooling followed a credit system**. The NCrF also covers skill and vocational education.
- According to the **University Grants Commission (Establishment and Operation of Academic Bank Of Credits in Higher Education) Regulations** notified in July, 2021, the credits shall remain valid for a **maximum duration of seven years**.

How will the credit points be obtained?

- For the **purpose of calculation**, the **NCrF** has divided the education system into **multiple levels**. For school education, there are **four levels**.
- Students clearing class XII will be at **credit level 4**. For higher education, the levels are **from 4.5 to 8** — which is basically from **first year UG to PhD**.
- The total credit points earned by the student will be obtained by multiplying the credits earned by them with the NCrF level at which the credits have been earned.

TWO MORE INDIAN BEACHES GET 'BLUE FLAG'

Two more beaches, both in Lakshadweep, have been accorded the '**Blue Flag**' tag, putting them in an elite list of the **world's cleanest and most eco-friendly "beaches, marinas and sustainable boating tourism operators"**. The **two new beaches** to have been awarded the **eco-label** are **Minicoy Thundi beach** and **Kadmat beach**, both in Lakshadweep.

The Blue Flag

- The **Blue Flag** is an **exclusive eco-label or certification** that is given to **coastal locations around the world** as a badge of environmental honour.
- The **Blue Flag programme** is run by the **Copenhagen**, Denmark-headquartered **Foundation for Environmental Education (FEE)**, a nonprofit which, through its work, contributes to the **Sustainable Development Goals (SDGs)** of the **United Nations**.
- According to the FEE, “**the iconic Blue Flag** is one of the **world's most recognised voluntary awards** for **beaches, marinas, and sustainable boating tourism operators**.”

4. In order to qualify for the Blue Flag, a series of **stringent environmental**, educational, safety, and accessibility criteria must be met and maintained.”
5. The **Blue Flag programme started in 1987**, initially in Europe. Certification is awarded annually.
6. A total **5,042 beaches, marinas, and tourism boats** in 48 countries have been awarded the label so far. A marina is a small harbour where mainly pleasure boats and yachts dock.
7. The **certification is given by an international jury** comprising members of the **United Nations Environment Programme (UNEP)**, **United Nations World Tourism Organisation (UNWTO)**, and **International Union for the Conservation of Nature (IUCN)**, besides FEE.

Beaches in India

1. India now has **12 “blue beaches”**, the **other 10 Indian beaches** on the list, according to the FEE site, are **Shivrajpur in Gujarat’s Devbhumi Dwarka district; Ghogla beach in Diu; Kasarkod (Uttara Kannada) and Padubidri (Udupi) in Karnataka; Kappad (Kozhikode) in Kerala; Eden beach in Puducherry; Kovalam (Chennai) in Tamil Nadu; Rushikonda (Visakhapatnam) in Andhra Pradesh; Golden beach in Puri, Odisha; and Radhanagar Swarajdeep in Andaman and Nicobar.**
2. **Kovalam and Eden** got the **Blue Flag last year**. The other eight beaches received the certification **in 2020**, and were **re-certified last year**.

DIGITAL BANKING UNITS DEDICATED TO NATION

Prime Minister on 16 October 2022 dedicated **75 digital banking units** to the nation, taking forward an announcement that was made in the **2022-23 Union Budget** by Finance Minister Nirmala Sitharaman. The **digital banking units** will “**further financial inclusion**” and “**significantly improve banking experience for the citizens**”.

What are these DBUs?

1. In April this year, the **Reserve Bank of India (RBI)** announced the guidelines for DBUs, following the report of a working group of the **Indian Banks Association (IBA)**.
2. A **digital banking unit** is a **specialised fixed point business unit or hub**, housing a certain minimum digital infrastructure for delivering digital banking products and services as well as servicing existing financial products and services digitally in self-service mode at any time.
3. **Commercial banks** (other than regional rural banks, payment banks and local area banks) with **past digital banking experience** are permitted to **open DBUs in tier 1 to tier 6 centres**, unless otherwise specifically restricted, without having the need to take permission from the RBI in each case.
4. The services include **saving bank accounts** under various schemes, **current accounts, fixed deposit and recurring deposit accounts**, digital kits for customers, mobile banking, **Internet banking**, debit cards, credit cards, and mass

What was the initial announcement?

1. In the **Budget for 2022-23**, the Finance Minister said: “In recent years, **digital banking, digital payments and fintech innovations** have grown at a rapid pace in the country.
2. The government is continuously encouraging these sectors to ensure that the benefits of digital banking reach every nook and corner of the country in a **consumer-friendly manner**.
3. Taking forward this agenda, and to mark 75 years of our independence, it is proposed to set up **75 Digital Banking Units (DBUs)** in 75 districts of the country by **Scheduled Commercial Banks**”.

transit system cardss, digital kits for merchants, UPI QR codes, BHIM Aadhaar and point of sale (PoS).

MISSION LIFE LAUNCHED

Prime Minister and United Nations Secretary General **Antonio Guterres** on 20 October 2022 launched **Mission LiFE**, a global plan of action aimed at **saving the planet from the disastrous consequences of climate change**. The launch of the mission, aimed at **encouraging people towards sustainable living**, comes ahead of next month's mega **UN climate meet in Egypt**.

What are the action plans?

1. The **action plan** - a list of ideas on lifestyle changes that can be taken up as **climate-friendly behaviour** - along with the logo and tagline for **Mission LiFE (Lifestyle for Environment)** were jointly launched by PM and Guterres at Kevadia in Gujarat.
2. PM asked people to adopt the concept of '**reduce, reuse and recycle**' and **circular economy** and said India is committed to tackling the menace of climate change.
3. **Mission LiFE** will strengthen the concept of a **pro-people planet**. The mission signifies "**lifestyle of the planet, for the planet and by the planet**".
4. **Mission LiFE** aims at following a **three-pronged strategy** for changing people's collective approach towards sustainability.
5. This includes **nudging individuals to practice simple yet effective environment-friendly actions** in their daily lives (demand), **enabling industries and markets** to respond swiftly to the changing demand (supply), and to **influence government and industrial policy** to support both sustainable consumption and production (policy).
6. People are **experiencing the effects of climate change in their surroundings**, and in the last few decades **unexpected calamities were witnessed**. This makes it amply clear that climate change goes beyond just policy-making," he said.
7. The PM said the mantra of Mission LiFE is 'Lifestyle For Environment'. The mission will connect the **people's power for the protection of the earth**, and teach them to utilise its resources in a better way.

NCF FOR CHILDREN IN 3-8 YRS LAUNCHED

Union education minister **Dharmendra Pradhan** on 20 October 2022 launched the **National Curriculum Framework for foundational stage education of children** in the **three to eight years** age group. The **NCF (National Curriculum Framework)** is an important step taken to implement the **New Education Policy-2020**.

More about framework

1. The **NCF-2022** has four sections -- the **National Curriculum Framework for School Education**, the **National Curriculum Framework for Early Childhood Care and Education**, the **National Curriculum Framework for Teacher Education** and the **National Curriculum Framework for Adult Education**.
2. Research from across the world on **education, neuroscience and economics** demonstrates clearly that ensuring free, accessible, high quality early childhood care and education is perhaps the **very best investment** that any country can make for its future.
3. The framework has listed the '**panchakosha**' concept for **education of children** and its five parts are **physical development (sharirik vikas)**, **development of life energy (pranik vikas)**, **emotional and mental development (manasik vikas)**, intellectual development (bauddhik vikas) and **spiritual development (chaitisik vikas)**.
4. **Panchakosha** is an ancient explication of the importance of the **body-mind complex** in human experience and understanding.

5. This **non-dichotomous approach** to human development gives clear pathways and direction towards a more holistic education.
6. The framework noted that while **staffing of anganwadis is not complete**, it is at high levels.
7. '**Vidya pravesh**' (**entry level education**) will enable learning of ethical values and cultural diversity, and interaction with the physical, social and natural environment.

SC NOTICE AGAINST WOMEN'S REPRODUCTIVE RIGHTS

The **Supreme Court** has sought response from the Centre on a plea against the **age restriction of 35 years on women's reproductive rights** for conducting pre-conception and pre-natal diagnostic tests. A bench of Justices S K Kaul and Abhay S Oka issued notice to the **Union government and others on a plea** filed by an advocate contending that the **age bar is a restriction** on the reproductive rights of women.

What

1. She refers to **Section 4(3)(i)** of the **Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex Selection) Act, 1994** to contend that the age restriction of 35 years is a restriction on the reproductive rights of women and in view of the recent judgment of this Court... Issue notice restricted to the aforesaid aspect, it said.
2. The top court was hearing a plea filed by advocate Meera Kaura Patel who contended that the **age restriction of 35 years in Section 4(3)(i)** of the Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex Selection) Act, 1994 is a **restriction on the reproductive rights of women**.
3. As per the act, **no pre-natal diagnostic techniques** shall be used or conducted unless the age of the pregnant woman is above 35 years.
4. In a significant ruling on **reproductive rights of women**, the apex court had earlier held that all women are entitled to safe and legal abortion till 24 weeks of pregnancy under the **Medical Termination of Pregnancy (MTP) Act**, and making any distinction on the basis of their marital status is "**constitutionally unsustainable**".

THE PRESIDENT PRESENTED THE SILVER TRUMPET AND TRUMPET BANNER

President Droupadi Murmu presented the **Silver Trumpet** and **Trumpet Banner** to the **President's Bodyguard in a ceremony** on 27 October 2022 evening. The **President's Bodyguard (PBG)** is the **oldest regiment** in the Indian Army, having been raised as the **Governor-General's Bodyguard** (later the Viceroy's Bodyguard) **in 1773**. The regiment was raised **in Banaras (Varanasi)** by the then Governor-General, **Warren Hastings**.

The President's Bodyguard

1. It had an initial strength of **50 handpicked cavalry troopers** from the so-called **Moghal Horse**, which was raised by two local sardars in 1760, and was later augmented by another 50 horsemen.
2. On **27 January 1950**, the regiment was renamed the **President's Bodyguard**. Today, the President's Bodyguard is a mounted unit comprising a select body of hand-picked men with special physical attributes. They are chosen after a rigorous and physically **gruelling process**.
3. The **President's Bodyguard has seen war-time duty** and a detachment currently serves on the **Siachen Glacier**.
4. Its men have served with the IPKF in Sri Lanka and as part of UN Peace-Keeping Missions.

Silver Trumpet and Banner

1. As the **President of India's own Guard**, it has the unique distinction of being the **only military unit of the Indian Army** that is **privileged to carry the President's Silver Trumpet and Trumpet Banner**.
2. This distinction was conferred on the **President's Bodyguard in 1923** by the then Viceroy, Lord Reading, on the occasion of the Bodyguard completing 150 years of service. Each succeeding Viceroy, thereafter, presented the **Silver Trumpet and Trumpet Banner** to the Bodyguard.
3. Every President has continued the **practice of honouring the regiment**. Rather than a coat of arms, as was the practice in the colonial era, the monogram of the President appears on the Banner.
4. **Dr Rajendra Prasad**, the **first President of India**, presented the Silver Trumpet and Trumpet Banner to the President's Bodyguard on 14 May 1957.

INTERNATIONAL

DELHI DECLARATION ADOPTED

The **UN counter-terrorism council**, during a meeting held in the national capital on 29 October 2022, adopted the **Delhi Declaration** and called on **all 15 member states** to **ensure zero tolerance towards terrorism**. The council also reaffirmed that terrorism, in all forms, constitutes one of **most serious threats to international peace and security**. It further vowed to deal with the scourge more vigorously.

What the declaration said

1. The **main focus** of the meeting was to **address misuse or abuse of new and emerging technologies by terrorists**, with a focus on information and communication technologies, **financing of terror**, and **unmanned aerial systems** including **drones**.
2. **Ruchira Kamboj**, permanent representative of **India** to the UN and Counter-Terrorism committee chair, said the **Delhi declaration will encourage member states** to work collaboratively and collectively to counter the menace of terrorism.
3. It will adopt **non-binding guiding principles** that will encourage member states to counter the menace of terrorism.
4. **In the declaration**, the global body expressed concerns over the **increasing use of Internet** and **other information and communications technologies**, including social media platforms, for terrorist purposes.
5. It said **innovations in financial technologies** such as **crowd funding platforms** present a risk of being misused for **terrorist-financing** and noted with concern the increasing global misuse of unmanned aerial systems by terrorists to conduct attacks against on critical infrastructure.
6. The **Counter-Terrorism Committee** urged all member-states to ensure "**zero tolerance**" towards terrorism, consistent with their obligations under international laws, including **human rights law**.
7. The meeting underlined the need for taking "**urgent action**" to **counter terrorism** in all its forms and manifestations through the full and effective implementation of various UN resolutions.
8. It also noted the importance of continuing discussions on the **misuse of emerging technologies for terrorist purposes** in other relevant international forums, including **the G20**.

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- The committee emphasised the need for member-states and **CTED (Counter-Terrorism Committee Executive Directorate)** to continue cooperation with the private sector and civil society for more effective means to counter the use of **new and emerging technologies** for terrorist purposes.

FIRST GLOBAL POLICE METAVERSE

Interpol, the **global police organisation**, has entered the **metaverse**. The **fully operational Interpol metaverse** was unveiled at the surprise session of its **90th General Assembly**, held in New Delhi. At present, users can tour the **virtual facsimile** of the Interpol General Secretariat headquarters in Lyon, France.

What

- The **lack of physical and geographical boundaries** allows users all over the world to interact with officers through **their avatars** and take **immersive training courses** in forensic investigations as well as other policing abilities. This metaverse, provided through the **Interpol Secure Cloud**, assures neutrality.
- It **can be accessed by all 195 member countries** and offers benefits like **remote work, networking, collecting and preserving evidence** from crime scenes, and delivering training.

What is metaverse?

- Neal Stephenson**, in his 1992 science-fiction novel, **Snow Crash**, coined the term "**metaverse**" - where **humans interact with each other** through **programmable avatars**.
- The **idea of a virtual world** was also explored by **Steven Spielberg** in his film **Ready Player One**, an **adaptation of Ernest Cline's novel**.
- Now, this concept is **fast becoming a part of our everyday reality** as the metaverse is touted to be the **next step in internet development**.

INDIA-AFRICA DEFENCE DIALOGUE

The **India-Africa Defence Dialogue (IADD)** was held on the sidelines of **DefExpo 2022** in Gandhinagar, Gujarat on 18 October 2022. The **Gandhinagar Declaration**, adopted as the outcome document of the **second edition of the IADD**, charted out new areas for enhancing the **India-Africa defence and security partnership**. Theme of this dialogue is **'India-Africa: Adopting Strategy for Synergising and Strengthening Defence and Security Cooperation'**

More about the news:

- During the IADD**, Defence Minister launched the **'India-Africa Security Fellowship Programme'**.
- MP-IDSA** (ManoharParrikar Institute for Defence Studies and Analysis), the **knowledge partner for the IADD**, will host the **Fellowship Programme**. The fellowship will give an opportunity to African scholars to pursue research on defence and security issues in India.
- It proposes to **enhance cooperation in the field** of training in all areas of mutual interest by increasing training slots and deputation of training teams, empowerment and capability building of the defence forces of Africa, participation in exercises and humanitarian assistance during natural disasters.
- India does not believe in making or becoming a client or satellite state**, it partners any nation on the basis of sovereign equality, mutual respect and we work towards mutual economic development.

5. **Africa, South East Asia and Middle East** have **emerged as major focus areas as India looks** to emerge as a major global arms exporter. Peace, security and development are inter-related and security is essential for enabling development in the region.
6. India has been the **first responder in providing Humanitarian Assistance and Disaster Relief (HADR)** to several African countries during COVID-19.

Flashback

1. **The first India-Africa Defence Ministers Conclave** was held in Lucknow, UP during DefExpo on February 06, 2020.
2. **India's -Africa realtions** is guided by the **Kampala Principle, affirmed** by Prime Minister ShriNarendraModi in 2018.
3. **It promotes ownership** of private sector engagement (PSE) through development co-operation with partner countries and ensure PSE projects and programmes alignment with national sustainable development priorities.

IMPORTANCE OF INSTC AND CHABAHAR PORT

An **International Conference** titled "**INSTC (International North South Transport Corridor)** and **Chabahar Port in Iran**. The conference was jointly organized by the Ala-Too University, Bishkek, and a think tank Burana Institute, Bishkek. **Eminent scholars** from Russia, Iran, Kazakhstan, Uzbekistan, Armenia, Poland, Sweden, England, India, and Kyrgyzstan presented papers highlighting the importance and **advantages of INSTC and Chabahar port** for **land-locked Central Asian, CIS countries and Russia**.

What

1. The **INSTC and Chabahar-Central Asia Corridors** are of **strategic importance for India**, as they facilitate trade with **Russia, Europe**, as well as Afghanistan and Central Asia, bypassing its **regional rival, Pakistan**.
2. The **main goal of New Delhi** through the **North-South Corridor and Chabahar-Central Asia** is to increase its **geopolitical influence** in the resource-rich republics of Central Asia, which India considers as a **source of energy supply** and a large market for Indian goods.
3. **Chabahar port** for India will **reduce the transportation costs by 60%** and the time of transporting goods to **Central Asia by 50%**.
4. **India's first export shipment from Chabahar** was destined to Afghanistan in 2017 in the form of a 130,000-ton wheat shipment.
5. **India and Iran** have the potential, as well as the necessity to be involved in **worldwide transnational projects** because of the following **two factors**: -
6. **Firstly, India** is **one of the emerging countries of the world** with significant technological achievements and an **increasing role in the Pacific region**.
7. **Secondly, Iran** proved the ability **to provide technological development** under the sanctions and to have a decisive role in regional stability.

About INSTC

1. India has the **geographical and economic potential** to bring together Eurasia and Indo-Pacific via INSTC.
2. The **proposed INSTC plan is 40% shorter and 30% cheaper than the BRI** - an enticing economic opportunity for India.
3. The **impact of INSTC** could potentially **decrease Afghanistan's economic dependency on Pakistan**. Chabahar route is 800km shorter than the Karachi port route," Sharma added.
4. **INSTC** might serve as a **soft power tool for establishing India's economic and political influence**. However, **China promoted BRI** is shaped by Chinese political ideology, and one cannot have any expectations of movement of democratic ideas, concepts or practices along the BRI route.

ECONOMY

LAKSHMI-GANESH ON CURRENCY

Several Aam Aadmi Party (AAP) leaders, led by party chief Arvind Kejriwal, on 26 October 2022 asked the government to put pictures of Goddess Lakshmi and Lord Ganesh on currency notes in order to bring “prosperity” to the country.

Who decides it?

1. **Changes in the design and form of bank notes and coins** are decided by the **Reserve Bank of India (RBI)** and the **central government**.
2. Any change in design of a currency note **has to be approved by the RBI’s Central Board** and the **central government**. Changes in the **design of coins** are the **prerogative of the central government**.

What role does the RBI play in issuing notes?

1. The **central bank internally works out a design**, which is put before the **RBI’s Central Board**.
2. **Section 22 of The Reserve Bank of India Act, 1934**, gives RBI the “**sole right**” to issue **banknotes in India**.
3. **Section 25** states that “**the design, form, and material of bank notes** shall be such as may be approved by the **Central Government** after consideration of the recommendations made by the [RBI’s] Central Board”.
4. The **RBI’s Department of Currency Management** — currently headed by **Deputy Governor T Rabi Sankar** — has the responsibility of administering the core function of currency management.
5. If the **design of a currency note has to change**, the Department works on the design and submits it to RBI, which recommends it to the central government. The government gives the final approval.

Who decides on the minting of coins?

1. **The Coinage Act, 2011** gives the **central government the power to design and mint coins** in various denominations.
2. In the case of coins, **the role of the RBI is limited** to the distribution of coins that are supplied by the central government.
3. The government decides on **the quantity of coins to be minted** on the basis of indents received from the RBI on a yearly basis, the central bank says.
4. **Coins are minted in four mints** owned by the Government of India in **Mumbai, Hyderabad, Kolkata and Noida**.

SINGLE BRAND 'BHARAT' FOR FERTILIZERS LAUNCHED

Prime Minister on 17 October 2022 launched **subsidised urea under single brand 'Bharat'** as part of **One Nation, One Fertiliser scheme** and inaugurated **600 Kisan Samruddhi Kendras**, saying these two reforms will boost availability and ensure quality fertilisers. PM also unveiled international weekly fertiliser e-magazine '**Indian Edge**' at the event **PM Kisan Samman Sammelan 2022** organised jointly by **agriculture and fertiliser ministries**.

What

1. The Centre has started a new scheme - **Pradhan Mantri Bhartiya Jan Urvarak Pariyojana - One Nation One Fertilizer (ONOF)** - under which it is mandatory for companies to market subsidised fertiliser under **single brand 'Bharat'**.

2. After launching the brand for the most consumed and highly subsidised fertiliser **urea**, the prime minister said branding subsidised fertilisers to ensure quality is a major reform undertaken by the government.
3. Farmers are in "**illusion and confused**" about fertiliser brands and are not getting the **quality soil nutrients** because at one hand retailers are pushing certain brands for want of higher commission and on the other hand companies run advertisement campaigns of their products. Now, these problems have been resolved **under ONOF**.
4. **One brand and one quality of urea** will be sold across the nation. This brand would be 'Bharat.' Now urea will be available in the **brand name of Bharat**.
5. With single branding, the competition among companies that push their brands will get reduced. It will also **ensure sufficient supply of fertilisers across the country**.
6. **PM-KSK** will not only supply **agri-inputs** like **seeds, fertilisers** and **farm implements**, but also provide testing facilities for soil, seeds and fertilisers, besides information about government schemes.

UTTARAKHAND'S REVENUE POLICE SYSTEM

In the wake of the murder of 19-year-old **Ankita Bhandari**, allegedly by her employer **Pulkit Arya**, the demand to replace the '**Revenue Police**' system in Uttarakhand has once again gained ground. In the murder case, there are allegations of the **revenue police not registering a complaint in time** and even siding with the accused.

The Revenue Police system

1. The **system of revenue police** was brought **by the British over a century ago** when crime in the hilly areas was low. The motive was to save money and resources by not deploying regular police.
2. Under the **unique revenue police system**, civil officials of the revenue department have the powers and functions of the regular police.
3. Whenever a crime takes place, the **revenue police of the area files an FIR**, investigates the case, arrests the accused and also files a chargesheet in the local court.
4. **In case of heinous crimes** like murder, rape, or crimes against Scheduled Castes (SC) and Scheduled Tribes (ST), the case is **transferred to the regular police**.
5. The process, however, takes days or sometimes months, as the revenue police first forwards the information to the **district Superintendent of Police (SP)**, and the SP will hands over the case to a regular police station. Often, the delay causes the disappearance of crucial evidence or weakens the case in other ways.
6. In other states, the **core function of revenue officials is to maintain land, cultivation and revenue records of villages**, and collect revenues on behalf of the government.
7. The revenue officials like **patwari and kanungo** compile data on **crop production**, perform **election-related duties**, and collect census and literacy data. They are also given the duty of implementing government schemes and preparing birth, death, and caste certificates.

SCIENCE AND TECHNOLOGY

GEAC CLEARS ENVIRONMENTAL RELEASE OF GM MUSTARD

The **environment ministry's Genetic Engineering Appraisal Committee (GEAC)** has recommended the environment **release of genetically modified (GM) mustard hybrid DMH-11**: the first crop to **get such a tag since BT cotton** years ago, according to some scientists. This paves the way for the commercial release of GM mustard, and it is now up to gene developers to grant permission for commercial release. States too have the power to deny final commercial approval.

More about the news:

1. **To generate scientific evidences** in Indian agro-climatic situation and also as a precautionary mechanism, the field demonstration studies with respect to the effect of GE (genetically engineered) mustard on honey bees and other pollinators.
2. **Patents on GM mustard** are jointly owned by India's National Dairy Development Board (NDDB) and the University of Delhi under Prof Deepak Pental.
3. Between 2002 and now, the GEAC, had approved **Bt Brinjal**, but the commercial release was stayed by the then environment minister on the grounds of insufficient scientific evidence about safety.
4. The **recommendation** to release GM mustard is **for four years** from the date of issue of the approval letter.
5. **Commercial use of DMH-11 hybrid** shall be subject to **Seed Act 1966** and related rules and regulations, its amendments and Gazette notifications from time to time as applicable.
6. **Mustard is cultivated** in the country on around 6.5-7.0 million hectares of land by around 6 million farmers **in Rajasthan, Haryana, Punjab and Madhya Pradesh.**

Flashback:

1. The Genetic Engineering Appraisal Committee (**GEAC**) **functions** in the Ministry of Environment, Forest and Climate Change (**MoEF&CC**).
2. **As per Rules, 1989**, it is responsible for appraisal of activities involving large scale use of **hazardous microorganisms and recombinants** in research and industrial production from the environmental angle.
3. The committee is also **responsible for appraisal of** proposals relating to release of **genetically engineered (GE) organisms** and products into the environment including experimental field trials.
4. **GEAC is chaired by** the Special Secretary/Additional Secretary of MoEF&CC and co-chaired by a representative from the Department of Biotechnology (DBT)

C295 AIRCRAFT MANUFACTURED IN INDIA

Prime Minister on 30 October 2022 laid the foundation stone of a **C295 aircraft** manufacturing plant **in Vadodara**, Gujarat, of the **Tata-Airbus consortium** that will manufacture the **transport aircraft for the Indian Air Force (IAF)**. It is the **first project of its kind** in which a military aircraft will be manufactured in India by a private company. It is also the **first time** that the **C295 aircraft will be manufactured outside of Europe**. The manufacturing unit will cater to the export of the transport aircraft and for additional orders by the IAF.

What are the technical specifications of the C295 aircraft?

1. The **C295MW is a transport aircraft** with 5 to 10-tonne capacity and a **maximum speed of 480 kmph**.
2. It has a rear ramp door for quick reaction and para-dropping of troops and cargo. Short take-off and landing from **semi-prepared surfaces** are some other features.

What are the roles that the C295 can perform?

1. As a **tactical transport aircraft**, the **C295 can carry troops and logistical supplies** from main airfields to forward operating airfields of the country.
2. It can also operate on **short unprepared airstrips** as it is capable of **Short Take-off and Landing (STOL)**. It can operate from short airstrips just 2,200 feet long and can fly low-level operations for tactical missions flying at a low speed of 110 knots, says Airbus.
3. The aircraft can additionally be used for **casualty or medical evacuation**, performing special missions, **disaster response** and **maritime patrol duties**.

3. The **technical specifications** put out by Airbus say that the aircraft has a cabin dimension of 12.7 metres or 41 feet and eight inches.
4. The company claims this aircraft has the longest unobstructed cabin in its class which can accommodate 71 seats. The company also claims that **C295 can carry more cargo** than its competitors with direct off-loading through the rear ramp.
5. **All 56 aircraft will be fitted with an indigenous electronic warfare suite** to be developed by **Bharat Electronics Ltd** and **Bharat Dynamics Limited**.

CRISPR POSSIBLE IN TEMPERATURE-SENSITIVE ORGANISMS

Scientists from **Raman Research Institute (RRI)**, Bengaluru, an **autonomous institute of the Department of Science and Technology (DST)**, have shown that **Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)** gene-editing technology possible at temperatures as low as **40°C**, making it possible to **edit genes in temperature sensitive organisms**, plants, or crop varieties.

More about the technology

1. The **Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)** gene-editing technology that **bagged the Nobel Prize in 2020**, **Indian scientists** have demonstrated for the first time that the **associated Cas9 enzyme**, which acts as **molecular scissors** to cut DNA at a location specified by a **guide RNA**, can bind to and cut the target DNA at **very low temperatures**.
2. It added that the **unprecedented precision** of targeting the DNA sequences and then efficiently cutting them is the basis for **CRISPR-Cas9 technology**, which has been recently demonstrated in **editing genes in cells and organisms**.
3. Pointing out that **CRISPR-Cas9 technology** has been successfully used for many purposes, including **basic studies of gene function, agriculture, and medicine** to increase our knowledge of disease processes and their potential future therapies, DST said, so far, most binding trials were typically performed at 37 °C.
4. As a further step to advance this platform into the **forefront of biomedical and analytical biotechnology**, RRI scientists have explored **temperature-dependent binding** and release of cleaved products by the **Cas9 enzyme**.
5. Their observations on **high efficiency of Cas9 binding to target at very low temperatures** also provide opportunities to edit genomes of the less explored organisms called **cryophiles with an optimal growth temperature of 15°C**, according to DST.

Flashback

1. **CRISPR are short DNA sequences** found in the **genome of prokaryotic organisms** such as **bacteria**, which are **reminders of previous bacteriophage (viruses)** attacks that the bacteria successfully defended against.
2. **Cas9 enzyme** (part of bacteria's defence mechanism) uses **these flags to precisely target and cut any foreign DNA**, thus protecting the bacteria from future attacks by similar bacteriophages.

ISRO SCRIPTS HISTORY WITH MISSION LVM3-M2

Indian Space Research Organisations' **heaviest rocket LVM3-M2** on its maiden commercial mission on 23 October 2022 successfully placed **36 broadband communication satellites** of a UK-based customer into the intended orbits, the mission as '**historic**'.

More about Mission

1. **OneWeb Ltd** is the UK-based customer of **NewSpace India Ltd (NSIL)**, ISRO's commercial arm, and a **global communication network powered from space**, enabling internet

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connectivity for governments and businesses. **Bharti Enterprises** is one of the major investors in OneWeb.

2. With this success, ISRO put behind the anomaly experienced in its 7 August 2022 **Small Satellite Launch Vehicle (SSLV) mission**, which had then made the satellites unusable.
3. **All 36 satellites** were **injected into the orbits** around 75 minutes after the rocket blasted off from the spaceport.
4. This is **OneWeb's 14th launch**, bringing the **constellation to 462 satellites**.
5. This launch represents more than 70% of its planned **648 Low Earth Orbit (LEO) satellite fleet** that will deliver **high-speed, low-latency** connectivity worldwide.
6. The **launch is also first for LVM3-M2** to place the satellites in the **Low Earth Orbit (LEO-up to 1,200 kms above the Earth)** unlike **Geosynchronous Transfer Orbit (GTO)**.

About LVM3-M2

1. ISRO scientists had renamed the launch vehicle as **LVM3-M2 from GSLV-Mk III** as the newest rocket is capable of **launching 4,000 kilograms class of satellites into GTO and 8,000 kg of payloads into LEO**.
2. The **LVM3-M2** mission would give a fillip to the space agency with the new launch vehicle set to place satellites into the low earth orbit, along with ISRO's trusted workhorse **Polar Satellite Launch Vehicle (PSLV)**.
3. The rocket is a **three-stage launch vehicle** consisting of **two solid propellant S200 strap-ons** on its sides and a core stage comprising **L110 liquid stage** and **C25 cryogenic stage**.

Salient features of the Mission

1. First Commercial Mission of LVM3
2. First Multi-Satellite mission with 36 OneWeb Satellites onboard
3. First launch of LVM3 to LEO
4. First Indian rocket with six ton payload
5. First NSIL Mission with LVM3
6. First OneWeb Mission with NSIL/DoS

FIRST-EVER LIST OF FUNGAL INFECTION RELEASED

The **World Health Organisation (WHO)** has published a report highlighting the **first-ever list of fungal "priority pathogens"** – a **catalogue of the 19 fungi** that represent the greatest threat to public health. The WHO **fungal priority pathogens list (FPPL)** is the **first global effort** to systematically prioritize fungal pathogens, considering the **unmet research and development (R&D) needs** and the perceived public health importance. This report is based on research led by the University of Sydney in Australia.

What the report said?

1. **Emerging evidence** indicates that the incidence and **geographic range of fungal diseases** are **both expanding worldwide** due to **global warming** and the **increase of international travel and trade**.
2. During the **COVID-19 pandemic**, the reported incidence of **invasive fungal infections** increased significantly among **hospitalized patients**.
3. As the **fungi** that cause **common infections** (such as candida oral and vaginal thrush) become increasingly resistant to treatment, risks for the development of **more invasive forms of infections** in the general population are also growing.
4. Emerging from the **shadows of the bacterial antimicrobial resistance pandemic**, **fungal infections** are growing, and are ever more resistant to treatments, becoming a public health concern worldwide, WHO said.

Three priority categories

The WHO FPPL list is divided into **three categories: critical, high and medium priority.**

1. **The critical group** includes **Candida auris**, which is **highly drug resistant** and has caused a **number of outbreaks in hospitals worldwide**, as well as **Cryptococcus neoformans**, **Aspergillus fumigatus**, and **Candida albicans**.
2. **The high group** includes a number of **other fungi from the Candida family** as well as others such as **Mucorales**, a group containing the fungi that causes **mucormycosis** or "**black fungus**", an infection which rose rapidly in seriously ill people - particularly in India - during COVID-19.
3. **The medium group** lists a number of other fungi, including **Coccidioides spp** and **Cryptococcus gattii**.

Fungal infection

1. **Fungal pathogens** are a **major threat to public health** as they are becoming increasingly common and resistant to treatment with **only four classes of antifungal medicines** currently available, and few candidates in the clinical pipeline, WHO said.
2. The **invasive forms** of these **fungal infections** often affect severely ill patients and those with significant **underlying immune system related conditions**.
3. Populations at greatest risk of **invasive fungal infections** include those with **cancer, HIV/AIDS, organ transplants, chronic respiratory disease, and post-primary tuberculosis infection**.

MISCELLANEOUS

INDIA IN MULTIDIMENSIONAL POVERTY INDEX (MPI)

The **number of people living below the poverty line in India decreased by 415 million** between 2005-06 and 2019-21, according to a new **Multidimensional Poverty Index (MPI)** released on 17 October 2022 jointly by the **United Nations Development Programme (UNDP)** and the **Oxford Poverty and Human Development Initiative (OPHI)** at the University of Oxford. However, the index has stated that India still has the world's highest number of poor at 228.9 million, followed by Nigeria (96.7 million projected in 2020).

What the report said?

1. The report found that across **111 countries** which were assessed using the most recent comparable data available, **1.2 billion people** (19.1 per cent) live in **acute poverty** and almost half of these people (593 million) are children under the age of 18 years.
2. The **developing region with the largest number of poor people** is Sub-Saharan Africa (nearly 579 million), followed by **South Asia (385 million)**.
3. The MPI highlighted that the **Covid-19 pandemic had set the global progress in reducing poverty back by 3-10 years**. Despite progress, **India's population remains vulnerable** to the mounting effects of the Covid-19 pandemic and to rising food and energy prices. **Integrated policies** tackling the ongoing nutritional and energy crises should be a priority.
4. **India had 97 million poor children in 2019-21**. This translates into more than one in five children (21.8 per cent)--more than the total number of poor people in any other country covered by MPI.
5. India is the only country in South Asia in which **poverty is significantly more prevalent among female-headed households** than among male-headed households.

- About **19.7 per cent of people living in female-headed households** live in poverty compared with 15.9 per cent in male-headed households.
- Ninety per cent of India's poor people live in rural areas** and 10 per cent in urban areas.

IN A FIRST-IN-HUMAN TRIAL OF FLASH RADIATION

The **first-in-human research** on a small number of patients with **bone cancer** reveals that **FLASH radiation therapy**, which delivers therapeutic amounts of radiation in a fraction of a second, may hold promise as a potential treatment for **difficult-to-kill malignancies**. The method **was previously tested on animals** and proved to be equally safe and effective without producing any unanticipated adverse effects.

What

- Today at the **Annual Meeting** of the **American Society for Radiation Oncology (ASTRO)**, results from the **FAST-01 trial (NCT04592887)** will be discussed.
- When compared to **traditional radiation treatments**, **FLASH radiotherapy (RT)** delivers **radiation at dose rates** that are more than 300 times higher.
- This causes a phenomenon known as the **FLASH effect**, which lessens the damage that conventional radiation therapy may do to healthy tissue surrounding a **tumour** while still killing the cancer cells at the **tumour location**.
- Because **FLASH radiotherapy** is given at **ultra-high dose rates**, it appears to cause less normal tissue injury. This offers the possibility of delivering larger doses of radiation - which could result in higher cure rates for patients with resistant tumours - without increasing side effects.
- Since **electron beams don't enter tissue very deeply**, they have mostly been used in early FLASH RT studies, which restricted their usefulness for this therapeutic strategy.
- Proton beams can penetrate enough to reach tumour sites** in most patients when used for **ultra-high dose-rate radiation**.
- FLASH-RT** had never been evaluated in a clinical study in humans before the **FAST-01 trial**, despite pre-clinical animal studies suggesting it could deliver high radiation doses safely and with fewer adverse side effects.

RISHI SUNAK'S ELEVATION AS UK PM

Sunak's elevation, as the UK's PM, can be termed as a **matter of pride for India**, the country once ruled by the British for over 300 years. **PM Modi said**, he looked forward to working closely together on global issues and implementing the Roadmap 2030 for bilateral relations. **The Roadmap 2030 for India-U.K. future relations was launched last year.**

More about the news

- Rishi Sunak was born in 1980 in Southampton** on England's south coast to parents of Indian descent, who were both born in East Africa. He grew up in a middle-class family, his father a family doctor and his mother a pharmacist, and says he inherited their hard-working ethos
- He **comes from** a Punjabi Khatri family and his grandparent had moved to Africa from Gujranwala, a city which is currently in the Punjab province of Pakistan, and later to the UK before India gained Independence.
- Britain is home to a vibrant and diverse community** of people with roots in India, which it ruled as a colony for nearly a century before India won independence in 1947. **As many as 1.5 million people of Indian** descent live in England and Wales, making them the largest ethnic group after white Britons.
- Sunak's triumph** a significant milestone for **Britain's Indian diaspora**, whose long struggle against racism and prejudice is rarely a prominent issue in British politics.

FIRST WOMAN TO REPRESENT INDIA IN ICAO

India's representative to the International Civil Aviation Organisation (ICAO), **Shefali Juneja**, has been unanimously elected as **chairperson** of the UN specialised aviation agency's **Air Transport Committee (ATC)**. India has won this coveted position in ICAO **after 28 years** when Juneja got unanimously elected in the ICAO council for the same on 24 October 2022. Incidentally, **Juneja is the first woman to represent India in ICAO.**

What

1. **ATC** is a **standing committee of ICAO** created by **Chicago Convention in 1944**. It is the **most important committee (of ICAO)** as it decides on **standards in air transport policies**.
2. **Nine technical panel report** to (it) including **facilitation and digitalisation of aviation**.
3. The **director of air transport bureau reports to the chair** and the entire year of work is decided under his guidance, Juneja told from **ICAO headquarters in Montreal**.
4. **India** is set to emerge as the **third largest aviation market globally by 2025**. The country's representative has held this position **twice in the 78 years** of ICAO's existence, **in 1987 and 1994**.
5. Juneja has occupied **various positions in ICAO** as chair of implementation and strategic policy group; group on gender leading to first time a mission statement being adopted by ICAO.
6. Last year, Juneja was elected as the **first woman chair of aviation security committee** and also held position as **chair of innovation**.

FACT TO REMEMBER:

1. **TWO MORE INDIAN BEACHES GET 'BLUE FLAG'**
2. **DIGITAL BANKING UNITS DEDICATED TO NATION**
3. **MISSION LIFE LAUNCHED**
4. **NCF FOR CHILDREN IN 3-8 YRS LAUNCHED**
5. **DELHI DECLARATION ADOPTED**
6. **FIRST GLOBAL POLICE METAVERSE**
7. **GEAC CLEARS ENVIRONMENTAL RELEASE OF GM MUSTARD**
8. **FIRST-EVER LIST OF FUNGAL INFECTION RELEASED**
9. **INDIA IN MULTIDIMENSIONAL POVERTY INDEX (MPI)**
10. **FIRST WOMAN TO REPRESENT INDIA IN ICAO**

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