

TO THE POINT

CURRENT AFFAIRS

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TO THE POINT – CURRENT AFFAIRS

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AGRICULTURE

1. DIRECT-SEEDING METHOD

Farmers in leading **rice-growing states** are adopting the **direct-seeding method** as a solution to **delayed rains and labor shortages**.

DIRECT-SEEDING METHOD



- Direct Seeded Rice (DSR), also known as the 'broadcasting seed technique,' is a water-saving method of sowing paddy.
- In this method, seeds are directly drilled into the fields, eliminating the need for nursery preparation and transplantation.

ADVANTAGES

Reduction in Labor	<ul style="list-style-type: none"> • Drum seeders reduce labor requirements to just two workers per acre, a stark contrast to the 25-30 laborers needed in traditional methods. This slashes labor costs and lightens the workload for farmers.
Time and Resource Saving	<ul style="list-style-type: none"> • By skipping nursery cultivation, farmers save 30 days in the crop cycle, enabling an early start to the rabi season and avoiding untimely rains during harvesting.
Water Conservation	<ul style="list-style-type: none"> • Direct-seeding cuts water needs by 15%, as water logging occurs a month later. Particularly advantageous in areas with delayed rainfall.
Enhanced Yield	<ul style="list-style-type: none"> • Research and field surveys show a yield increase of one to two quintals per acre with this technique compared to puddled transplanted rice.

Challenges

Weed Growth: Weed growth becomes a challenge as seeds are sown directly into the fields

Extreme climate: High temperatures and deficient rainfall can affect seed germination and crop growth

Operational challenges: Closed canals, erratic electricity supply, and issues with weed control and pest management

SUCCESSFUL IMPLEMENTATIONS

- The direct-seeding method has gained traction in various regions, including **Punjab, Telangana, and Andhra Pradesh**.
- In Andhra Pradesh alone, an **NGO** has implemented this method on approximately **4,000 hectares**, resulting in significant **cost savings**.

2. WORLD FOOD PROGRAM

The United Nations World Food Program (WFO) has temporarily **suspended food aid to Ethiopia** because its supplies are being **diverted to the Ethiopian military**.

ABOUT

STATUS	<ul style="list-style-type: none"> The World Food Program (WFP) is an international organization within the United Nations (UN). Its Parent organization is the UN General Assembly.
PURPOSE	<ul style="list-style-type: none"> It is the world's largest humanitarian organization that provides food assistance worldwide. It aims to achieve the Sustainable Development Goal (SDG) 2 which is about creating a world free of hunger by 2030.
BACKGROUND	<ul style="list-style-type: none"> It was established in 1961 after the 1960 Food and Agriculture Organization (FAO) Conference. It launched its First development program in Sudan in 1963.
HEADQUARTERS	<ul style="list-style-type: none"> Rome, Italy
ACHIEVEMENTS	<ul style="list-style-type: none"> WFP was awarded the Nobel Peace Prize 2020 for its efforts to provide food assistance in areas of conflict.
HUNGER HOTSPOTS	<ul style="list-style-type: none"> This report is jointly published by the Food and Agriculture Organization of the United Nations (FAO) and the World Food Program (WFP).



GOVERNANCE

- Executive Board:** It is the supreme governing body of WFP. It comprises **36 States Members** of the UN or Member Nations of the Food and Agriculture Organization (**FAO**).
- Executive Directors:** WFP is headed by an executive director, who is appointed jointly by the **UN Secretary-General and the director-general of the Food and Agriculture Organization (FAO)** of the United Nations. **Sushil Dev of India** served as the acting **Executive Director of WFP in 1968**.

Source: AIR

3. JOHA RICE

The Joha variety of rice is found to be effective in **lowering blood glucose** and **preventing diabetes** is an effective **nutraceutical** of choice in diabetes management.

JOHA RICE



- Joha is a **short-grain winter paddy** known for its significant **aroma** and noteworthy taste.
- It is cultivated in the **Northeastern region** of India.
- Joha rice is also rich in several **antioxidants, flavonoids, and phenolics**. Some of the reported bioactive compounds are **oryzanol, ferulic acid, tocotrienol, caffeic acid, catechuic acid, gallic acid, triclin**, and so on, each with reported **antioxidant, hypoglycaemic and cardio-protective** effects.
- It got the **GI** (geographical indications) Tag from the Union ministry of commerce.

ENVIRONMENT AND ECOLOGY

1. INDIA'S FIRST CARBON NEUTRAL VILLAGE

Syllabus: GS3/ Conservation

India's first **carbon neutral Village** is being developed in **Bhiwandi Taluka of Thane district, Maharashtra**.

ABOUT

Carbon Neutrality	<ul style="list-style-type: none"> Carbon neutrality means having a balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks.
Carbon Sequestration	<ul style="list-style-type: none"> Removing carbon dioxide from the atmosphere and then storing it is known as carbon sequestration.
Carbon Sink	<ul style="list-style-type: none"> Carbon sink is any system that absorbs more carbon than it emits. The main natural carbon sinks are soil, forests and oceans. To date, no artificial carbon sinks are able to remove carbon from the atmosphere on the scale to fight global warming.
Carbon Offsetting	<ul style="list-style-type: none"> Another way to pursue carbon neutrality is to offset emissions made in one sector by reducing them somewhere else. This can be done through investment in renewable energy, energy efficiency or other clean, low-carbon technologies.

INDIA'S NET ZERO TARGET

In 2021, at COP-26, India announced an ambitious target for achieving net zero GHG-emission by 2070.

Source: AIR

2. SPOTTED POND TURTLES



Three **mahouts** (keepers and drivers of elephants) at **Kaziranga National Park, Assam**, were arrested for capturing and consuming a rare freshwater turtle species, **spotted pond turtles**, sparking investigations into the **illegal consumption of protected species** by park employees

SPOTTED POND TURTLES

ABOUT: Spotted pond turtles (*Geoclemys hamiltonii*) are named for the yellow or white spots on their black heads, legs and tails.

- They have **large heads and short snouts**, and their **webbed feet help them swim**.
- They are also known as **Black Pond Turtle, Black Spotted Turtle, Hamilton's Terrapin**.
- They bask in the **sun to regulate their body temperature**.
- Their need for **warm water** and an **intense basking** area is important.
- When **they retreat** into their shells, spotted pond turtles **make a soft croak**.

RANGE AND HABITAT	<ul style="list-style-type: none"> They are found in large, deep rivers in India, Assam, Pakistan and Bangladesh. In India, the species is distributed across the north, northeast and a few parts of central India.
DIET REQUIREMENTS	These turtles are primarily carnivorous and eat aquatic invertebrates
SLEEP HABITS	Spotted pond turtles are crepuscular , meaning they are most active at twilight (dusk and dawn) .
CONSERVATION STATUS	International Union for Conservation of Nature (IUCN): Endangered CITES: Appendix I

KAZIRANGA NATIONAL PARK: It is in the State of **Assam** and covers 42,996 Hectare (ha). It is the **single largest** undisturbed and representative area in the **Brahmaputra Valley floodplain**.
LEGAL STATUS: It was declared as a **National Park in 1974**. It has been declared a **tiger reserve since 2007**. It has a total tiger reserve area of 1,030 sq km with a core area of 430 sq. km.

Significant Species Found

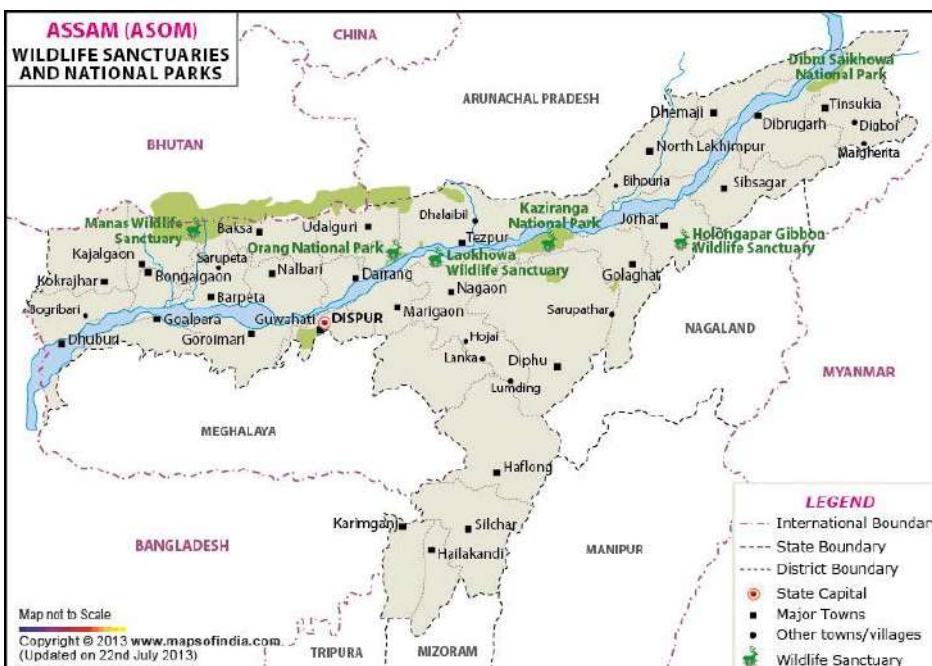
It is the home of the world's most one-horned rhinos. Pobitora Wildlife Sanctuary has the highest density of one-horned rhinos in the world and second highest number of Rhinos in Assam after Kaziranga National Park

Much of the focus of conservation efforts in Kaziranga are focused on the 'big four' species— Rhino, Elephant, Royal Bengal tiger and Asiatic water buffalo

Kaziranga is also home to 9 of the 14 species of primates found in the Indian subcontinent

INTERNATIONAL STATUS: It was declared a **UNESCO World Heritage Site** in 1985. It is recognized as an **Important Bird Area** by BirdLife International.

RIVERS AND HIGHWAYS: The **National Highway 37** passes through the park area. The park also has more than **250 seasonal water bodies**, besides the Diphlu River running through it.



OTHER NATIONAL PARKS IN ASSAM:

- Dibru-Saikhowa National Park,
- Manas National Park,
- Nameri National Park,
- Rajiv Gandhi Orang National Park

GEOGRAPHY

1. NAMING OF CYCLONES

A cyclonic storm “**Biparjoy**” has developed over the **east-central and adjoining southeast Arabian Sea**, according to the **India Meteorological Department (IMD)**.

The system intensified from **depression to deep depression** and a **cyclonic storm**.

About

'Biparjoy' was suggested by Bangladesh and the word means 'disaster' or 'calamity' in Bengali

It is not rare for cyclones to develop in the Arabian Sea. There are fewer cyclones compared to the Bay of Bengal, but it is not uncommon

Between 1980–2019, Cyclone Gonu in June 2007 — the strongest cyclone in the Arabian Sea

June is one of the favorable months for the formation of cyclones in the Arabian Sea

NAMING OF CYCLONES

- The naming of cyclones is done by countries on a **rotational basis**, following certain existing guidelines.
- Worldwide, there are six **regional specialized meteorological centres (RSMCs)** and five **regional Tropical Cyclone Warning Centres (TCWCs)** mandated for issuing advisories and naming of tropical cyclones.
- **IMD** is one of the six RSMCs to provide **tropical cyclone and storm surge** advisories to 13 member countries under the **WMO/Economic and Social Commission for Asia-Pacific (ESCAP) Panel** including **Bangladesh, India, Iran, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Thailand, United Arab Emirates and Yemen**.

SIGNIFICANCE FOR NAMING TROPICAL CYCLONES

- It helps to **identify** each individual tropical cyclone.
- It facilitates **disaster risk awareness, preparedness, management and reduction**.
- **Local and international media** become focused on the tropical cyclone.
- It **removes confusion** where there are **multiple cyclonic systems** over a region.

GLOBAL TERMINOLOGY

- **hurricanes** in the US and the Caribbean
- **cyclones** in South Asia
- **typhoons** in East Asia
- **willy-willies** in Australia

They all **develop in the same way**, have the **same characteristics** and are **all tropical storms**.

2. BETELGEUSE STAR

Researchers from **Japan and Switzerland** recently reported that the **Betelgeuse star** is in its **late carbon-burning stage**.

ABOUT BETELGEUSE STAR



- Betelgeuse, a red supergiant star, is over 10 times the mass of the sun and, if placed at the solar system's center, its surface would reach Jupiter.
- At 10 million years old, Betelgeuse, though younger than the 5-billion-year-old Sun, is more massive, leading to faster burn through its materials consumption and a shorter lifespan compared to the Sun.
- Situated 640 light-years away, it implies that the light we observe today originated 640 years ago, making our view of it a glimpse into its past.
- Its brightness makes it easy to spot and is often the tenth-brightest star in the sky.

- It is called *'Thiruvathirai'* or *'Ardra'* in Indian astronomy, and is easily spotted in the *constellation Orion*.

BURNING STAGES OF STAR

<ul style="list-style-type: none"> Betelgeuse’s observed pulsation matches theoretical estimates from a late carbon-burning stage, suggesting the red supergiant is in its death throes. 	<ul style="list-style-type: none"> In massive stars like Betelgeuse, the carbon-burning stage lasts only up to a few hundreds of years, culminating in a rapid collapses and supernova within months.
<ul style="list-style-type: none"> Most stars, including the Sun, fuse hydrogen, to produce helium and some energy as a byproduct. This energy’s outward push balances gravity’s inward pull, and keeps the star from collapsing. 	<ul style="list-style-type: none"> Such stars exhaust hydrogen in a few million years, shifting to helium fusion for making carbon. However, less energy is released in helium fusion, leading the star to burn through its helium in about one million years.
<ul style="list-style-type: none"> Currently, red giants like Betelgeuse sequentially burn carbon and silicon, depleting elements until their core contains iron, cobalt, and nickel. 	<ul style="list-style-type: none"> Each of these stages is shorter than the predecessor. In a star like Betelgeuse, carbon burns in a few hundred years whereas silicon lasts about a day. So the late-carbon stage is the terminal phase of Betelgeuse.

FACTORS ALTERING THE BRIGHTNESS OF THE STAR

- Red giant stars expand and contract due to the periodic heating and cooling of the hydrogen in their outermost layers.
- As this process repeats itself, the star appears to a distant observer to dim and brighten at regular intervals.

3. KALASA BANDURI PROJECT

The Kalasa Banduri project in Karnataka is **stuck again**.

ABOUT KALASA-BANDURI PROJECT



- The project aims to divert **water from Mahadayi** to satisfy the drinking water needs of the **Belagavi, Dharwad, Bagalkot and Gadag** districts in Karnataka.
- As per the plans, barrages are to be built on **Kalasa and Banduri streams** — tributaries of Mahadayi — and **water diverted towards Karnataka’s** parched districts.
- Though the project was first proposed in the early 1980s, it has remained on paper owing to a dispute between **Karnataka, Goa and Maharashtra**.

A joint statement by Goa and Maharashtra governments says that a united fight against Karnataka regarding the water diversion project will be put

Concerns

The impacts of such development projects are adverse, especially when it comes to natural resources and the need to share them between different states/territories

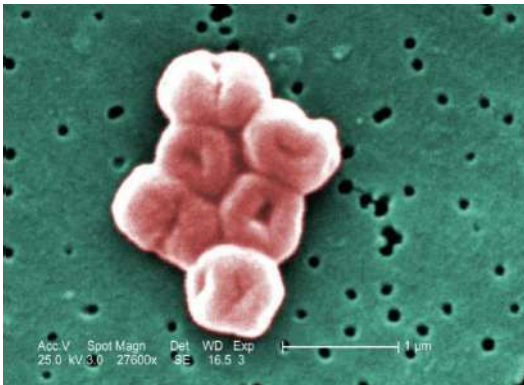
SCIENCE AND TECHNOLOGY

1. ACINETOBACTER BAUMANNII

Recently, Scientists from the **United States and Canada** have achieved a remarkable feat in the **field of medicine** by using Artificial Intelligence (AI) to discover a powerful antibiotic called **Abaucin** capable of fighting **Acinetobacter baumannii superbug**.

This breakthrough holds immense promise in the fight against **drug-resistant bacteria**.

ACINETOBACTER BAUMANNII



Acinetobacter baumannii is a dangerous bacterium **resistant to antibiotics**, as identified by the World Health Organization (WHO). It can cause severe infections like **pneumonia, meningitis, and wound infections**, leading to **fatalities**. Typically found in **hospitals**, Acinetobacter baumannii can survive on surfaces for **long periods**, making it difficult to eradicate. Due to its remarkable capacity to develop resistance to all currently available antibiotics, it was recognised as a "red alert" human pathogen.

Overuse and misuse of antibiotics have fueled the rise of drug-resistant bacteria, posing a global health concern

The WHO lists infections such as pneumonia, tuberculosis, and foodborne diseases as becoming harder to treat with existing medication due to increasing anti-bacterial resistance

Antibiotic Resistance

Antibiotic resistance occurs when bacteria adapt and become resistant to the effects of antibiotics, rendering treatments ineffective

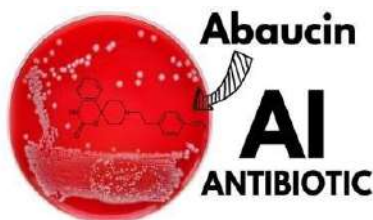
Antibiotics are medicines used to prevent and treat bacterial infections

Note:

Superbugs are bacteria that are resistant to several types of antibiotics.

WHO's list of superbugs highlighted bacteria that have **built-in abilities** to find new ways to **resist treatment** and can pass along **genetic material** that allows other bacteria to become drug resistant as well. They can also be **fungi**.

ABAUCIN



Abaucin is a compound that shows useful activity as a narrow-spectrum antibiotic. It is effective against Acinetobacter baumannii.

DISCOVERY

Abaucin was found with the assistance of **AI** using a **machine-learning** model approach.

Network was trained with a dataset of ~7,500 molecules screened for inhibiting Acinetobacter baumannii growth.

The network predicted structurally different molecules with activity against A. baumannii, including abaucin.

Abaucin was experimentally validated and found to have potent antibacterial activity.

MECHANISM OF ACTION

Abaucin disrupts the normal function of the **CCR2 protein in bacteria**.

This disruption hinders the **movement of certain molecules** inside the bacteria, preventing them from **reaching the outer membrane**.

As a result, the growth of *Acinetobacter baumannii* is inhibited, reducing its ability to cause infections.

2. VISION PRO: APPLE'S FIRST SPATIAL COMPUTER

Apple has unveiled the **Vision Pro**, a mixed **reality headset** that allows "**spatial computing**" by using the wearer's **eyes, voice and hands**.

ABOUT



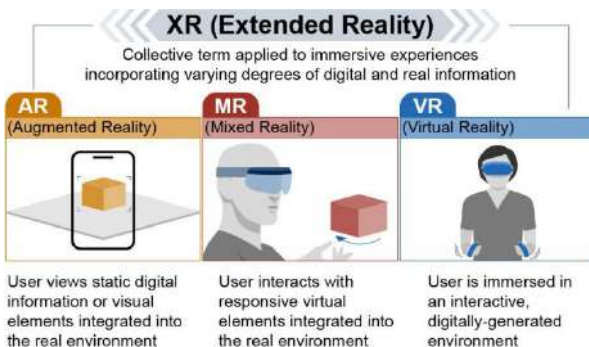
Vision Pro is essentially an **augmented-reality (AR) headset** that "**seamlessly**" blends the **real and digital worlds**. The device can switch between **augmented and full virtual reality (VR)** using a dial. Apple has described the product as a "**Spatial Computer**".

SPATIAL COMPUTING

It offers a seamless **machine to machine interaction** or **human-machine interaction** in a **three-dimensional world** while using **AR, VR and mixed reality**.

It was defined in 2003 by Simon Greenwold.

With the increasing adoption of the **IoT, VR and AR applications** and devices the scope of spatial computing has expanded. It **digitizes the processes**, collects the data via **sensors**, and allows the computer hardware to control the object's **functions and operations**.



3. CAPTAGON PILLS

Reports suggest that the **Islamic State (IS) and Syrian fighters** widely consumed Captagon Pills to **increase alertness and suppress appetite** during their **gruelling battles**.

ABOUT

- Captagon is a **highly addictive amphetamine-type drug**, which is produced mainly in **Syria** and widely smuggled across **West Asia**.
- While **Nazi Germany supplied Pervitin**, a methamphetamine (now known as **crystal meth**) to its soldiers, the Allied forces gave their troops **Benzedrine**, which was **amphetamine sulfate**.

ECONOMY

1. Lightweight' Payment and Settlement System

The Reserve Bank of India (RBI) recently announced plans to introduce a '**Lightweight' Payment and Settlement System (LPSS)** for emergencies which was proposed in **RBI's annual report for 2022-23**. The lightweight system aims to provide **resilience and continuity of payment and settlement systems** while ensuring efficiency during emergencies.

RBI'S PLANNED LPSS



LPSS is independent of **conventional technologies and wired networks** that underlie existing payment systems such as **UPI, NEFT, and RTGS**.

BACKGROUND

As a part of the '**Utkarsh 2.0**' initiative, RBI will put in place a resilient framework for oversight of **Centralized Payment Systems –NEFT and RTGS**.

It also seeks to **upgrade the RTGS system**, including improvements to the existing ones and the introduction of **new functionalities**.

ENHANCING PAYMENT SYSTEM RESILIENCE

<ul style="list-style-type: none"> LPSS for emergencies ensures resilience and continuity of payment and settlement systems during extreme and volatile situations. 	<ul style="list-style-type: none"> Conventional payment systems like UPI, NEFT, and RTGS are vulnerable to disruptions caused by natural calamities or war due to their dependence on complex wired networks and advanced IT infrastructure.
<ul style="list-style-type: none"> Disruptions in existing systems can affect liquidity pipeline and hamper essential payment services. 	<ul style="list-style-type: none"> Lightweight system provides a portable and easily activated solution that can be operated remotely with minimal resources.
<ul style="list-style-type: none"> It serves as a backup option for critical transactions, maintaining stability and ensuring the availability of essential payment services. 	

OPERATING PROCEDURE

MINIMAL STAFF	<ul style="list-style-type: none"> The system will have a bare minimum of trained staff who will handle payment and settlement operations securely and efficiently. They will also coordinate with government agencies, financial institutions, market participants, and service providers.
EMPHASIS ON NECESSARY TRANSACTIONS	<ul style="list-style-type: none"> The system will process only those transactions that are crucial for maintaining the stability of the economy, such as government and market-related transactions. Retail or individual transactions that can be deferred or conducted through alternative modes will not be handled.
SIMPLIFIED AUTHENTICATION AND VERIFICATION	<ul style="list-style-type: none"> The system will employ a simplified mechanism to ensure the integrity and validity of transactions. It will also maintain transaction records for reconciliation and audit purposes.



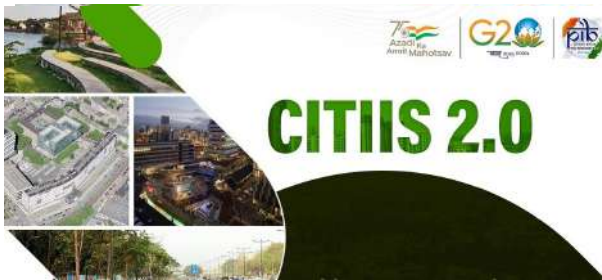
CHALLENGES

Requires careful **planning and coordination** among stakeholders for readiness and effectiveness.
 Requires testing and validation of **functionality, security, and reliability** before deployment.
 Requires **regular training and capacity building** of staff.
 Requires **constant monitoring and evaluation** of performance and impact.

2. CITY INVESTMENTS TO INNOVATE, INTEGRATE & SUSTAIN 2.0 (CITIIS 2.0)

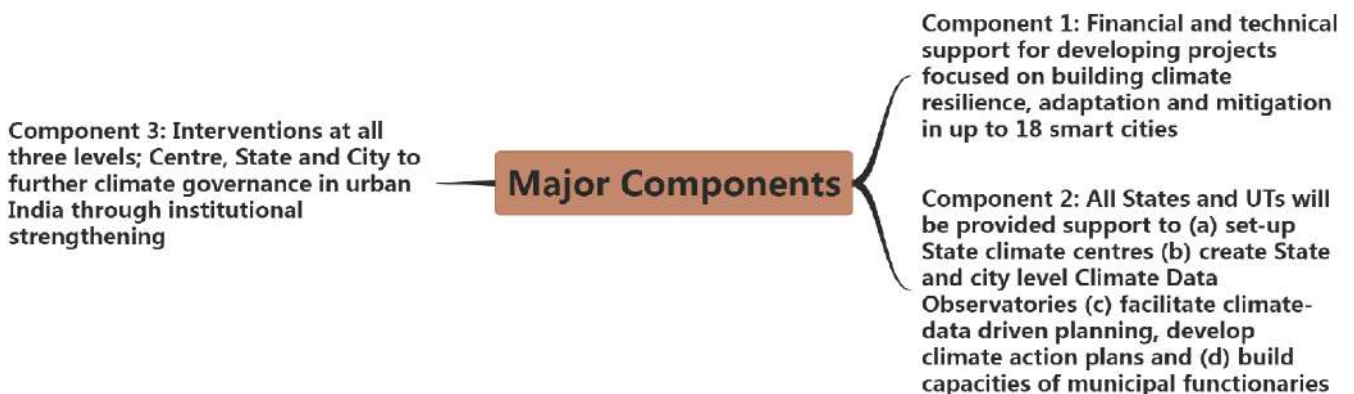
The Union Cabinet has approved the City Investments to Innovate, Integrate and Sustain 2.0 (**CITIIS 2.0**).

ABOUT



Objective: It aims to support competitively selected projects promoting **circular economy** with focus on **integrated waste management** at the city level, **climate-oriented reform actions** at the State level, and **institutional strengthening and knowledge dissemination** at the National level.
Funding: The funding for CITIIS 2.0 would include a loan of **Rs.1760 crore (EUR 200 million) from AFD** and **KfW (EUR 100 million each)** and a technical assistance grant of **Rs.106 cr. (EUR 12 million)** from the EU.

Agencies involved: CITIIS 2.0 is a program conceived by the **Ministry of Housing and Urban Affairs (MoHUA)** in partnership with the **French Development Agency (AFD)**, **Kreditanstalt für Wiederaufbau (KfW)**, the **European Union (EU)**, and **National Institute of Urban Affairs (NIUA)**.
Duration: The program will run for a period of four years, i.e., from **2023 till 2027**.



INTERNATIONAL RELATIONS

1. IRAN-TALIBAN WATER CONFLICT

Iran and Afghanistan are locked in a **long-standing dispute** over the **sharing of water** from the **Helmand River**.

The Helmand River is a **vital source of water** for both sides, **supporting agriculture, livelihoods and ecosystems** in the region.

WHAT IS THE DISPUTE?

The **Helmand River Treaty**, signed in **1973** between Afghanistan and Iran to **regulate water allocation**, remains **unratified and unimplemented**. Iran accuses Afghanistan of **violating water rights**, citing only 4% of agreed-upon river water received last year. Afghanistan attributes **reduced water flow to climatic factors** and **denies Iran's accusations**. Iran is particularly concerned about Afghanistan's construction of dams and irrigation systems along the Helmand River.



HELMAND RIVER

- The Helmand is **Afghanistan's longest river**. It **originates** near **Kabul** in the **western Hindu Kush Mountain range** and flows in a southwesterly direction through desert areas for a total of about 1,150 kilometers before **emptying into Lake Hamun**, which straddles the **Afghanistan-Iran border**.
- **Lake Hamun** is the **largest freshwater lake in Iran**. It used to be one of the world's largest **wetlands** fed by Helmand.
- It is **separated** from the watershed of the Kabul River by the **Unai Pass**.

IRAN - TALIBAN TIES-

Iran and Afghanistan share a **950-kilometer land border**. Both countries have **no major territorial disputes**.

Iran had cultivated **good ties** with the **Taliban** before the **Islamic fundamentalist group captured Kabul** in August **2021** as **US and NATO** troops were in the final weeks of their **pullout from Afghanistan**.

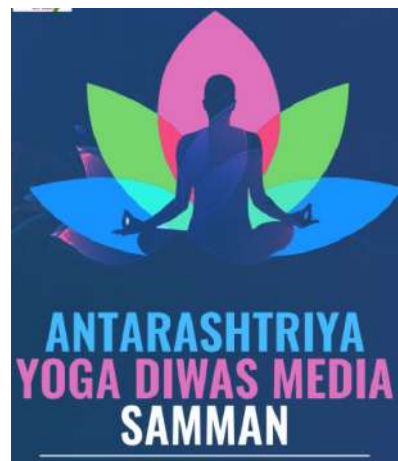
Source: IE

2. ANTARASHTRIYA YOGA DIWAS MEDIA SAMMAN.

The **Ministry of Information and Broadcasting(I&B)** has announced the second edition of **Antarashtriya Yoga Diwas Media Samman**.

ABOUT ANTARASHTRIYA YOGA DIWAS MEDIA SAMMAN

The **Ministry of I&B** introduced the **Antarashtriya Yoga Diwas Media Samman (AYDMS)** in **2019** to recognize the **media's positive role in promoting Yoga globally**. The **inaugural awards** were presented in **2020**, and the Ministry plans to revive the **second edition in 2023**. **Thirty-three awards** will be distributed across **Print, Television, and Radio** categories in **twenty-two Indian languages and English**. An **independent Jury** will recommend the awardees, who will receive a special **media/plaque/trophy** along with a citation.



DO YOU KNOW?

The **International Day of Yoga** has been celebrated annually on **21 June since 2015**. The **idea** of the International Day of Yoga was **first proposed by** the Prime Minister of India, **Shri Narendra Modi**, during his address at the **United Nations General Assembly (UNGA)**, on **27 September 2014**.

Source: News on air

3. L-20 SUMMIT (G20 ENGAGEMENT GROUPS)

The L-20 summit held in **Patna, Bihar** from **June 2023**. The topics of '**Universal Social Security**' and '**Women and Future of Work**' was discussed.

ENGAGEMENT GROUPS UNDER G20

Engagement Groups, comprising non-government participants from each G20 member, provide recommendations to the G20 Leaders and contribute towards the policy-making process.

BUSINESS20	B20 is the official G20 dialogue forum representing the global business community . Established in 2010 . Confederation of Indian Industry (CII) has been designated as the Business 20 (B20) Secretariat for India's G20 Presidency .
CIVIL20(C20)	It was launched in 2013 to engage with Civil Society Organizations (CSOs) .
LABOUR20	L20 Summit first took place formally during the French Presidency in 2011 . L20 convenes trade union leaders from G20 countries.
PARLIAMENT20	P20 Engagement Group, started during Canada's Presidency in 2010 , is led by Speakers from Parliaments of G20 countries .
SCIENCE20	S20 Engagement Group, comprising the national science academies of the G20 countries, was initiated during Germany's Presidency in 2017 .
SUPREME AUDIT INSTITUTIONS 20	SAI20 is an Engagement Group introduced by the Indonesian Presidency in 2022 . It is a forum to discuss the important role played by SAIs globally in ensuring transparency
STARTUP20	Startup 20 Engagement Group has been initiated under G20 India presidency of 2023 which aspires to create a global narrative for supporting startups .
THINK20	T20 as an official G20 Engagement Group, was initiated during the Mexican Presidency in 2012 . It serves as an " idea bank " for the G20 by bringing together think tanks and high-level experts to discuss relevant international socio-economic issues .
URBAN20	Urban 20 or U20 is a city diplomacy initiative , comprising cities from G20 countries . The U20 was instituted in 2017 under the leadership of Mayors of Buenos Aires (Argentina) and Paris C40 (Cities Climate Leadership Group is a group of 96 cities) and UCLG (United Cities and Local Governments) are the conveners of U20 since its inception. Ahmedabad is the Chair for the 6th edition of U20 . The National Institute of Urban Affairs will work with the city of Ahmedabad as the Technical Secretariat for U20.
WOMEN20	Women20 (W20) was launched in 2015 during the Turkish Presidency . Its aim is to implement the "25x25" commitment adopted at Brisbane Summit in 2014 , aimed at reducing the gender gap in labour force participation by 25% by the year 2025 . W20 focuses on ' gender inclusive economic growth ', and the following five are the priority areas for W20: <i>Grassroots leadership, Entrepreneurship, Bridging the Gender Digital Divide, Education & Skill Development and Climate Change</i> .
YOUTH20	Y20 with its first Y20 conference held in 2010 , provides a platform that allows youth to express their vision on the G20 priorities.

Source: G20

POLITY

1. NATIONAL COMMISSION FOR SCHEDULED CASTES

The National Commission for Scheduled Castes (**NCSC**) has recently issued a notice to **Zomato**, regarding an **advertisement** that was deemed "**inhuman**" and **casteist**.

NATIONAL COMMISSION FOR SCHEDULED CASTES

The NCSC is a **constitutional body** established with a view to provide safeguards against the **exploitation of Scheduled Castes** and to promote and protect their **social, educational, economic and cultural interests**.

HISTORY

Special Officer	Initially, the constitution provided for the appointment of a Special Officer under Article 338 . The special officer was designated as the Commissioner for Scheduled Castes and Scheduled Tribes .
65th Amendment Act, 1990	It amended Article 338 of the Constitution and replaced the one-member system with a multi-member National Commission for Scheduled Castes (SC) and Scheduled Tribes (ST).
89th Amendment Act, 2003	Article 338 was amended, and the erstwhile National Commission for SC and ST was replaced by two separate Commissions from the year 2004 which were: (a) National Commission for Scheduled Castes (NCSC) and (b) National Commission for Scheduled Tribes (NCST)

COMPOSITION

- The NCSC comprises a **Chairperson**, a **Vice-Chairperson**, and **three additional Members**.
- These positions are filled through **the President's appointment**, indicated by a warrant **under his hand and seal**.
- Their **conditions of service** and **tenure of office** are also determined by **the President**.

FUNCTIONS

<ul style="list-style-type: none"> • To investigate and monitor all matters relating to the constitutional and other legal safeguards for the SCs and to evaluate their working 	<ul style="list-style-type: none"> • To participate and advise on the planning process of socioeconomic development of the SCs and to evaluate the progress of their development under the Union or a state
<ul style="list-style-type: none"> • To inquire into specific complaints with respect to the deprivation of rights and safeguards of the SCs 	<ul style="list-style-type: none"> • To present to the President, annually and at such other times as it may deem fit, reports upon the working of those safeguards
<ul style="list-style-type: none"> • To make recommendations as to the measures that should be taken by the Union or a state for the effective implementation of those safeguards and other measures for the protection, welfare, and socio-economic development of the SCs 	<ul style="list-style-type: none"> • Till 2018, the commission was also required to discharge similar functions with regard to the other backward classes (OBCs). It was relieved from this responsibility by the 102nd Amendment Act, 2018.

2. PRIME MINISTERS MUSEUM AND LIBRARY

Recently, the name of the **Nehru Memorial Museum & Library (NMML)** situated in the **Teen Murti Complex** was changed to **Prime Ministers Museum and Library society**.

THE BUILDING

Teen Murti House	Built in 1929-30 as part of Edwin Lutyens's imperial capital, then known as Flagstaff House, was the official residence of the Commander-in-Chief of the British armed forces in India.
Nehru Residence	In August 1948, it became the official residence of India's first Prime Minister, Jawaharlal Nehru , who lived there for 16 years until his death on May 27, 1964.
Nehru Memorial Museum	On Nehru's 75th birth anniversary on November 14, 1964, President S Radhakrishnan dedicated the Teen Murti House to the nation and inaugurated the Two years later, the NMML Society was set up to manage the institution and has remained in charge since then.

THE PRADHANMANTRI SANGRAHALAYA

- In 2016, The Prime Minister mooted the idea of setting up a museum dedicated to **all Prime Ministers of India on the premises of Nehru Museum**.
- It was inaugurated by the PM in April, 2022, to create awareness about **all 14 prime ministers** of the country with **ample space for future leaders** as well.
- Also, the **Nehru Museum** has been integrated with the **new building and designated as Block I** of the Prime Ministers Museum.



Source: IE

3. PROTECTING THE HONOUR OF NATIONAL ANTHEM

Recently the **Executive Magistrate in Srinagar** sent **11 men to jail** after detaining them for **allegedly not rising for the National Anthem** at an event where J&K Lt Governor was present.

- The order noted that “there is every likelihood that they may commit **breach of peace and disturb public tranquillity** if released”.
- They were “**bound down**” for good behavior under sections **107/151 of CrPC**. The accused is bound by **surety or personal guarantee** to appear before the court.



Note: In legal terms, to be “bound down” means to be required to **appear before the investigating officer or the court** on a given date.

EXECUTIVE MAGISTRATE

The CrPC classifies magistrates into 2 types - **Executive Magistrates and Judicial Magistrates**. **Section 3(4)** of the CrPC enforces on **good relations** between the two.

GOVERNANCE

1. Film Certification in India

Union Information & Broadcasting Minister has raised concerns to the Central Board of Film Certification (CBFC) over their nod to the **Hollywood film Oppenheimer**.

What is the CBFC?

ABOUT	CBFC is a statutory body tasked with regulating the public exhibition of films under the provisions of the Cinematograph Act, 1952 . Films can be shown in India only after they have been certified by the Board.
PARENT MINISTRY	Ministry of Information and Broadcasting (I&B)
HEADQUARTERS	Mumbai
GOVERNANCE	The Board consists of Board members and a Chairperson (all of whom are appointed by the Central Government). The CEO , under the chairperson, is in charge of the administrative functioning .
REGIONAL OFFICES	CBFC has nine regional offices (ROs) . In the examination of films, the ROs are assisted by Advisory Panels that can have multiple members. These members of the Advisory panel are nominated by the Central Government for two years . While the board members are usually film and TV professionals , members of the advisory panel are often from outside the industry.

PROCESS OF FILM CERTIFICATION

- **After receiving** all of the film's materials, **requisite fees** and other matters required under the rules, the regional officer forms an **Examining Committee** to view the film.
- After the film has been **previewed**, the CBFC has to ensure that each member gives a **report in writing** about his/her recommendations about the **modifications** and **the classification recommended to the film**.
- The **Certification process** is in accordance with The **Cinematograph Act, 1952**, The **Cinematograph (certification) Rules, 1983**, and the guidelines **issued by the Central government under section 5 (B) of The Cinematograph Act, 1952**.
- **Section 5(B)** states that "a film shall **not** be certified if any part of it is **against the interest** of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or involves defamation or contempt of court or is likely to incite commission of any offence".
- The **report** is then given to the **Chairperson** who will ask the **regional officer to initiate further procedures**.

CERTIFICATES THAT CAN BE ISSUED TO INDIAN FILMS

- Certification is decided by the **Regional Officer** based on reports by **Examining Committee** members in unanimity or majority. In case of a divided opinion, the case rests with the chairperson.
- These **certifications include** unrestricted public exhibition (**U**), parental guidance for children below age 12 (**U/A**), adult (**A**), or viewing by specialized groups (**S**).
- If the **applicant is unhappy** with the certification or the list of changes, he or she can apply to the **Revising Committee**. The Committee **cannot** have any of the **members** who were on the **earlier committee**; and it also has to have a **Board member (or more) on it, mandatorily**.
- If there is still contention the **last point of appeal** is the **Film Certification Appellate Tribunal, an independent body**.



Source:IE

2. RAJMARGYATRA

Recently 'Rajmargyatra', a **unified mobile application** was launched to provide **comprehensive information for national highway users**.

ABOUT

It aims to create a **seamless, user-friendly experience** for highway users, fostering a **safer and more enjoyable** journey on Indian National Highways.

- The app was launched by the **National Highways Authority of India (NHAI)**.



KEY FEATURES OF 'RAJMARGYATRA' APP

COMPREHENSIVE HIGHWAY INFORMATION	It provides real-time weather conditions , timely broadcast notifications, and access to details about nearby toll plazas, petrol pumps, hospitals, hotels, and other essential services that ensure a seamless and safe journey on National Highways.
HASSLE-FREE COMPLAINT REDRESSAL	The app comes with an inbuilt complaint redressal and escalation mechanism . Users can easily report highway-related issues , attaching geo-tagged videos or photos for better clarity. The registered complaints will be handled in a time-bound manner , with system-generated escalations to higher authorities in case of any delays.
SEAMLESS FASTAG SERVICES	'Rajmargyatra' integrates its services with various bank portals, making it convenient for users to recharge their FASTags, avail monthly passes , and access other FASTag-related banking services – all within a single platform . <ul style="list-style-type: none"> • Over-speeding notifications and voice-assistance to encourage responsible and safe driving behavior

Source: PIB

HEALTH

1. PRADHAN MANTRI BHARTIYA JANAUSHADHI PARIYOJANA (PMBJP)

The Janaushadhi scheme has helped citizens to save around **Rs 20,000 cr on their medicine bills** in the last 9 years.

ABOUT PRADHAN MANTRI BHARTIYA JANAUSHADHI PARIYOJANA (PMBJP)



- It is a campaign launched in **November 2008** by the **Department of Pharmaceuticals** in association with Central Pharma Public Sector Undertakings, to provide **quality medicines at affordable prices** to the masses through dedicated outlets known as **Pradhan Mantri Bhartiya Janaushadhi Kendras (PMBJK)**.
- The Government revamped the '**Janaushadhi Scheme**' in September 2015 as '**Pradhan Mantri Janaushadhi Yojana (PMJAY)**'.
- To give further impetus to the scheme, it was again renamed as **Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)**.

The drugs sold at the Kendras are **50% to 90% cheaper** than their branded counterparts

Features

PMBJK provides generic medicines at a much lesser price. The potency of these medicines is the same as that of expensive branded medicines available in the open market

The Janaushadhi scheme requires that at least one Janaushadhi Store be set up in each District of the country

AIM

- | | |
|---|--|
| <ul style="list-style-type: none"> • Ensure access to quality medicines for all the section of the population especially for the poor and the deprived ones. | <ul style="list-style-type: none"> • Create awareness about generic medicines through education and publicity to counter the perception that quality is synonymous with high price. |
| <ul style="list-style-type: none"> • Generate employment by engaging individual entrepreneurs in opening of PMBJP Kendras. | <ul style="list-style-type: none"> • Extend coverage of quality generic medicines so as to reduce the out of pocket expenditure on medicines and thereby redefine the unit cost of treatment per person. |

EVOLUTION

- | | |
|--|---|
| <ul style="list-style-type: none"> • In the last nine years, the number of Janaushadhi Kendras has increased by 100 times and the sales have increased more than 150 times. | <ul style="list-style-type: none"> • It has helped citizens to save around 20,000 crore rupees on their medicine bills in last nine years. |
| <ul style="list-style-type: none"> • Over 9,400 Janaushadhi Kendras are functional across the country. | <ul style="list-style-type: none"> • Medicines to treat gastric issues, diabetes, cardiovascular ailments, and pain have seen the highest sales at the Jan Aushadhi Kendras, under the PMBJP scheme. |

FUTURE PROSPECTS: The government has set a target to **increase the number** of Janaushadhi Kendras to **10,000** by the end of this year.

Source: TH

2. FIRST INDIGENOUSLY DEVELOPED ANIMAL-DERIVED BIOMEDICAL DEVICE

Recently, Indian Drugs Controller approved the first indigenously developed animal-derived **Class D Biomedical Device, Cholederm** that can **rapidly heal skin wounds** at low-cost with minimum scarring. As per the Medical Devices Rules, 2017, medical devices are classified into four classes based on the risk level: **Class A (low risk), Class B (low moderate risk), Class C (moderate high risk); Class D (high risk)**.

MAJOR HIGHLIGHTS OF THE DEVELOPMENT

<ul style="list-style-type: none"> The Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), an autonomous institution under the Department of Science and Technology (DST), developed the tissue engineering scaffold. 	<ul style="list-style-type: none"> The institution is India's pioneer in developing CDSCO-compliant Class D medical devices and employs innovative technology to create tissue engineering scaffolds from mammalian organs.
<ul style="list-style-type: none"> The concept of using animal-derived materials as advanced wound care products is not new. 	<ul style="list-style-type: none"> However, indigenous technology was so far not available for fabricating quality products that satisfy the requirements of the Drugs Controller General.

It showed that graft-assisted healing was regulated by anti-inflammatory M2 type of macrophages, which helped modulate or mitigate scarring reactions in different tissues

Healing Capabilities

The tissue engineering scaffold, (Cholederm), showed the ability to heal various types of skin wounds, including burn and diabetic wounds, in rat, rabbit, or dog models faster than existing products in the market, while minimizing scarring

COST REDUCTION AND MARKET POTENTIAL

- The introduction of Cholederm to the Indian market is expected to **reduce treatment costs** from Rs 10,000/- to Rs 2,000/-, making it **more affordable**.
- Additionally, the technology provides a **competitive advantage in the international market** and creates an **income-generating opportunity**.

FUTURE DEVELOPMENTS

The research team is currently developing **injectable gel formulations of the scaffold** for easier application in treating **cardiac injuries**, aiming to revolutionize the management of patients suffering from **myocardial infarction**.

Note:

- Medical devices are regulated as drugs under the **Drugs and Cosmetics Act, 1940**.
- CDSCO** is the national regulating authority for **medical devices and pharmaceuticals** while **NPPA** is empowered by the Drugs (Price Control) Order, 2013, to control the **prices of drugs and medical devices**.

CDSCO

- The CDSCO is the **Central Drug Authority** for discharging functions assigned to the Central Government under the **Drugs and Cosmetics Act, 1940**.
- The CDSCO under Directorate General of Health Services, Ministry of Health & Family Welfare, GoI is the **National Regulatory Authority (NRA)** of India. Its headquarter is in **New Delhi**.

DEFENCE AND INTERNAL SECURITY

1. NORTH KOREAN SPY SATELLITES

A North Korean military **reconnaissance satellite Malligyong-1** was launched through a new type of rocket named **Chollima-1**.



DO YOU KNOW?

- The recent flight was the 16th satellite launch by North Korea.
- It was done through the **Chollima-1**, a new space launcher with an engine similar to North Korea's **dual-nozzle liquid-fuel machine** used in **Hwasong-15 ICBM**.

MORE IN NEWS

- The satellite is said to have flown for about **10 minutes before crashing** into the **Yellow Sea**.
- The **U.S., Japan, and South Korea** expressed 'strong condemnation' to the launch.

The launch vehicle used was Unha-3, a likely variant of Taepodong-2 ICBM

The Unha-type launch vehicle was also used in the 2016 launch of Pyongyang's Earth Observation satellite

N. Korea's Space Program

North Korea in the past decade has had an active space program that is closely related to its missile program

Starting in 1998, North Korea successfully orbited its first satellite in 2012 after three failed attempts.

OBJECTIVES OF NORTH KOREA

The North Korean spy satellites are expected to play a crucial role in providing advanced surveillance technology that covers a large portion of the region, to improve the ability to strike targets during conflict.

OTHER RELATED DEVELOPMENTS

- Earlier, the U.S. announced that it would be activating **U.S. Space Forces Korea**.
- This system would provide South Korea with advanced capabilities of **missile warning and satellite communications** throughout the Korean peninsula and its proximate areas.
- South Korea successfully launched its **Nuri rocket** which is designed to **assist Seoul's efforts** to develop a **space-based surveillance system**.

REPERCUSSIONS

- The **security anxiety in East Asia** in response to the North Korean satellite launch reveals a sense of urgency among the regional powers.
- While the launch is a **breach of the UN Security Council resolutions**, it is unlikely to attract additional economic sanctions.
- This displays the **weak effectiveness of sanctions** imposed on North Korea.

INDIAN SCENARIO

EMISAT

The satellite was successfully placed in its intended **sun-synchronous polar orbit** of 748 km height by **PSLV-C45** in 2019.

It has been developed under **DRDO's Project Kautilya** which aims to boost India's **space surveillance capacity**.

The project is named after the ancient Indian economist who emphasized **the importance of spying** for a king to protect his kingdom.

It detects **electronic signals on the ground**, especially hidden enemy radars.

This capacity will help India in **surgical warfare** which is supposed to have become a

	permanent option for India to check Pakistan-sponsored terrorism after the Balakot surgical strike.
RISAT-2	It is a Radar Imaging Satellite with the all-weather capability to take images of the Earth. This Satellite enhances ISRO's capability for Disaster Management applications . RISAT-2 was launched on 20 April 2009 by the PSLV-C12 launch vehicle. It was a radar-imaging satellite that was India's first " eye in the sky " to keep surveillance on the country's borders as part of anti-infiltration and anti-terrorist operations . It possessed day-night as well as all-weather monitoring capability .

Source: TH

2. SIPRI ANNUAL REPORT 2023

Stockholm International Peace Research Institute (SIPRI) has released its annual assessment of the state of **armaments, disarmament and international security** of 2023.

Funding: Founded on a decision by the Swedish Parliament, it relies heavily on an annual grant from the Swedish Government and actively pursues additional funding from various organizations to conduct its research

SIPRI

SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament. It is based in Stockholm

It was established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public

KEY HIGHLIGHTS OF THE REPORT

NUCLEAR ARSENALS

- The nine nuclear-armed states (the **USA, Russia, India, China, UK, France, Pakistan, North Korea and Israel**) are actively modernizing their arsenals. Russia and the USA collectively hold nearly **90% of the world's nuclear weapons**.

CHINA	China's nuclear arsenal rose from 350 to 410 warheads in a year and is projected to expand further, possibly matching the USA or Russia in intercontinental ballistic missiles (ICBMs) by the decade's end.
INDIA AND PAKISTAN	India and Pakistan are expanding their nuclear arsenals, introducing and developing new delivery systems in 2022. India, with a focus on Pakistan as its main nuclear deterrent , is increasingly emphasizing longer-range weapons , some capable of reaching targets across China.
N. KOREA	In 2022, North Korea refrained from nuclear test explosions but conducted over 90 missile tests , including new ICBMs that may have nuclear warhead capabilities.

ART AND CULTURE

1. GITA PRESS AWARDED GANDHI PEACE PRIZE

The Gandhi Peace Prize for the **year 2021** is being conferred on Gita Press, **Gorakhpur by PM Modi-led jury**.

ABOUT

Gita Press is one of the **world's largest publishers** of **Bhagavad Gita, the Ramayana and the Upanishads**, having published 41.7 crore books in **14 languages**, including 16.21 crore Bhagavad Gita. It **completes 100 years of its establishment in 2023**.

- The institution has **never relied on advertisement** in its publications, **for revenue generation**.

PAST AWARDEES: Former President of South Africa **Nelson Mandela**, social worker **Baba Amte**, **Archbishop Desmond Tutu** of South Africa, environmentalist **Chandi Prasad Bhatt**, **Sultan Qaboos Bin Said Al Said**, Oman and **Bangabandhu Sheikh Mujibur Rahman** of Bangladesh (2020).

- Also **include organizations** such as ISRO, Ramakrishna Mission, Grameen Bank of Bangladesh, Vivekananda Kendra, Kanyakumari, Akshaya Patra, Bengaluru, Ekal Abhiyan Trust, India and Sulabh International, New Delhi.



GANDHI PEACE PRIZE

INTITUTION	It is an annual award instituted by Government of India in 1995 , on the occasion of 125th Birth Anniversary of Mahatma Gandhi as a tribute to the ideals espoused by Mahatma Gandhi
ELIGIBILITY	This is an annual award given to individuals and institutions for their contributions towards social, economic and political transformation through non-violence and other Gandhian methods. The award is open to all persons regardless of nationality, race, language, caste, creed or gender.
REWARDS	The award carries an amount of Rs. 1 crore, a citation, a plaque and an exquisite traditional handicraft/handloom item .
SELECTION COMMITTEE	The Jury chaired by Prime Minister and comprises two ex-officio members , namely the Chief Justice of India and Leader of the single largest Opposition Party in Lok Sabha. Two eminent members are also part of the Jury, Speaker of the Lok Sabha, and Founder of Sulabh International Social Service Organisation.

Source: TH

2. JANAKPUR AND JANAKI

Recently released movie **Adipurush** has led to a **controversy in Nepal** over the **dialogue** that says **“Janaki is a daughter of India”**.

JANAKPUR

- It is the **capital** of Nepal's **Madhesh province** and is located about 225 km off Kathmandu.
- Across the **border from India**, Janakpur is about **23 km away**, and the **last town** on the **Indian side** is **Jainagar**, in **Bihar's Madhubani district**.
- The city is said to be **Janakpurdham** – the ancient **capital** of the **Videha dynasty** that ruled the **Mithila region**.

JANAKI

- As per the **Ramayana**, **Sita** also known as Janaki is the **daughter of King Janaka** of the **Videha dynasty**.
- She was **married to Ram**, the prince of Ayodhya and owing to its connection with the Ramayana, Janakpur has been an **important pilgrimage site for Hindus**.

JANAKI TEMPLE

- The temple is **located in Janakpur** and was **built in 1898**.
- The inner sanctum of the temple houses a flower-covered **statue of Sita**, said to have been **found in the Sarayu near Ayodhya**.
- **Statues** of Lord Ram, and his brothers **Lakshman, Bharat and Shatrughan** stand **next to Janaki** statue.
- The temple is a destination under the **Ramayana Circuit**.
- Adjacent to the Janaki temple is the **Ram-Sita Vivaha temple**, which marks the **event of Ram's marriage to Sita**.

**RAMAYANA CIRCUIT**

- Ramayana Circuit is one of the **fifteen thematic circuits** identified for development under the **Swadesh Darshan scheme of the Ministry of Tourism**.
- **India inaugurated a bus service** in **2018**, **between Janakpur and Ayodhya** (where Lord Ram was born), emphasizing the mythological connection between the two countries.

Source:IE

3. KHARCHI PUJA

Kharchi Puja, also called the **Festival of 14 Gods**, is observed on the **eighth day of the new moon in July or August every year**.

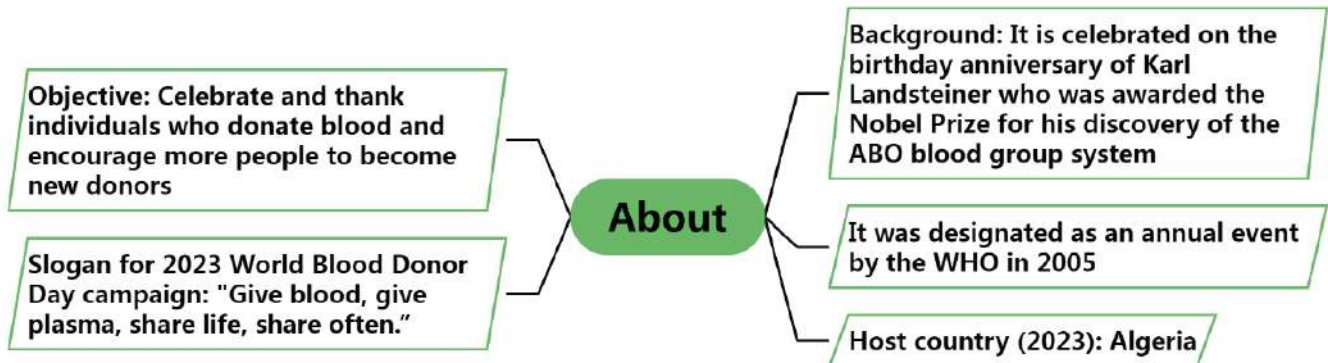
ABOUT KHARCHI PUJA

- | | |
|--|--|
| <ul style="list-style-type: none"> • The word 'Kharchi' is derived from two Tripuri words– 'khar' or kharta meaning sin and 'chi' or si meaning cleaning. | <ul style="list-style-type: none"> • Kharchi Puja is a festival in Tripura, that concentrates on the worship of Chaturdasa Devata, the ancestral deity of the Tripuri people. |
| <ul style="list-style-type: none"> • It is devoted to the deity of the royal dynasty, Tripura Sundari, also known as Kharchi or Kharcha Baba. | <ul style="list-style-type: none"> • This festival takes place 15 days after Ambu bachi or Ambu pechi. Ambu pechi symbolises the menstruation of the Mother Goddess or Earth Mother as per Tripuri folklore. |

SOCIAL JUSTICE

1. World Blood Donor Day

Every year **June 14** is observed as World Blood Donor Day.

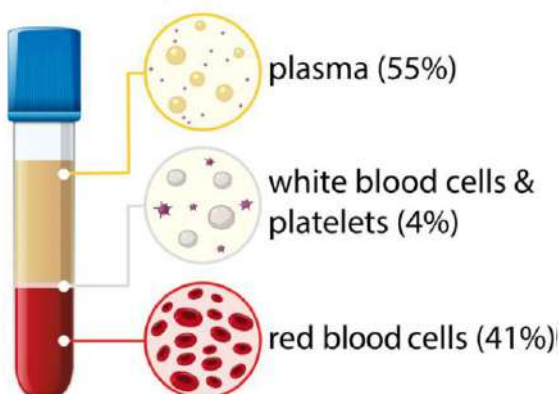


COMPOSITION OF BLOOD

Blood is a **specialized body fluid** which has four main components:

PLASMA	<ul style="list-style-type: none"> It is the liquid component of the blood and a mixture of water, sugar, fat, protein and salts. The main job of the plasma is to transport blood cells throughout the body along with nutrients, waste products, antibodies, clotting proteins, chemical messengers such as hormones, and proteins that help maintain the body's fluid balance.
RBC	<ul style="list-style-type: none"> These are the most abundant cells in the blood. Blood appears red because of the large number of red blood cells Red cells contain a special protein called haemoglobin, which helps carry oxygen from the lungs to the rest of the body and then returns carbon dioxide from the body to the lungs so it can be exhaled. Production of red blood cells is controlled by erythropoietin, a hormone produced primarily by the kidneys.
WBC	<ul style="list-style-type: none"> White blood cells protect the body from infection and account for about 1 percent of human blood.
PLATELETS	<ul style="list-style-type: none"> Platelets are small, colourless cell fragments in our blood that help the blood clotting process (or coagulation) by gathering at the site of an injury. A normal platelet count ranges from 150,000 to 450,000 platelets per microliter of blood

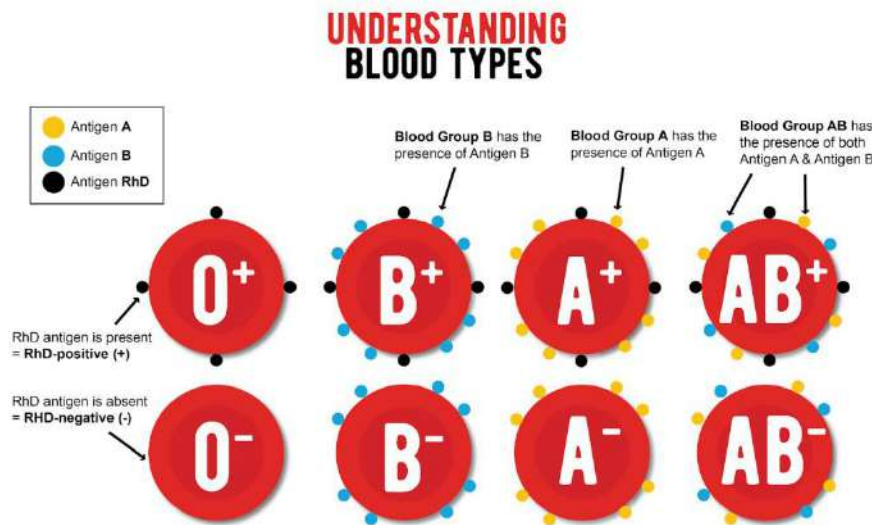
Composition of Blood



TYPES OF BLOOD GROUPS

- There are 4 main blood groups (types of blood) – **A, B, AB and O**.
- The blood group is identified by **antibodies and antigens** in the blood.
- Antibodies are **proteins found in plasma**. They're part of the body's **natural defences**. They recognize foreign substances, such as **germs**, and alert the **immune system**, which destroys them.
- Antigens are **protein molecules found on the surface of red blood cells**.

The ABO System: There are 4 main blood groups defined by the ABO system.



Blood Group A	It has A antigens with anti-B antibodies.
Blood Group B	It has B antigens with anti-A antibodies.
Blood Group AB	It has both A and B antigens but no antibodies .
Blood Group O	It has no antigens but both anti-A and anti-B antibodies .
The RH System	RBCs sometimes have another antigen, a protein known as the RhD antigen . If this is present, the blood group is RhD positive . If it's absent, the blood group is RhD negative . The golden blood type or Rh null blood group contains no Rh antigens (proteins) in the RBCs. This is the rarest blood group in the world, with less than 50 individuals having this blood group. It was first seen in Aboriginal Australians .

UNIVERSAL BLOOD GROUPS:

- **Universal donor: O- blood**, since **no antigens** are present and it has a **negative Rh factor**.
- **Universal receiver: AB+ blood**, since both **A and B antigens** are present and it has a **positive Rh factor**.

BLOOD DONATION IN INDIA

- There are **3840 licensed blood banks** (blood centres) in the country. (till March 2022).
- The first voluntary blood donation initiative in India started in **1942**, during **World War II** and the first blood bank was established in **Kolkata, West Bengal**.

MEASURES

<ul style="list-style-type: none"> • 1st October is celebrated as the National Voluntary Blood Donation Day in India. 	<ul style="list-style-type: none"> • National Blood Transfusion Council (NBTC) and State Blood Transfusion Council (SBTCs) were established with the intention of planning Nationwide IEC (Information, Education and Communication) campaigns.
<ul style="list-style-type: none"> • The National Blood Policy (2002): Ensures a safe, ample supply of quality blood & its components collected/procured from voluntary unpaid regular blood donors in well-equipped premises; the blood should be free from Transfusion Transmissible Infections (TTIs), be stored and transported under optimum conditions. 	<ul style="list-style-type: none"> • In response to the HIV pandemic, blood safety became an important component of National AIDS Control program with key objectives: <ul style="list-style-type: none"> ➤ Modernization of blood banks. ➤ Promotion of voluntary blood donation. ➤ Quality systems in blood transfusion services (BTS)

Source: WHO

MISCELLANEOUS

1. SPECIAL OLYMPICS WORLD GAMES

India ended their Special Olympics World Games campaign with a whopping **202 medals**.

ABOUT

India secured **76 gold, 75 silver and 51 bronze medals** in the global multi-sport spectacle that celebrates **unity, diversity and special skills** among people with intellectual disabilities.

SPECIAL OLYMPICS WORLD GAMES



SPECIAL OLYMPICS
WORLD GAMES
BERLIN 2023

- It was founded in **1968** with a mission to provide **year-round sports training and athletic competition** in a variety of Olympic-type sports for **children and adults with intellectual disabilities**, giving them continuing opportunities to develop **physical fitness, demonstrate courage, experience joy** and participate in a **sharing of gifts, skills and friendship** with their families, other Special Olympics athletes and the community.
- The Special Olympics strives to create a better world by fostering the **acceptance and inclusion of all people**.

SIGNIFICANCE

- The Special Olympics mission remains as **vital** in fostering **global unity** by bringing together individuals of **diverse abilities, nationalities, cultures, political beliefs, and religions** through the **unifying force of sports**, enabling them to transcend prevailing prejudices.

DIFFERENCE BETWEEN PARALYMPIC GAMES AND SPECIAL OLYMPICS

<ul style="list-style-type: none"> • The Special Olympics is solely for athletes with intellectual disabilities. The Paralympics focus more on physical disabilities. 	<ul style="list-style-type: none"> • The Olympics and Paralympics are about elite competition and specialization, and the athletes compete in Olympic and Paralympic Games only once every four years in their sport.
<ul style="list-style-type: none"> • In contrast, the Special Olympics provides sporting opportunities throughout the year and across the world. 	<ul style="list-style-type: none"> • And in Special Olympics competitions, it's a fundamental rule that athletes in competitions are matched up with others of the same competitive ability.
<ul style="list-style-type: none"> • The Paralympics are run by the International Paralympic Committee (IPC). 	<ul style="list-style-type: none"> • The Special Olympics are run by Special Olympics International (SOI).

SOURCE: TH

2. SAFF CHAMPIONSHIP 2023

Recently, India marked a remarkable victory in the **South Asian Football Federation (SAFF) Championship 2023** held in **Bengaluru**, Karnataka, securing their ninth title by **defeating Kuwait** in a thrilling football match.

SAFF CHAMPIONSHIP

- It is an internationally recognized **football tournament** that brings together teams from the **South Asian subcontinent**. Organized by the South Asian Football Federation (**SAFF**), it is one of the **five sub-confederations under the Asian Football Confederation (AFC)**.
 - SAFF was formed in **1997** by founding Member Associations from **Bangladesh, India, Maldives, Nepal, Pakistan and Sri Lanka**.
 - The SAFF Secretariat currently operates from **Dhaka, Bangladesh**.
- Founding members:** India, Pakistan, Sri Lanka, Bangladesh, Nepal, and Maldives.
 - Expansion:** **Bhutan** joined in 2000, while **Afghanistan** became a member in 2005 before moving to the Central Asian Football Association (CAFA) in 2015.

EVOLUTION

- The South Asian football tournament started as the **South Asian Association for Regional Cooperation (SAARC) Gold Cup** in 1993.
- Later renamed the **South Asian Gold Cup in 1995** and became the **SAFF Gold Cup from 1997 to 2005**.
- Since **2008**, it has been known as the SAFF Championship.

INDIA'S PERFORMANCE

- Men's SAFF Championship:** India has been a **powerhouse** in the tournament, reaching the finals in all editions **except 2003**. India has won **nine men's SAFF Championship** titles out of the **14 editions**.
- Women's SAFF Championship:** India has enjoyed success in the SAFF Championship, winning the **inaugural edition in 2010** and subsequently securing victories in **2012, 2014, 2016, and 2019**.

Source: TH

3. DURAND CUP

The **Trophy tour** of the **132nd edition of Durand Cup** was flagged off by the **Chief of the Army Staff General Manoj Pande** and **Air Chief Marshal VR Chaudhari**.

DURAND CUP



Background	Durand Cup is Asia's oldest and the world's third oldest football tournament. It was started in Shimla in 1888 by Sir Henry Mortimer Durand (known for negotiating the Durand Line).
Format	It is an annual domestic football competition in which top Indian football clubs from across the country participate.
Governance	It is organized by the Indian Armed Forces in association with the All India Football Federation (AIFF)
Trophies	The Durand Cup tournament is unique where in the winning team is awarded three trophies, i.e. the Durand Cup (a rolling trophy and the original prize), the Shimla Trophy (also a rolling trophy and first given by the residents of Shimla in 1904) and the President's Cup (for permanent keep, first presented by Dr. Rajendra Prasad, India's first President , in 1956).

DURAND LINE

- Location:** The Durand Line forms a **2,670-km long international land border** between **Afghanistan** and **India**.
- Background:** It was established in 1893 as the **international border** between **British India** and the **Emirate of Afghanistan** by **Mortimer Durand**, a British

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