



KERALA STATE CIVIL SERVICE ACADEMY

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GREENHOUSE BULLETIN REPORT

World Meteorological Organization (WMO) released the Greenhouse Gas Bulletin.

Background:

- The Greenhouse Gas Bulletin reports on greenhouse gas concentrations, rather than on emission levels.

The Greenhouse Gas Bulletin complements the UN Environment Programme's Emissions Gap report.

- Both were published ahead of COP29 in Baku, Azerbaijan.



Key takeaways

- The Greenhouse Gas Bulletin has been published annually since 2004.
- The publication presents the latest analysis of observations from the WMO Global Atmosphere Watch (GAW) Programme on concentrations of long-lived greenhouse gases in the atmosphere.
- The Bulletin reports globally averaged surface mole fractions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). It compares these values to those of the previous year and pre-industrial levels.
- Additionally, it provides insights into changes in radiative forcing – the warming effect on the atmosphere by long-lived greenhouse gases and details the contribution of individual gases to this effect.
- The Greenhouse Gas Bulletin is released yearly to inform the United Nations Climate Change negotiations, the annual Conference of the Parties (COP).

Key findings of latest bulletin

- The globally-averaged surface concentration of CO₂ reached 420.0 parts per million (ppm), methane 1934 parts per billion and nitrous oxide 336.9 parts per billion (ppb) in 2023.

These values are 151%, 265% and 125% of pre-industrial (before 1750) levels.

- In 2023, the increase in CO₂ levels was driven by three main factors: large amounts of CO₂ released from wildfires, a possible decline in how much CO₂ forests can absorb, and persistently high CO₂ emissions from fossil fuels due to human and industrial activities.
- During El Niño years, greenhouse gas levels tend to rise because drier vegetation and forest fires reduce the efficiency of land carbon sinks.
- Given the extremely long life of CO₂ in the atmosphere, the temperature level already observed will persist for several decades even if emissions are rapidly reduced to net zero.
- The last time the Earth experienced a comparable concentration of CO₂ was 3-5 million years ago, when the temperature was 2-3°C warmer and sea level was 10-20 meters higher than now.

CTBTO

On October 5, two earthquakes struck Iran's Semnan province, sparking rumours of a nuclear test. This fuelled uncertainty across West Asia but the claims were promptly refuted by the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)

Background: -

- CTBTO monitors nuclear activities to detect any possible nuclear tests. It has established an International Monitoring System (IMS) to ensure that no nuclear explosion goes undetected.



About CTBTO

- The Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) was established under the Comprehensive Nuclear-Test-Ban Treaty (CTBT), adopted in 1996 by the United Nations General Assembly.
- The CTBT bans all nuclear test explosions everywhere, by everyone, and for all time.
- Adherence to the Treaty is nearly universal, with 187 States Signatories and 178 ratifying states. However, to enter into force, the Treaty must be ratified by all 44 States listed in its Annex 2, for which nine ratifications are still required.
- CTBTO Headquarters: Located in Vienna, Austria.

- Verification Regime: The CTBTO has a comprehensive International Monitoring System (IMS) comprising:
 - Seismic monitoring stations to detect underground tests.
 - Hydroacoustic sensors for underwater tests.
 - Infrasound sensors for atmospheric tests.
- Radionuclide stations to detect nuclear particles in the air.
- India has not signed or ratified the CTBT, and is not a member of the CTBTO. India initially participated in negotiating the CTBT, but later walked away from the negotiations. India believes the CTBT's current format is discriminatory.
- **India's Stand on CTBT:**
 - India's decision to not sign the CTBT is primarily based on national security considerations.
 - India views nuclear weapons as a deterrent against potential security threats from neighbouring countries, especially Pakistan and China.
 - India also feels that signing the CTBT would undermine its national security and strategic autonomy, as it would constrain its ability to conduct nuclear tests.
 - India's decision is rooted in its desire for equitable and universal nuclear disarmament, as well as its national security concerns.

CONVENTION ON BIODIVERSITY

Countries are currently assembled in the Colombian city of Cali for the UN Biodiversity Conference that takes place every two years.

Background:

- This year's meeting – the 16th Conference of Parties to CBD, or COP16 – is the first after a landmark agreement on biodiversity was finalised two years ago.
- This agreement, the Kunming-Montreal Global Biodiversity Framework that was concluded at COP15 in Montreal in 2022, lay down four goals and 23 targets to be achieved collectively by 2030.

About the United Nations Convention on Biological Diversity (CBD)

- The Convention on Biological Diversity (CBD), a legally binding treaty to conserve biodiversity has been in force since 1993.
- India enacted Biological Diversity Act in 2002 for giving effect to the provisions of the CBD.
- **It has 3 main objectives:**
 - The conservation of biological diversity.
 - The sustainable use of the components of biological diversity.
 - The fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

Key takeaways

- The Convention on Biological Diversity (CBD) is an international legally binding treaty aimed at the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the utilization of genetic resources.
- Adopted: 1992 at the Rio Earth Summit (United Nations Conference on Environment and Development – UNCED).

Objectives of CBD:

- Conservation of Biological Diversity: Protecting ecosystems, species, and genetic diversity.
- Sustainable Use: Ensuring that natural resources are used in a way that doesn't deplete them and allows for future generations to meet their needs.
- Fair and Equitable Sharing: Ensuring that benefits from the use of genetic resources, especially in developing countries, are shared equitably.

Key Protocols under CBD:

- Cartagena Protocol on Biosafety (2000):
 - Focuses on the safe transfer, handling, and use of living modified organisms (LMOs) resulting from biotechnology.
 - Aims to protect biodiversity from potential risks posed by LMOs, especially those that cross national boundaries.
 - Biosafety Clearing-House: Platform for information exchange.
- Nagoya Protocol (2010):
 - Deals with Access and Benefit-Sharing (ABS) of genetic resources.
 - Ensures that benefits arising from the use of genetic resources, such as pharmaceuticals or agriculture, are shared fairly with the country of origin.
- India is a party to the CBD and has committed to implementing its objectives through various national initiatives.
- Biological Diversity Act, 2002: Indian law enacted in compliance with CBD to ensure the conservation of biological resources and equitable sharing of their benefits.
- National Biodiversity Authority (NBA): Established to regulate access to biological resources and share the benefits.

KEY BIODIVERSITY AREAS (KBAS)

At the 16th Conference of Parties (COP16) of the Convention on Biological Diversity (CBD), new data was released which shows that the world's best and most important ecosystems are facing threat from extractive industries. These include key biodiversity areas (KBAs), high-integrity forest landscapes, protected areas, and Indigenous territories.

Background: -

- Maps included in a report titled "Closing Window of Opportunity: Mapping Threats from Oil, Gas and Mining to Important Areas for Conservation in the Pantropics" show that extraction is being carried out for oil, gas, and mining in important areas for conservation across the Amazon Basin, Congo Basin, and Southeast Asia.

Key Biodiversity Areas (KBAs) are sites of global importance for the conservation of biodiversity. Here are some of the key biodiversity areas in India, spread across diverse ecosystems:

Himalayan Region

1. Khangchendzonga National Park - Sikkim
2. Nanda Devi and Valley of Flowers National Parks - Uttarakhand
3. Great Himalayan National Park - Himachal Pradesh
4. Namdapha National Park - Arunachal Pradesh
5. Hemis National Park - Ladakh

Western Ghats

1. Silent Valley National Park - Kerala
2. Periyar Wildlife Sanctuary - Kerala
3. Anamalai Tiger Reserve - Tamil Nadu
4. Agasthyamalai Biosphere Reserve - Kerala and Tamil Nadu
5. Kudremukh National Park - Karnataka

Northeast India

1. Dibru-Saikhowa National Park - Assam
2. Manas National Park - Assam
3. Kaziranga National Park - Assam
4. Nokrek Biosphere Reserve - Meghalaya
5. KeibulLamjao National Park - Manipur

Central India

1. Panna Tiger Reserve - Madhya Pradesh
2. Kanha National Park - Madhya Pradesh
3. Satpura Tiger Reserve - Madhya Pradesh
4. Pench Tiger Reserve - Maharashtra and Madhya Pradesh

Desert Region

1. Desert National Park - Rajasthan
2. Tal Chhapar Sanctuary - Rajasthan

Coastal and Marine Areas

1. Sundarbans National Park - West Bengal
2. Gulf of Mannar Biosphere Reserve - Tamil Nadu
3. Malvan Marine Sanctuary - Maharashtra
4. Lakshadweep Islands - Arabian Sea

Deccan Plateau

1. Nallamala Hills - Andhra Pradesh and Telangana
2. Bhadra Wildlife Sanctuary - Karnataka

These areas are essential for the survival of many endangered species and serve as crucial habitats for various plants, animals, and ecosystems in India.

About Key Biodiversity Areas (KBA)

- Key Biodiversity Areas (KBA) are geographical regions that have been determined to be of international importance in terms of biodiversity conservation, using globally standardized criteria published by the IUCN as part of a collaboration between scientists, conservation groups, and government bodies across the world.
- The purpose of Key Biodiversity Areas is to identify regions that are in need of protection by governments or other agencies.
- KBAs extend the Important Bird Area (IBA) concept to other taxonomic groups and are now being identified in many parts of the world.

Examples of types of KBAs include Important Plant Areas (IPAs), Ecologically and Biologically Significant Areas (EBSAs) in the High Seas, Alliance for Zero Extinction (AZE) sites, Prime Butterfly Areas, Important Mammal Areas and Important Sites for Freshwater Biodiversity, with prototype criteria developed for freshwater molluscs and fish and for marine systems.

- The Global Standard for the Identification of Key Biodiversity Areas (IUCN 2016) sets out globally agreed criteria for the identification of KBAs worldwide.
- Sites qualify as global KBAs if they meet one or more of 11 criteria, clustered into five higher level categories: threatened biodiversity, geographically restricted biodiversity, ecological integrity, biological processes, and irreplaceability.
- The KBA criteria can be applied to species and ecosystems in terrestrial, inland water, and marine environments, and may be applied across all taxonomic groups (other than micro-organisms).

Q1. Two important rivers - one with its source in Jharkhand (and known by a different name in Odisha), and another, with its source in Odisha - merge at a place only a short distance from the coast of Bay of Bengal before flowing into the sea. This is an important site of wildlife and biodiversity and a protected area. Which one of the following could be this? (2011)

- (a) Bhitarkanika
- (b) Chandipur-on-sea
- (c) Gopalpur-on-sea
- (d) Simlipal

NEW BIOLOGICAL DIVERSITY RULES, 2004

Ministry of Environment, Forest and Climate Change notified them in accordance with the Biological Diversity Act of 2002.

New Rules will replace Biological Diversity Rules, 2004.

Also these rules will ensure the implementation of the Biological Diversity (Amendment) Act, 2023.



**Biological Diversity
Rules, 2024**

Amendment of 2023 was done to facilitate fast-tracking of processes for research, encouraging Indian system of medicine etc. Rules outline various provisions related with National Biodiversity Authority (NBA), Penalties, etc.

Key Highlights of the Rules

National Biodiversity Authority (NBA):

Chairperson shall be appointed by the Central Government, will hold office for a term of three years' and shall be eligible for re-appointment.

General Functions of the NBA :

- ◆ Administering the National Biodiversity Fund (NBF), established under the Act of 2002.
 - ◆ Granting approvals for biodiversity-related agreements.
 - ◆ Providing technical guidance and support to state bodies.
 - ◆ Developing and maintaining databases related to biological resources and traditional knowledge.
- Intellectual Property Rights: Approval of Authority will be required before the actual grant of the IPR.

Penalties for Contraventions: Penalties for violations range from ₹1 lakh to ₹50 lakh, with additional fines for repeated violations.

All penalties collected go to the NBF or relevant state funds, supporting biodiversity initiatives.

UNIQUE LAND PARCEL IDENTIFICATION NUMBER (ULPIN)

Approximately 30% of rural land parcels in India have received a Unique Land Parcel Identification Number (ULPIN). This initiative aims to assign a 14-digit alpha-numeric identity to each land parcel. The data is sourced from the Ministry of Rural Development's portal.

What is ULPIN?

ULPIN stands for Unique Land Parcel Identification Number. It is part of the Digital India Land Records Modernisation Programme (DILRMP). Each ULPIN is a unique identifier for land parcels, streamlining land record management across India.

Background of the Initiative

The initiative was launched in 2021. It is a continuation of the earlier National Land Record Modernisation Programme, which began in 2008. The program was revamped and implemented as a central sector scheme on April 1, 2016.



Current Statistics

On October 18, 2024, over 28.72 crore land parcels are listed in the ministry's portal. Of these, more than 8.4 crore ULPINs have been generated. This indicates an important but incomplete implementation of the ULPIN system.

Importance of ULPIN

The ULPIN initiative is crucial for improving land record transparency. It aims to reduce disputes over land ownership and facilitate easier access to land-related services.

The unique identification of land parcels will simplify transactions and enhance the efficiency of land management.

Future Outlook

The success of ULPIN depends on state-level implementation. Continued government support and incentives are vital. The focus remains on achieving complete coverage of ULPINs across rural land parcels. This will enhance the digital infrastructure of land records in India and promote better governance.

Challenges Ahead

Despite the progress, challenges remain. States with slow implementation must address issues such as bureaucratic delays and lack of resources. Coordination between state and central governments is essential for overcoming these hurdles.

New CRS app launched

Union Home Minister Amit Shah launched the Civil Registration System (CRS) mobile application. This initiative aims to integrate technology with governance. The app facilitates the registration of births and deaths, making the process seamless and hassle-free. Citizens can register at any time and from any location, using their State's official language.

Purpose of the CRS Mobile Application

The CRS mobile application is designed to simplify the registration process. It allows users to register vital events, such as births and deaths, easily. The application is expected to reduce the time required for these registrations. This move is part of a larger effort to modernize government services through digital solutions.



Legal Framework

The launch of the application aligns with The Registration of Births and Deaths (Amendment) Act, of 2023. This law mandates that all births and deaths occurring from October 1, 2023, must be digitally registered. The registrations will be processed through the central portal, dc.crsorgi.gov.in.

DIGITAL BIRTH CERTIFICATES

The digital birth certificates generated through this system will serve as a single document. They will provide proof of date of birth for various services. These include admission to educational institutions, government job applications, and marriage registrations. This simplification is intended to reduce bureaucratic hurdles for citizens.

Centralized Database Benefits

The CRS will create a centralized database of registered births and deaths. This database will facilitate updates to the National Population Register (NPR).

The NPR is crucial for managing citizen data in India. It also supports other governmental processes, such as updating ration cards, property registrations, and electoral rolls.

National Population Register (NPR)

The NPR was first collected in 2010 and updated in 2015. It includes data on 119 crore residents. The NPR serves as the foundation for the National Register of Citizens (NRC) as outlined in the Citizenship Act. Accurate data collection is vital for effective governance and service delivery.

Impact on Governance

The introduction of the CRS mobile application represents an important shift in governance. By leveraging technology, the government aims to enhance efficiency and accessibility. This initiative is expected to empower citizens, making it easier for them to access essential services.

MOUNT FUJI

Japan's iconic Mount Fuji has yet to receive its first snowfall of the season. This is unprecedented, marking the latest date without snow since records began in 1894. The previous record was October 26, noted in 1955 and 2016. This year, warm weather has delayed the formation of the snowcap.

Historical Snow Patterns

Mount Fuji typically sees its first snow around October 2. Last year, the snow appeared on October 5. The absence of snow this year marks an important shift in weather patterns. The snowcap is essential for the mountain's ecosystem and is a key feature for climbers and tourists.

Weather Influences

Yutaka Katsuta, a forecaster, attributes the delay to persistently high temperatures. Summer 2024 was among the hottest on record, matching the extreme heat of 2023. This prolonged warmth has continued into September, preventing the cold air needed for snowfall.

Climate Change Impact

Experts suggest that climate change may be influencing these unusual weather patterns. The rising global temperatures contribute to the warmer conditions experienced in Japan. Such changes can disrupt traditional seasonal weather, including snowfall.

Tourism and Mount Fuji

Mount Fuji is a popular destination, attracting over 220,000 hikers during the July to September climbing season.

Many climbers ascend through the night to witness the sunrise from the summit, which stands at 3,776 meters (12,388 feet). However, this year, visitor numbers dropped due to new regulations.

Regulations on Climbing

To combat overtourism, Japanese authorities introduced an entry fee and a daily cap on climbers. These measures aim to protect the mountain's environment and enhance the visitor experience. The changes have led to fewer climbers attempting the ascent this year.

Cultural Significance

Mount Fuji holds immense cultural value in Japan. It has been depicted in countless artworks, most famously in Hokusai's "Great Wave." The mountain is not just a natural wonder but also a symbol of Japan's heritage and artistic history.

Volcanic Activity

Mount Fuji last erupted approximately 300 years ago. Since then, it has been a dormant volcano. The long period without eruptions contributes to its status as a safe hiking destination, although monitoring continues for any signs of activity.

Environmental Considerations

The delay in snowfall raises concerns about the environmental impact on the mountain. Snow plays a vital role in maintaining the ecosystem. Without it, the flora and fauna that depend on seasonal changes may be affected.

MIZO CARNIVOROUS ANIMALS

The term "Mizo carnivorous animals" refers to specific carnivorous animals that are found in the state of Mizoram, located in the northeastern region of India.

Mizoram's dense forests, mountainous terrain, and tropical climate create a unique habitat that supports a diverse range of wildlife, including several carnivorous species.

Some notable carnivorous animals in Mizoram include:

1. **Tigers:** As apex predators, tigers are part of Mizoram's ecosystem, particularly in protected areas like the Dampa Tiger Reserve.
2. **Leopards:** Common in the dense forests of Mizoram, leopards are highly adaptable predators.
3. **Clouded Leopards:** These elusive cats, found in Mizoram's forests, are rare and threatened, known for their distinctive cloud-like patterns.
4. **Bears:** Asiatic black bears inhabit Mizoram's forested areas, playing a role as both predators and scavengers.
5. **Wild Dogs (Dholes):** Dholes are social predators that hunt in packs and are known to inhabit regions within Mizoram.
6. **Small Carnivores:** Mizoram also hosts various smaller carnivorous animals, including civets, mongooses, and foxes.

These animals play an essential role in maintaining the ecological balance by controlling herbivore populations and supporting biodiversity. Conservation efforts in Mizoram aim to protect these carnivores, as they face threats from habitat loss, human-animal conflict, and hunting.



INDIA -ARMENIA DEFENCE EXPORTS

Armenia has emerged as India's leading destination for defence exports. In the fiscal year 2023-24 achieved a record in defence exports, totalling Rs 21,083 crore (approximately \$2.63 billion).

This marks a 32.5% increase from the previous year. Rising security concerns in Eurasia have prompted Armenia to shift away from its historical reliance on Russian arms, seeking diversification and self-reliance in its defence strategy.

Shifts from Russian Dependence

Historically, Armenia relied heavily on Russia for military supplies, receiving about 94% of its arms from Moscow between 2011 and 2020. This included advanced weaponry like the Iskander missile system and Su-30SM fighter jets.

However, the 2020 Nagorno-Karabakh war revealed weaknesses in Russian support. Armenian Prime Minister Nikol Pashinyan expressed frustration over Russia's failure to deliver contracted weapons. This dissatisfaction prompted Armenia to seek alternative defence partnerships, leading to closer ties with India.

Partnership Development

The partnership between India and Armenia began to solidify in 2020, with defence agreements estimated at \$2 billion. Armenia quickly became the top destination for Indian arms. This shift marked an important transition from reliance on Russian military support to a strategic alliance with India.

Pinaka Multi-Launch Rocket Systems: These systems enhance Armenia's artillery capabilities, providing a strategic advantage in mountainous terrains like Nagorno-Karabakh.

Akash-1S Air Defence Missile System: Armenia placed a \$720 million order for 15 units in 2022. This system will help defend against aerial threats such as fighter jets and drones.



HIBOX SCAM

The Hibox application scam has resulted in financial losses for many Indians, estimated at Rs 1,000 crore. This scam involved the promotion of a mobile app that promised high returns on investments.

Popular social media influencers and YouTubers played a key role in promoting this app. Investigations are ongoing, led by the Intelligence Fusion and Strategic Operations (IFSO) unit of the Delhi Police.



What is the Hibox Scam?

The Hibox scam lured victims into investing money through an app. The promise was simple: guaranteed returns of 1 to 5 per cent daily. This equated to monthly returns of 30 to 90 per cent. Early investors received returns, which encouraged more people to invest. Eventually, the app stopped disbursing funds, and the operators vanished.

How Did the Scam Operate?

The scheme relied heavily on social media for promotion. Influencers like Saurav Joshi and Abhishek Malhan convinced people to invest. Many victims decided to invest after seeing these endorsements. Once the funds stopped, the operators disappeared, leaving thousands without their investments.

CLOUDED LEOPARD

The clouded leopard, a medium-sized wild cat, has been extirpated from Taiwan. Recent research indicates that the island is still highly suitable for reintroducing this species.

Approximately 38% of Taiwan's territory could serve as a potential habitat for the clouded leopard. Notably, 46% of this suitable habitat is currently under



About the Clouded Leopard

The clouded leopard (*Neofelis nebulosa*) is native to South and Southeast Asia. It faces numerous threats, including habitat loss, prey depletion, and poaching. The International Union for the Conservation of Nature (IUCN) lists it as 'Vulnerable'.

Reasons for Extinction in Taiwan

The clouded leopard once thrived on the island, known historically as Formosa. Its extinction in Taiwan resulted from several factors:

- **Poaching:** Illegal hunting for its pelts was rampant, especially during Japanese rule (1895-1945).
- **Habitat Destruction:** Deforestation reduced its natural habitat.
- **Prey Elimination:** The loss of its natural prey further contributed to its decline.

A camera-trap survey conducted from 1997 to 2012 found no evidence of clouded leopards in Taiwan, confirming their extirpation decades earlier.

Current Habitat Suitability

Despite the clouded leopard's extinction, recent studies suggest that Taiwan's mammal populations are recovering. Increased forest cover and a hunting ban established in the 1970s have contributed to this recovery. Researchers found that 38% of Taiwan's landmass, particularly in its mountainous regions, is moderate to highly suitable for the clouded leopard.

Reintroduction Efforts

Plans to reintroduce the clouded leopard to Taiwan are underway. The Clouded Leopard Association of Taiwan leads the initiative, with support from international experts and conservation organisations. The goal is to restore the Formosan Clouded Leopard population.

Research Methodology

The latest study employed a multi-scale, multivariate habitat selection model. This model used presence-absence data from camera-trap surveys across the clouded leopard's current range to predict suitable habitats in Taiwan.

Geographical and Ecological Overview

Taiwan, with an area of 36,000 square kilometres, is a rugged and mountainous island. It features diverse habitats, ranging from tropical forests to alpine grasslands. Over 60% of the island is classified as forest, with areas of continuous forest remaining in the upland interior.

Findings on Suitable Habitat

The researchers identified a large, continuous area of 13,854 square kilometres in Taiwan's hilly and mountainous regions as suitable for the clouded leopard.

This includes:

- Moderately Suitable Habitat: 10,041 square kilometres.
- Highly Suitable Habitat: 3,813 square kilometres.

The study concludes that Taiwan's substantial habitat protection and low hunting pressure make it a viable location for the reintroduction of the clouded leopard.

NATIONAL MISSION FOR MANUSCRIPTS

The Union Ministry of Culture in India is revitalizing the National Mission for Manuscripts (NMM). This initiative aims to preserve ancient texts and manuscripts.

A new autonomous body, likely named the National Manuscripts Authority, is proposed to enhance these efforts. The NMM currently operates under the Indira Gandhi National Centre for Arts.

Meeting Overview

On October 14, an important meeting took place. Culture Minister Gajendra Singh Shekhawat chaired the session. Experts from various fields attended, including linguists and scholars. They discussed the future of the NMM and its accomplishments since its inception in 2003.

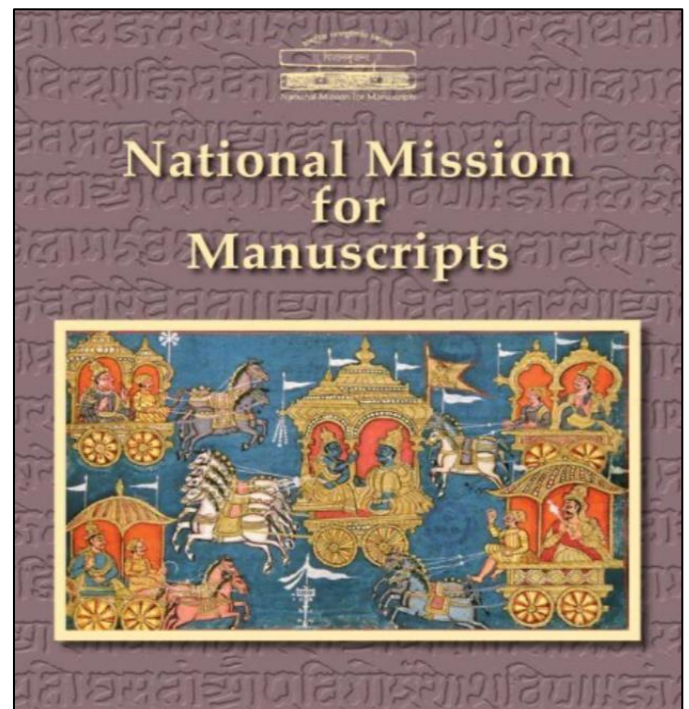
Achievements of NMM

The NMM has made notable progress. It has compiled metadata for 5.2 million manuscripts. Additionally, over 300,000 titles have been digitized. However, only one-third of these digitized works are accessible online. This limited access raises concerns about the visibility of India's rich manuscript heritage.

Challenges Identified

Experts brought into light issues with the digitized metadata. There are discrepancies between the data and the actual manuscripts. Efforts are underway to correct these mismatches.

A senior NMM official revealed that out of 130,000 uploaded manuscripts, only 70,000 are viewable. The lack of an access policy discourages private owners from sharing their manuscripts.



Ownership of Manuscripts

About 80% of manuscripts in India are privately owned. This presents a challenge for preservation efforts. Many private owners lack incentives to make their manuscripts accessible. Financial support and registration assistance for these owners could enhance preservation.

Conservation Efforts

Over the past 21 years, the NMM has conserved 90 million folios. This includes both preventive and curative conservation strategies. The goal is to ensure the longevity of these valuable texts for future generations.

Future Roadmap

The meeting outlined a roadmap for the NMM's future. One suggestion was to establish academic chairs in universities abroad. These chairs would focus on ancient Indian studies and strengthen ties with the NMM. Collaboration between international institutions and the NMM can enhance global awareness of India's manuscript heritage.

Legal and Intellectual Property Considerations

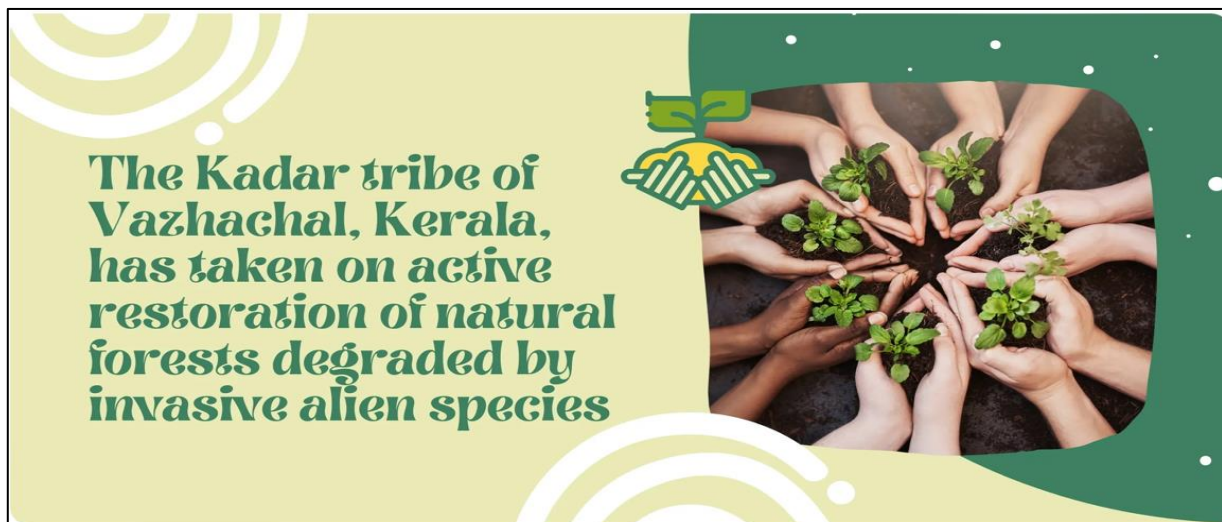
There were discussions on the need for legal expertise within the NMM framework. Intellectual property rights could protect manuscripts and encourage responsible ownership. This could also aid in preventing the sale of manuscripts outside India.

Preservation of Lesser-Known Scripts

The preservation of non-Brahmi and lesser-known scripts is crucial. Mr. Singh emphasized the importance of collating information on these scripts. This initiative would ensure that all aspects of India's manuscript heritage are recognized and preserved.

KADAR TRIBES

The Kadar tribe in Vazhachal, Kerala, initiated a pioneering project to restore natural forests affected by invasive species. This effort involves collaboration with various organisations, including local government bodies and WWF-India. The project aims to revitalise the forest ecosystem and support local communities.



Collaborative Effort

The restoration project involves multiple stakeholders:

- Local Self-Governments department
- MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act)
- Scheduled Tribes Development department
- WWF-India
- Kerala Forest Research Institute (KFRI)

These organisations work together to combat the spread of invasive plants that threaten local biodiversity.

Mapping Invasive Species

KFRI has mapped invasive species in the Vazhachal and Parambikulam forest divisions.

- 29 invasive species were recorded in Vazhachal.
- 31 invasive species were identified in Parambikulam.

This mapping helps identify the most degraded areas for restoration.

Impact of Invasive Species

Invasive plants limit forage space for wildlife, including Elephants, Spotted deer, and Gaur. The reduction of natural habitats leads to increased human-wildlife conflicts. Additionally, invasive species threaten the availability of non-timber forest products, impacting local livelihoods.

Removal of Invasive Species

The Kadar tribe is actively removing invasive plants, such as Lantana camara, Chromolaena odorata, Mimosa diplotricha, and Mikania micrantha. This removal is essential for restoring the ecosystem.

Planting Native Species

Following the removal, the project will focus on planting native species. These include, Myristicabeddomei, Canarium strictum, Garcinia gummi-gutta, Hydnocarpus pentandrus, Curcuma neilgherrensis, Acacia sinuate, Phyllanthus emblica, Entadarheedii, Desmodium gangeticum, Pseudarthriaviscida and Sapindus trifoliolate. These plants are vital for the community, as they provide forest products that locals rely on.

Community Involvement

The project is based in Pothupara, a new tribal hamlet formed after a landslip in 2018. The community received Community Forest Resource (CFR) rights under the Forest Rights Act in 2014. This area is the first of its kind in Kerala, covering 400 sq. km. The nine tribal gram sabhas have approved a conservation and management plan that includes the restoration work.

Leveraging Traditional Knowledge

The initiative demonstrates how CFR rights holders utilize traditional knowledge to protect and regenerate their resources. Local governance is crucial, with Gram Sabhas overseeing the project.

Ecological Restoration Goals

The programme aims to revive natural habitats that support local flora and fauna. Enhancing local livelihoods is also a key goal. This initiative is vital for restoring ecological balance and supporting communities dependent on forest resources.

The project aligns with the UN Decade on Ecosystem Restoration (2021–2030). It contributes to global efforts to halt and reverse ecosystem degradation. This collaboration showcases the ingenuity of indigenous communities in taking action for environmental restoration.

GLOBAL NATURE CONSERVATION INDEX

India ranks 176th in the Global Nature Conservation Index (NCI) 2024, with a score of 45.5 out of 100. This places India among the five worst performers globally, alongside Kiribati, Turkey, Iraq, and Micronesia. The NCI was released on October 24, 2024, and assesses conservation efforts across 180 countries.



About the Nature Conservation Index

The NCI is a new tool that evaluates conservation efforts using four key markers:

1. Land Management
2. Threats to Biodiversity
3. Capacity and Governance
4. Future Trends

Developed by the Goldman Sonnenfeldt School of Sustainability and Climate Change at Ben-Gurion University and BioDB.com, the index aims to provide a clear analysis of each country's conservation strategies. It helps governments and organizations identify issues and improve their conservation policies.

India's Conservation Challenges

India's low ranking is primarily due to poor land management and increasing threats to biodiversity. The country has converted 53% of its land for urban, industrial, and agricultural use. The NCI marks several problems:

- **High Pesticide Use:** This contributes to soil pollution.
- **Sustainable Nitrogen Index:** Currently at 0.77, indicating a need for improvement in soil health.

Marine Conservation Deficiencies

Marine conservation is another critical area of concern. Only 0.2% of India's national waterways are protected. There are no protected areas within its Exclusive Economic Zone (EEZ), despite 7.5% of terrestrial land being safeguarded.

Threats to Biodiversity

India faces threats to its biodiversity:

- **Habitat Loss and Fragmentation:** Caused by agriculture, urbanization, and infrastructure development.
- **Climate Change:** This adds pressure on sensitive ecosystems, like alpine regions and coral reefs.

From 2001 to 2019 lost 23,300 sq. km of tree cover due to deforestation. Although 40% of marine species and 65% of terrestrial species are in Protected Areas, many continue to decline. The index reports that 67.5% of marine species and 46.9% of terrestrial species are experiencing population decreases.

Global Sustainable Development Goals

India's NCI findings align with issues raised in the latest global progress report on Sustainable Development Goals (SDG). The country struggles with SDG 14 (Life below water) and SDG 15 (Life on land).

Future Trends and Opportunities

The index notes both challenges and opportunities for India's biodiversity. With one of the highest population densities globally and a population that has doubled since the late 1970s, ecological wealth is under threat. India is also the fourth-largest illegal wildlife trader, with annual sales of around £15 billion. The index calls for stronger enforcement and international cooperation to combat this issue.

WRITERS VILLAGE

Ramesh Pokhriyal Nishank, former Chief Minister of Uttarakhand, will inaugurate a unique initiative called 'Writers' Village' (Lekhakh Gaon) near Dehradun. This event marks an important cultural milestone in India, aiming to celebrate literature and creativity.

Location and Significance

The Writers' Village is situated 24 km from Dehradun. It is the first of its kind in India. The village aims to provide a dedicated space for writers and artists to gather, create, and collaborate. Nishank's vision is to encourage a community that nurtures literary and artistic talent.



India's First Writer's Village Opens in Dehradun

The Writers' Village is equipped with several facilities. It features a library for research and reading. A meditation and yoga centre will provide relaxation and mindfulness opportunities. An auditorium will host events and discussions. Additionally, a Himalayan museum will showcase the region's rich cultural heritage.

Creative Spaces

Writers can stay in dedicated writing cottages. These cottages are designed to inspire creativity and focus. The village also includes SanjeevaniBhojanalaya, which offers nourishing meals, and Nakshatra Vatika and GrahaVatika, which are spaces for reflection and inspiration.

The Role of the Himalayas

Nishank brought into light the Himalayas as a source of inspiration for many writers. The natural beauty and serenity of the region have historically attracted creative minds. The Writers' Village aims to harness this inspiration for the benefit of writers and artists.

The Writers' Village seeks to become a hub for literary and cultural activities. It aims to host regular events, workshops, and residencies for writers. Nishank envisions a vibrant community that will elevate the status of writers in India and beyond.

PM YASASVI

The PM Young Achievers Scholarship Award Scheme for Vibrant India (PM-YASASVI) was launched by the Ministry of Social Justice and Empowerment. This scheme aims to uplift students from Other Backward Classes (OBC), Economically Backward Classes (EBC), and Denotified Tribes (DNT). It provides access to quality education, addresses financial barriers, and supports academic growth.



₹75000 & ₹125000 Scholarship

**PM YOUNG ACHIEVERS SCHOLARSHIP
AWARD SCHEME FOR VIBRANT INDIA FOR
OBCs AND OTHERS (PM –YASASVI)**

Background of the Scheme

PM-YASASVI consolidates previous scholarship initiatives. It includes the Dr. Ambedkar Post-Matric Scholarship for EBCs and the Pre-Matric and Post-Matric Scholarship for DNTs. These initiatives were merged into PM-YASASVI in 2021-22 to streamline support for disadvantaged students.

Objectives

The main goal of PM-YASASVI is to promote educational empowerment. It seeks to help vulnerable groups complete their education. This initiative encourages individual growth and contributes to a more inclusive society.

Scholarship Categories

PM-YASASVI has five sub-schemes:

1. Pre-Matric Scholarship for students in classes IX and X.
2. Post-Matric Scholarship for higher education.
3. Top Class School Education for exceptional students.
4. Top Class College Education for Higher Studies.
5. Construction of Hostels for OBC boys and girls.

Pre-Matric Scholarship Details

The Pre-Matric Scholarship offers an annual allowance of Rs. 4,000. It targets families with an income below Rs. 2.5 lakh. For 2023-24, Rs. 32.44 crore has been allocated for this scheme.

Post-Matric Scholarship Details

The Post-Matric Scholarship supports students in post-secondary education. Academic allowances range from Rs. 5,000 to Rs. 20,000, depending on the course. For the current year, Rs. 387.27 crore has been released.

Top Class Education Support

The Top Class School and College Education schemes assist meritorious students. School students (Class 9-12) can receive funding up to Rs. 1.25 lakh annually. College students at top institutions receive full financial support covering tuition and living expenses.

Hostel Construction Initiative

The scheme allocates Rs. 12.75 crore for hostel construction in 2023-24. This aims to provide accommodation for OBC students near educational institutions, improving access to quality education.

Benefits of PM-YASASVI

PM-YASASVI promotes inclusivity and equity in education. It addresses systemic barriers faced by OBC, EBC, and DNT students. The scheme ensures financial assistance and encourages educational empowerment. This initiative helps create opportunities for upward mobility and self-reliance.

The PM-YASASVI scheme impacts the educational landscape. It empowers disadvantaged students, enabling them to achieve their academic potential. The scheme contributes to societal upliftment, aligning with the vision of a more equitable education system.

GIANT SALMON CARP

The giant salmon carp, thought to be extinct, has been spotted in the Mekong River. This species has been seen three times since 2020, raising hopes for its survival. The last confirmed sighting was in 2005. Researchers are excited about these discoveries, which signal potential resilience in the face of environmental challenges.



The Giant Salmon Carp

The giant salmon carp is a large predatory fish. It can grow up to 4 feet long. A distinctive feature is a knob at the tip of its lower jaw. It has a striking patch of yellow around its large eyes. This fish is often referred to as the ghost fish due to its rarity.

Historical Background

Historically, the giant salmon carp has been elusive. The last confirmed sighting before 2020 was nearly two decades ago. Researchers believed it had vanished from the Mekong region. Its rediscovery is for biodiversity in the area.

Research and Monitoring

Since 2017, biologists in Cambodia have been tracking migratory fish species. They have built relationships with local fishing communities. These communities are vital for reporting unusual sightings. The collaboration has led to the recent discoveries of the giant salmon carp.

The three sightings of the giant salmon carp occurred between 2020 and 2023. Two were in the Mekong River, and one was in a tributary. These sightings were documented in a study published in the journal *Biological Conservation*. Researchers view these events as a positive sign for the species.

Conservation Efforts

The recent discoveries have sparked renewed interest in conservation efforts. Biologists aim to work with local communities in Thailand and Laos. Their goal is to confirm if the giant salmon carp exists in other parts of the Mekong. This collaboration is crucial for understanding the species' range.

MEKONG-GANGA COOPERATION

An initiative by six countries – India and 5 ASEAN countries: Cambodia, Lao PDR, Myanmar, Thailand and Vietnam.

It was launched in 2000 at Vientiane, Lao PDR.

The MGC initiative aims to facilitate closer contacts among the people inhabiting river basins of river Mekong & Ganga.

MGC is also indicative of the cultural and commercial linkages among the member countries.

- There is the importance of expediting projects that have faced challenges in the recent past, especially the **India-Myanmar-Thailand trilateral highway**.
 - India, Thailand and Myanmar are working on about 1,400-km-long highway that would link the country with Southeast Asia by land.
 - It would give a boost to trade, business, health, education and tourism ties among the three countries.
 - Around 70% of construction work on the ambitious trilateral highway has been completed.
 - The strategic highway project, which will connect Moreh in Manipur with Mae Sot in Thailand via Myanmar, has been delayed because of the situation in Myanmar.

UNRWA

Israel's parliament passed two Bills to ban the United Nations Relief and Works Agency for Palestine Refugees In The Near East (UNRWA) from operating in Israel and the Palestinian territories. The Knesset also voted to designate UNRWA a terrorist organisation, cutting all ties with the agency.

Background: -

- The UNRWA was established in 1949 to provide aid to Palestinians who were forced to leave their homes during the 1948 Arab-Israeli war. Israel has argued that the UNRWA's role is obsolete, and its work is an impediment to a peace settlement.

However, critics have blamed Israel's own actions, such as not meaningfully recognising the foundation of a Palestinian state, as having perpetuated the longstanding conflict.



Key takeaways

What is the UNRWA, and what role does it play?

- UNRWA is mandated by the UN General Assembly to serve 'Palestine refugees'. This term was defined in 1952 as any person whose "normal place of residence was Palestine during the period 1 June 1946 to 15 May 1948 and who lost both home and means of livelihood as a result of the 1948 conflict.

Palestine refugees are persons who fulfil the above definition and descendants of fathers fulfilling the definition.

- In addition, the UN Assembly has also mandated UNRWA to offer services to certain other persons who require humanitarian assistance, on an emergency basis as and when required, in UNRWA fields of operations.

Notably, the Assembly has mandated the Agency to provide services to persons in the region who are currently displaced and in serious need of continued assistance as a result of the 1967 and subsequent hostilities. These persons are not registered as Palestine refugees.

- Only the UN General Assembly can change the mandate of UNRWA, the definition of a Palestine refugee and whom the Agency is mandated to serve.
- UNRWA began operations on May 1, 1950. It operates in Gaza and the Israeli-occupied West Bank, as well as in Lebanon, Syria, and Jordan – where Palestinian refugees took shelter after their expulsion.
- An estimated 5.9 million Palestinian refugees – most of whom are descendants of the original refugees – currently access the UNRWA's services.
- The UN agency is funded mostly by voluntary contributions from donor states such as the United States, Germany, the European Union, etc. It also gets a limited subsidy from the UN, which is used only for administrative costs.
- UNRWA employs some 30,000 Palestinians. More than 200 of its staff members have been killed in Israeli attacks over the past year.

So why has Israel acted against the UNRWA?

- Israel has also accused some of UNRWA's 13,000 employees in Gaza of participating in the October 7, 2023 attacks on Israel by Hamas.
- Although UNRWA fired nine employees after an investigation, it has denied that it aids armed groups on purpose – the agency has been sharing the list of its employees with Israel for a long time.

What are the two Bills that Israel has passed?

- One of the Bills bars UNRWA from operating any representative office, providing any service, or conducting any activity, directly or indirectly, in Israel's sovereign territory.
- The second Bill cuts all ties between government employees and UNRWA, and takes away the legal immunities of the agency's staff.
- Together, the Bills are likely to stop UNRWA from operating in Gaza and the West Bank as Israel controls access to both these Palestinian territories. They could also force the agency to relocate its headquarters from East Jerusalem.

What can be the impact of these measures?

- Since the beginning of the war, almost all of Gaza's 2 million people have been reliant on UNRWA for basic necessities, including food, water, and hygiene supplies.
- Along with the Palestinian Red Crescent, UNRWA handles almost all UN aid distribution in the territory.
- In the West Bank, UNRWA currently provides services for 19 refugee camps, more than 90 schools, and several health services, including prenatal care.

Q1.) Consider the following statements regarding the United Nations Relief and Works Agency for Palestine Refugees (UNRWA):

1. The UNRWA was established in 1949 to provide aid and services to Palestinian refugees displaced due to the 1948 Arab-Israeli war.
2. The UN agency is funded mostly by voluntary contributions from donor states.

Which of the statements given above is/are correct?

1. Only 1
2. Only 2
3. Both 1 and 2
4. Neither 1 nor 2

ASIATIC GOLDEN CAT

The Asiatic golden cat has been spotted in Assam's Manas National Park. This is an important conservation milestone. The last sighting was in 2007, casting doubt on the cat's presence in the park. Its return is a positive sign for wildlife conservation in the region.

Conservation Efforts

The rediscovery of the Asiatic golden cat results from years of dedicated conservation work. The Assam Forest Department collaborated with Aaranyak, a prominent biodiversity research organization. Other Indian conservationists also played crucial roles. This teamwork has proven essential for the cat's return.



Historical Challenges

Ethnic conflicts hindered conservation efforts in Manas National Park for many years. The recent sighting marks a victory over these obstacles. It shows that perseverance in conservation can yield results even after prolonged difficulties.

Species Overview

The Asiatic golden cat (*Catopumatemminckii*) is a medium-sized wild cat. It inhabits regions in southern China, Southeast Asia, and Northeast India. This species is known for its adaptability. It can thrive in diverse environments, including sub-alpine forests and tropical rainforests.

The Asiatic golden cat can live at various altitudes, even up to 3,738 meters above sea level. Its flexible habitat preferences contribute to its survival in different ecosystems. This adaptability is crucial for its continued existence in changing environments.

Conservation Status

Despite its adaptability, the Asiatic golden cat is classified as Near Threatened by the IUCN. It is protected under India's Wildlife (Protection) Act of 1972. This legal protection underscores the need for ongoing conservation efforts to ensure its survival.

Significance of Rediscovery

The sighting of the Asiatic golden cat in Manas National Park is more than a simple rediscovery. It signifies the importance of sustained conservation efforts. It marks the potential for wildlife recovery in regions previously affected by conflict and neglect.

SARVAM APP

Sarvam AI, a rising player in India's generative AI sector, has introduced a new language model named Sarvam-1. This model is specifically designed for Indian languages and is open-source.

It supports ten Indian languages, including Bengali, Hindi, and Tamil, as well as English. Launched in October 2024, Sarvam-1 follows the company's earlier model, Sarvam 2B, which debuted in August 2024.

Overview of Sarvam-1

Sarvam-1 is developed with 2 billion parameters. Parameters indicate the complexity and capability of an AI model. For comparison, Microsoft's Phi-3 Mini has 3.8 billion parameters.

Sarvam-1 is classified as a small language model (SLM) because it has fewer than ten billion parameters. This contrasts with large language models (LLMs) like OpenAI's GPT-4, which has over a trillion parameters.

Technical Specifications

Sarvam-1 is powered by 1,024 Graphics Processing Units (GPUs) from Yotta and trained using NVIDIA's NeMo framework. The model addresses a major challenge: the lack of high-quality training data for Indian languages. Existing datasets often lack the necessary depth and diversity. To overcome this, Sarvam AI created its training corpus, Sarvam-2T.



Training Data

Sarvam-2T consists of an estimated 2 trillion tokens. The dataset is evenly distributed across all ten supported languages. It includes synthetic data generation techniques to enhance the quality of the training data.

Approximately 20% of the dataset is in Hindi, with considerable portions in English and programming languages. This diversity aids the model in performing both monolingual and multilingual tasks.

Performance Metrics

Sarvam-1 is reported to be more efficient in handling Indic language scripts than previous LLMs. It uses fewer tokens per word, which contributes to its efficiency.

The model has surpassed larger AI models like Meta's Llama-3 and Google's Gemma-2 on several benchmarks, including MMLU and ARC-Challenge.

Benchmark Achievements

On the TriviaQA benchmark, Sarvam-1 achieved an accuracy of 86.11 for Indic languages. This score exceeds that of Meta's Llama-3.1 8B, which scored 61.47. Sarvam-1 also boasts computational efficiency, with inference speeds 4-6 times faster than larger models such as Gemma-2-9B and Llama-3.1-8B.

Practical Applications

The combination of strong performance and high inference efficiency makes Sarvam-1 suitable for practical applications, including deployment on edge devices. This is particularly important for real-world use cases where computational resources may be limited.

DYSLEXIA

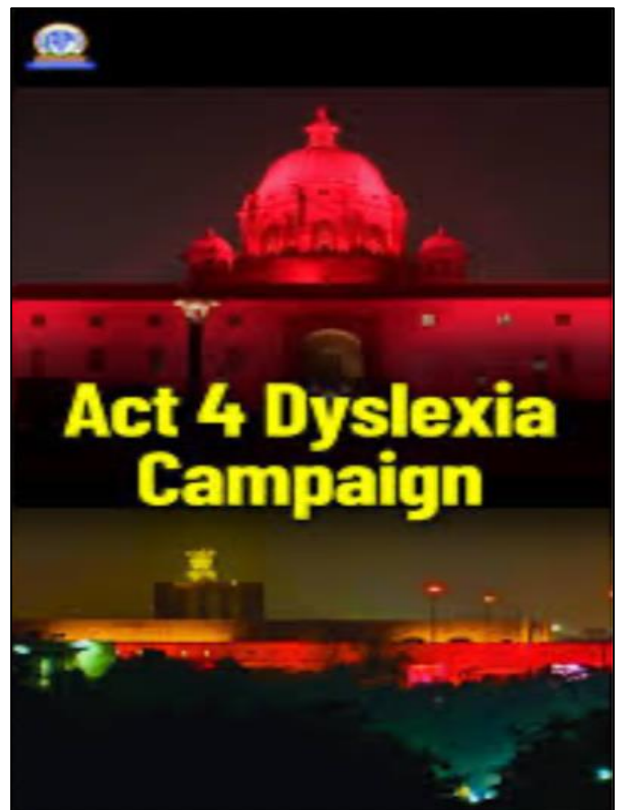
Key government buildings in India, including the Rashtrapati Bhavan and Parliament, were illuminated in red. This event was part of the 'Act4Dyslexia' campaign. The aim was to raise awareness about dyslexia and other learning disabilities affecting 20% of India's population, which includes approximately 35 million students.

About Dyslexia

Dyslexia is a specific learning disability. It affects how individuals process written and spoken language. People with dyslexia may struggle with reading, writing, spelling, and mathematics. However, they often possess strong skills in logical reasoning, critical thinking, and problem-solving.

Common Misconceptions

Dyslexia is often misunderstood. It is not a reflection of intelligence. Many believe that individuals with dyslexia are simply "slow learners." This view is misleading and can contribute to stigma. Dyslexia is a neurological condition, and those affected can excel in various fields.



Statistics and Impact

Around 20% of the Indian population is estimated to have some form of learning disability. This includes 35 million students who face challenges in education. Awareness campaigns like 'Act4Dyslexia' aim to change perceptions and reduce the stigma surrounding these disabilities.

Illumination Campaign

The illumination of prominent buildings was a symbolic gesture. It aimed to draw attention to dyslexia and promote inclusivity. The campaign extended beyond Delhi to cities like Patna, Ranchi, Jaipur, Kohima, Shimla, and Mumbai. Each city participated by lighting up landmarks in red, the color representing dyslexia awareness.

Collaboration and Support

The event was organized in collaboration with UNESCO MGIEP and ChangeInkk Foundation. These organizations advocate for educational reforms and awareness regarding learning disabilities. They work to create an inclusive society where individuals with dyslexia can thrive.

Notable Figures with Dyslexia

Many successful individuals have dyslexia. Research shows that 40% of self-made millionaires are dyslexic. Famous figures like Albert Einstein and Thomas Edison also had dyslexia. Their achievements demonstrate that dyslexia does not limit potential.

Goals of the Campaign

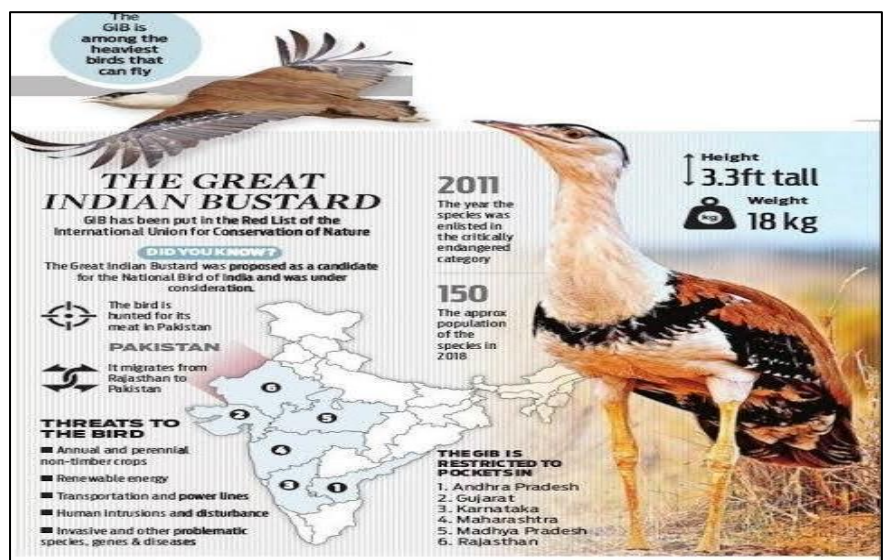
The 'Act4Dyslexia' campaign aims to inspire a cultural shift. It seeks to encourage understanding and acceptance of learning disabilities. The goal is to create an environment where individuals with dyslexia can achieve their full potential.

GREAT INDIAN BUSTARD

An important achievement occurred in conservation efforts in India. A baby great Indian bustard was born through artificial insemination (AI) at the Sudasari Great Indian Bustard Breeding Centre in Rajasthan. This marks India as the first country to successfully breed this critically endangered species using AI. The event has generated excitement and hope for the survival of the great Indian bustard.

Importance of the Great Indian Bustard

The great Indian bustard is a large bird native to the Indian subcontinent. It is critically endangered, with a population decline due to habitat loss, hunting, and human interference. Conservationists have been working tirelessly to protect and increase its numbers. The successful birth of a chick through AI is a pivotal step in these efforts.



Artificial Insemination Process

Artificial insemination is a reproductive technology that allows for the breeding of animals without natural mating. This method involves collecting sperm from a male and using it to fertilize a female's egg. In this case, a male bustard named Suda was trained for the process. He was placed in front of an artificial female to stimulate sperm production. This training took about eight months.

Steps Leading to the Birth

1. **Training the Male:** The male great Indian bustard, Suda, underwent training to prepare for artificial mating.
2. **Sperm Collection:** Once trained, Suda's sperm was collected for use in insemination.
3. **Insemination of the Female:** The collected sperm was then used to artificially inseminate a female bustard named Tony on September 20, 2024.
4. **Egg Laying:** Tony laid an egg on September 24, which was closely monitored by scientists.
5. **Hatching:** The egg hatched on October 16, resulting in a healthy chick.

Conservation Significance

This breakthrough in breeding techniques is crucial for the future of the great Indian bustard. It allows for the creation of a sperm bank, which can help increase the population.

Now, the population of great Indian bustards in Jaisalmer is estimated at 173. Of these, 128 are in the wild, while 45 are housed in breeding centers. The Desert National Park in Jaisalmer serves as a critical sanctuary, providing suitable conditions for breeding.

INDIAN SKIMMERS

An important event occurred at Lower Manair Dam (LMD) in Telangana. Around 150 to 200 rare Indian Skimmer birds were spotted. This is the first recorded sighting of these birds in Telangana.

Typically, they migrate to Kakinada port in Andhra Pradesh for the winter months. Birdwatchers noted that the last sighting of these skimmers was in 2023.



About Indian Skimmers

The Indian Skimmer (*Rynchopsalbicollis*) is a unique bird known for its striking appearance and behaviour. It has a long, slender body and a distinctive bill. The bill is adapted for skimming the water's surface to catch fish. The International Union for Conservation of Nature (IUCN) classifies these birds as endangered due to habitat loss and other environmental pressures.

Migration Patterns

Indian Skimmers typically migrate from the Chambal and Mahanadi rivers. They move to coastal wetlands during the non-breeding season. Traditionally, they head to Kakinada for winter feeding. However, since 2023, there has been a notable shift. Some of these birds have started migrating to LMD, indicating a change in their behaviour and habitat preferences.

Local Observations

Members of the Karimnagar Birdwatchers Community (KBC) observed the skimmers flying over the LMD reservoir near Chintakunta. Abdul Raheem, a bird conservator, confirmed these sightings. The KBC is dedicated to monitoring bird populations and raising awareness about conservation.

Conservation Efforts

The KBC met with the Karimnagar District Forest Officer (DFO), Ch Balamani. They discussed the importance of protecting the habitats of Indian Skimmers. The DFO agreed on the need for awareness programmes. These programmes aim to educate local fishermen and farmers about the significance of preserving these birds' habitats.

Biodiversity at Lower Manair Dam

The LMD reservoir is becoming a site of rich biodiversity. It is home to various species, including the Indian Skimmer. The DFO mentioned that during winter, 300 to 400 Indian Skimmers are often seen in the Bobbarlanka area. This marks the ecological importance of the reservoir.

Importance of Awareness

Raising awareness is crucial for the conservation of the Indian Skimmer. Local communities play a vital role in protecting these birds. By understanding their migration patterns and habitat needs, people can help ensure their survival. Conservation efforts must focus on engaging local stakeholders.

Future of Indian Skimmers

The declining population of Indian Skimmers emphasises the urgent need for conservation efforts. The recent sightings at LMD may indicate a positive trend, but ongoing monitoring is essential. Continued collaboration between birdwatchers, conservationists, and local authorities is necessary to protect these endangered birds and their habitats.

AFRICAN BAOBAB

New research by South African ecologists has refuted the claim that the African Baobab (*Adansoniadigitata*) tree is dying due to climate change.

Background:

- Known as the 'Tree of Life', baobab trees define African landscapes and some are known to exist for over 1,000 years, thus becoming one of the largest living beings on the planet.



Key takeaways

- There are nine species of the Baobab tree, six of which are native to Madagascar, two to mainland Africa and the Arabian Peninsula, and one to Australia.
- They are typically found in semi-arid regions and are a prominent part of the African savannah ecosystem.
- The Baobab is known for its distinctive, thick trunk that can store water during dry periods, and it can live for over a thousand years.
- The tree has a large swollen trunk, often referred to as a “bottle tree,” due to its capacity to store up to 100,000 liters of water.
- The leaves are deciduous, falling during the dry season, and the tree has a broad canopy. The trees that can grow up to 30 meters (100 feet) tall.

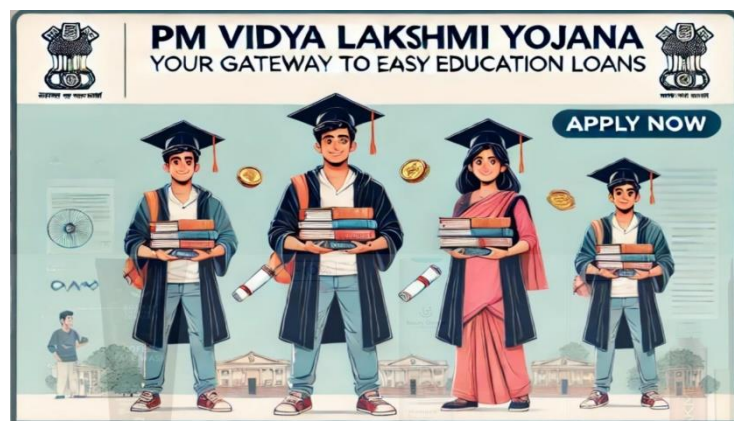
- The fruit of the baobab, known as “monkey bread,” is highly nutritious and rich in vitamin C, calcium, and antioxidants.
- Baobab trees are found in several places in India, including:
 - Mandu, Madhya Pradesh: This town is home to around 1,000 baobab trees, which are also known as MandukiImli. The trees were brought to Mandu by African traders more than 4,000 years ago.
 - The Bhil tribe has protected the trees for centuries, and the fruit is a source of livelihood for the community.
 - Prayagraj (formerly Allahabad), Uttar Pradesh: Baobab trees have been recorded in this city.
 - Mumbai: Baobab trees are part of the city’s landscape and history, but their numbers have declined due to construction projects.

PM VIDYALAXMI SCHEME

The government of India approved the PM-Vidyalaxmi scheme and an important equity infusion into the Food Corporation of India (FCI). These decisions aim to enhance access to quality higher education and strengthen food security in India.

PM-Vidyalaxmi Scheme Overview

The PM-Vidyalaxmi scheme is a new initiative with a budget of Rs 3,600 crore over five years, starting from the fiscal year 2024-25. It targets meritorious students in both private and public Quality Higher Education Institutions (QHEIs). The scheme is rooted in the National Education Policy 2020.



Eligibility Criteria

Students from families with an annual income of up to Rs 8 lakh can benefit from the scheme. They will receive a 3% interest subvention on education loans up to Rs 10 lakh. Importantly, there is no need for collateral or a guarantor.

Loan Application Process

The application process will be entirely digital. Students can apply through a consolidated portal named PM-Vidyalaxmi. This portal will facilitate access to education loans and interest subvention from various public and private scheduled banks.

Expected Impact

The scheme aims to assist over 22 lakh students annually. It will provide education loans for those enrolling in the top 860 prestigious higher education institutions across India. The funding allocated will span from 2024-25 to 2030-31.

Complementary Schemes

The PM-Vidyalaxmi scheme will work alongside existing initiatives like the Central Sector Interest Subsidy (CSIS) and the Credit Guarantee Fund Scheme for Education Loans (CGFSEL). Under CSIS, students from families earning up to Rs 4.5 lakh will continue to receive full interest subvention on education loans during the moratorium period.

Equity Infusion in the Food Corporation of India

The Union Cabinet also approved a Rs 10,700 crore equity infusion for the Food Corporation of India (FCI) for the financial year 2024-25. This funding is intended to support FCI's working capital needs.

Purpose of the Equity Infusion

The infusion aims to reduce FCI's reliance on short-term borrowings. This reduction will lower interest burdens and ultimately decrease government subsidy expenditures. FCI's authorised capital has increased from Rs 10,000 crore to Rs 21,000 crore.

JAL UTSAV

NITI Aayog launched a 15-day initiative called 'Jal Utsav'. This campaign aims to raise awareness about water management, conservation, and sustainability. It aligns with Prime Minister Narendra Modi's vision, introduced during the 3rd Chief Secretaries Conference in December 2023.

Campaign Overview

'Jal Utsav' will run from November 6 to November 24, 2024. It targets 20 Aspirational Districts and Blocks across India. The campaign is a collaborative effort with the National Jal Jeevan Mission and the Ministry of Jal Shakti.

The focus is on community involvement in water resource preservation.



Objectives of Jal Utsav

The main goals of Jal Utsav are:

- To promote awareness about efficient water use.
- To encourage community participation in water conservation.
- To instill a sense of responsibility in households regarding water management.
- To empower school students to lead water management initiatives in their communities.

Community Engagement

Community participation is central to Jal Utsav. Local leaders and eminent personalities will engage with communities. Their involvement aims to inspire collective action towards water resource protection.

Involvement of School Students

School students play a crucial role in this campaign. They will participate in various water management activities. This initiative empowers them to become catalysts for change. They will influence their families and communities to adopt sustainable water practices.

Launch Activities

The festival begins with a ceremony called 'Jal Bandhan'. This involves tying a sacred thread around water assets. Esteemed personalities and local leaders will lead this symbolic act. They will also release a Fact Sheet on Jal Sampada for their respective blocks and districts.

Expected Outcomes

Jal Utsav aims to achieve several outcomes:

- Increased awareness of water conservation practices.
- Enhanced community involvement in managing local water resources.
- Development of a culture of responsibility towards water usage.
- Empowerment of youth to take initiative in water sustainability efforts.

Significance of Water Management

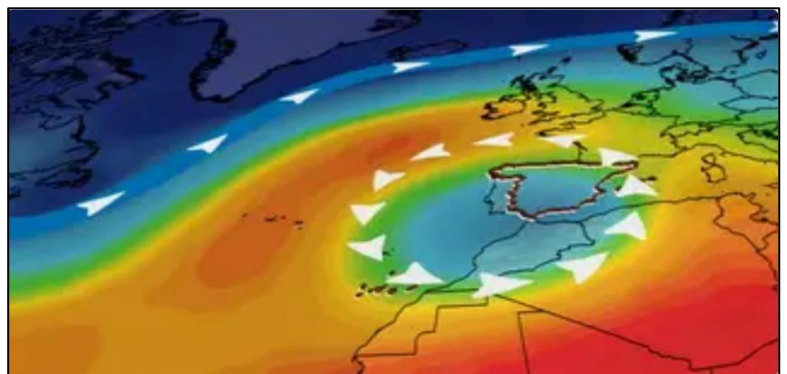
Effective water management is crucial for sustainable development. It ensures that water resources are available for future generations. Proper management helps prevent water scarcity and promotes health. It also supports agriculture and economic activities.

Partnerships and Collaboration

The success of Jal Utsav relies on partnerships. Collaboration between government bodies, local communities, and schools is essential. This multi-stakeholder approach encourages a unified effort towards water conservation.

DANA WEATHER PATTERN

Millions have been affected in Spain due to torrential rain. Flash floods caused by the immense deluge have led to the death of at least 64 people in the eastern Spanish region of Valencia.



Background: -

- The primary cause of the intense rain is likely an annual weather phenomenon known as a "gotafría," or cold drop. It is also sometimes called a "DANA," the acronym for "depresiónaisladaenniveles altos," or isolated depression at high altitudes.

Key takeaways

- **DANA or cold drop takes place when cold air descends over the warm waters of the Mediterranean Sea. This results in atmospheric instability, causing hotter, moist air on the surface of the sea to rise quickly, leading to the formation of dense, towering cumulonimbus clouds in a matter of hours. These clouds then dump heavy rain in parts of Spain.**
- The weather pattern's occurrence is related to the polar jet stream – a fast-moving wind current at high levels of the troposphere (the lowest layer of Earth's atmosphere) which circulates from west to east and separates the cold polar air from the warm tropical air.
- Often, a pocket of cold air gets separated from the polar jet stream and collides with the warmer air over the Mediterranean Sea, which results in DANA.
- The phenomenon is a common occurrence in Spain and usually coincides with the onset of autumn and spring in the western Mediterranean.

ORPHAN DRUGS

India faces considerable challenges in developing, making affordable, and ensuring access to orphan drugs, particularly when compared to countries like the United States and those in the European Union.

Background: -

- Orphan drugs, critical in treating rare diseases, have increasingly gained attention in India following the implementation of the National Policy for Rare Diseases (NPRD) in 2021.

Key takeaways

- Orphan drugs are pharmaceutical agents developed specifically to treat rare (orphan) diseases. These diseases, though affecting only a small portion of the population, often lead to life-threatening conditions.
- Definitions of orphan drugs vary depending on the regulatory framework. In the U.S., a disease is considered rare if it affects fewer than 2,00,000 people, while in the European Union, a disease must affect fewer than 1 in 10,000 people to be considered rare.

Charting the UNKNOWN

Niti Aayog

holding talks on

incentivising R&D

of orphan drugs



Sops for private sector may include faster approvals, longer period of exclusivity

Worldwide 7,000-8,000 diseases are considered as rare or orphans



Nearly 300 million people are affected globally



India has 90 million people affected by rare diseases

- Although there is no formal prevalence-based definition in India, the NPRD of 2021 outlines a framework for diagnosing and treating rare diseases, with a low prevalence threshold expected.
- The lack of a clear definition complicates the identification of orphan drugs and the addressing of needs of patients affected by these conditions.

Classification of orphan drugs

- Under India's NPRD, rare diseases are classified into three categories to facilitate treatment approaches.

Group 1 includes disorders that are curable through one-time interventions, such as Lysosomal Storage Disorders (LSDs) requiring Hematopoietic Stem Cell Transplantation (HSCT).

Group 2 encompasses diseases that need long-term or lifelong management but have relatively lower treatment costs, such as Maple Syrup Urine Disease (MSUD).

Group 3 covers conditions like Gaucher Disease and Pompe Disease, where treatment is available but complicated by high costs and the necessity for lifelong care.

- For a drug to receive orphan drug designation, it must meet certain criteria that vary across countries. **Once designated, orphan drugs receive several incentives to encourage their development, including market exclusivity, tax credits for research and development (R&D) expenses, and fee waivers for regulatory applications.**

Challenges for India

- Although orphan drug development has been incentivised globally, significant challenges remain, particularly in countries like India.
- The high cost of research and development is a barrier, as orphan drugs often target small patient populations, making it difficult for companies to justify the financial risk.
- Clinical trials for orphan drugs also face hurdles due to the limited number of patients available.
- Pricing and accessibility are additional challenges, as the high costs of orphan drugs often make them unaffordable for patients in countries like India. For instance, enzyme replacement therapies (ERTs) for diseases like Gaucher's disease can cost several crores annually.
- India faces unique challenges in the development and accessibility of orphan drugs despite efforts like the NPRD. The country lacks a formal definition and comprehensive data on the prevalence of rare diseases, which hampers drug development efforts.
- While the NPRD provides a framework for diagnosing and treating rare diseases, it falls short in offering financial or regulatory incentives that could encourage the development and marketing of orphan drugs.

THE BALFOUR DECLARATION

The Balfour Declaration was made on November 2, 1917. A century later, its violent ripples are still being felt.

Background: -

- The Declaration is often cited as a foundational document leading to the Israeli-Palestinian conflict, with its repercussions still evident in contemporary Middle Eastern geopolitics.

Key takeaways

- Arthur James Balfour (1848-1930): A prominent British statesman who held various powerful positions in the British government. He was nicknamed 'Bloody Balfour' for his harsh suppression of Irish revolts.
- However, his legacy is profoundly marked by the Balfour Declaration, which has had lasting implications in the Middle East.

The Balfour Declaration:

- Date: November 2, 1917.
- Nature: A letter from Foreign Secretary Arthur Balfour to Lionel Walter Rothschild, a leader of the British Jewish community.
- Content: The British government expressed support for the establishment of a "national home for the Jewish people" in Palestine, with the stipulation that this should not prejudice the civil and religious rights of existing non-Jewish communities in Palestine or the rights and political status of Jews in other countries.

Motivations Behind the Declaration:

- Zionist Movement: The late 19th and early 20th centuries saw the rise of Zionism, advocating for a Jewish homeland in response to persecution in Europe.
- British Interests: During World War I, Britain sought to gain Jewish support, particularly from influential communities in the U.S. and Russia, to bolster the Allied war effort. Additionally, control over Palestine was strategically important for safeguarding the Suez Canal and maintaining access to British colonies, including India.

LIGNOSAT

Japan is pioneering a new era in space exploration with the launch of the world's first wooden satellite, LignoSat. This innovative project is a collaboration between Kyoto University and Sumitomo Forestry. The satellite is scheduled to launch atop a SpaceX rocket, destined for the International Space Station (ISS) next week.

LignoSat will be launched next week and will remain in orbit for six months. After its deployment from the ISS, the satellite will collect data on how wood withstands the harsh conditions of space.



Material Properties

The wood used in LignoSat comes from the Japanese honoki tree, a type of magnolia. This wood is known for its strength and resistance to shattering. It is traditionally used for crafting the scabbards of Japanese swords and the blades of wooden sandals.

Benefits of Wood in Space

Wood has unique advantages in space. The absence of moisture in space means that wood won't rot. Additionally, there are no flames to ignite it. This makes wood a viable candidate for space applications.

Environmental Impact

At the end of its operational life, LignoSat will burn up harmlessly upon re-entry into Earth's atmosphere. This is an important advantage over traditional satellites, which release harmful metal particles when they disintegrate.

Future Aspirations

Takao Doi envisions a future where humanity can plant trees and construct timber houses on the Moon and Mars. LignoSat is seen as a crucial first step towards this ambitious goal.

The launch of LignoSat represents an important shift in how we think about materials in space. It opens the door to sustainable practices in satellite design. The success of this mission could lead to more eco-friendly innovations in the future.

GLOBAL MULTIDIMENSIONAL POVERTY INDEX (MPI) REPORT.

With over 80 per cent of the world's poor living in Sub-Saharan Africa and South Asia, India is among the countries with the largest number of the world's poor, found the 2024 Global Multidimensional Poverty Index (MPI) report.

Background: -

- The report also stated that almost 84 per cent of the world's poor live in rural areas and they are poorer than their counterparts in the urban areas. In the case of India, rural poverty has been a persistent issue for policymakers

Multidimensional Poverty Index (MPI)

- The MPI, developed by Sabina Alkire and James Foster and adopted by the United Nations Development Programme (UNDP) in 2010, measures deprivation across health, education, and standard of living, and not monetary poverty.
- National Institution for Transforming India (NITI Aayog) in collaboration with the UNDP and Oxford Poverty and Human Development Initiative (OPHI), developed a National Multidimensional Poverty Index to monitor multidimensional poverty at national, state, and district levels in the country.
- In January this year, NITI Aayog released a discussion paper titled Multidimensional Poverty in India since 2005-06 which claims that the country has seen a significant decline in multidimensional poverty from 29.17 per cent in 2013-14 to 11.28 per cent in 2022-23.

- The discussion paper sends a positive message that India is on its way to achieve Sustainable Development Goal 1.2 of “halving multidimensional poverty by 2030”.
- The paper also notes rural India has seen a larger decline in multidimensional poverty. Between 2015-16 and 2019-21, poverty in rural India decreased from 32.59 per cent to 19.28 per cent, while urban poverty fell from 8.65 per cent to 5.27 per cent.

Rural poverty: Disparities and deprivations

- Rural poverty, which refers to poverty in rural areas, is characterised by factors including poor living conditions, heavy reliance on agriculture, landlessness and limited access to basic services.

In addition, the rural poor are often affected by social constraints stemming from caste, gender, and ethnicity, which can limit social mobility and access to opportunities.

- For instance, the 2018 National Sample Survey (NSS) on education highlighted significant disparities, with rural literacy at 73.5 per cent compared to 87.7 per cent in urban areas.
- Also, the 76th round of the NSS underlined notable differences in access to basic services. **About 29 per cent of rural households lack access to toilets, in contrast to nearly 4 per cent in urban areas;** and more than 40 per cent of rural households do not have drinking water facilities within the home, compared to 20 per cent in urban areas.
- Around 65 per cent of India’s population lives in rural areas, but a disproportionately high percentage – **about 90 per cent – of the nation’s poor reside in rural areas.**
- The Periodic Labour Force Survey data shows that around 59 per cent of the rural workers are engaged in agriculture and allied activities. Among agricultural workers, there is a disparity in the incidence of poverty based on whether a worker is a cultivator or a casual wage worker.
- The incidence of poverty is much higher among agricultural labourers than cultivators. Among the rural non-agricultural workers, the type of non-agricultural work is important.
- Self-employment in non-farm work or precarious and casual non-farm work like in construction may not lead to poverty reduction.
- Another way of understanding rural poverty is by looking at access to land and land ownership. **Data reveals that the small (1-2 hectares of land) and marginal (less than 1 hectare) farming households are the most affected and poor groups.**
- India is also the only country in South Asia where poverty is significantly higher among female-headed households as compared to male-headed households.

Around 19.7 per cent of female-headed households are poor in India while 15.9 per cent of male-headed households are poor.

- Hence, along with regional factors, gender, caste, and religion are also important determinants in understanding poverty in India. For instance, studies have found that both Scheduled Tribes and Scheduled Castes in India contribute more to multidimensional poverty than their population share.
- While rural poverty has been a persistent issue for Indian policymakers, the country has also seen significant rural-urban migration. As of 2020-21, about one-third of India’s total population is migrants. Migrants form 34.6% of the total population in urban areas. This has led to growing debates on “urbanisation of poverty”.

GREEN FIRECRACKERS

Delhi earned the tag of the world's most polluted city on Friday after firecrackers were burst on the occasion of Diwali on Thursday despite a blanket ban in the national capital.

Background: -

- At 6 am on Friday, the Air Quality Index (AQI) was recorded at 359, which falls in 'very poor' category, according to CPCB.

Conventional crackers

Colour	Compounds
White colour	Aluminium, Magnesium, and Titanium
Yellow Colour	Sodium compounds
Blue Colour	Copper compounds
Red Colour	Strontium carbonates
Green Colour	Barium monochloride salts or Barium nitrate or Barium chlorate

- Green crackers are eco-friendly fireworks developed as a solution to the air and noise pollution caused by traditional firecrackers. They are designed to emit fewer pollutants and are developed with an emphasis on reducing the harmful effects of conventional crackers.
- Both green crackers and traditional crackers cause pollution. However, the difference is that green crackers cause 30 per cent less air pollution as compared to traditional ones.
- Green crackers do not contain harmful chemicals like arsenic, lithium, or barium, which are found in conventional firecrackers and are responsible for high emissions of sulfur oxides, nitrogen oxides, and particulate matter.

WHAT ARE 'GREEN CRACKERS'?

Firecrackers that have "less dangerous" and "less harmful" chemicals than conventional ones

Being Developed by
CSIR's National Environmental Engineering Research Institute

Production after they are approved by Petroleum and Explosives Safety Organisation (PESO)

Green Because

- ▶ They have a chemical formulation that produces water molecules
- ▶ This substantially reduces emission level and absorbs dust
- ▶ Is basically a light and sound show that produces lower emissions
- ▶ Promise **30-35% reduction** in particulate matter, nitrous oxide and sulphur oxide

Also In The Works
E-CRACKERS BEING DEVELOPED BY CSIR'S CENTRAL ELECTRONICS ENGINEERING RESEARCH INSTITUTE

OTHER INITIATIVES

- Crackers with lower aluminium to reduce emissions substantially
- 'Anar' or flower pot made using eco-friendly material that can reduce particulate matter by 40%
- Bijli crackers that eliminate use of ash as desiccants
- Firecrackers without antimony, lithium, mercury, arsenic and lead as directed by PESO last year

Council of Scientific and Industrial Research

- Use of alternative chemicals and a reduced level of aluminum, which cuts down on the emission of particulate matter (PM).
- The Council of Scientific and Industrial Research (CSIR) has developed 'green firecrackers' to combat pollution.
- According to the CSIR-National Environmental Engineering Research Institute, green crackers must have a reduction in the size of the shell, elimination of ash usage, reduced usage of raw materials in the composition, and/or use of additives as dust suppressants to reduce particulate matter, SO₂, and NO₂ emissions.
- These 'green firecrackers' have types like SWAS (safe water releaser), SAFAL (safe minimal aluminium), and STAR (safe thermite cracker).
- SWAS is a safe water releaser, which suppresses the dust released by releasing water vapour in the air. It does not comprise potassium nitrate and sulphur and the particulate dust released will reduce approximately by 30 per cent.
- SAFAL is safe minimal aluminium which has minimum usage of aluminium, and used magnesium instead. It ensures a reduction in sound in comparison to traditional crackers.
- STAR is a safe thermite cracker, which does not comprise potassium nitrate and sulphur, and emits reduced particulate matter disposal and reduced sound intensity.

KODO TOXINS

Ten wild elephants from a herd of 13 have died in Madhya Pradesh's Bandhavgarh Tiger Reserve. The cause is suspected to be mycotoxins from Kodo millet. This incident marks the dangers of Kodo millet and its potential toxicity.

What is Kodo Millet?

Kodo millet, scientifically known as *Paspalum scrobiculatum*, is a type of grain grown in India and several other countries. It is also called Kodra and Varagu. Madhya Pradesh is one of the largest producers of kodo millet in India. It thrives in tropical and subtropical climates, often in poor soils.

Why Do Farmers Grow Kodo Millets?

Kodo millet is a staple for many tribal communities. It is drought-tolerant and has a high yield potential. The grain is rich in vitamins, minerals, and dietary fiber. It is gluten-free and easy to digest, making it a healthy choice.

History of Kodo Poisoning

The first documented case of kodo millet poisoning dates back to 1922. Four individuals became unconscious after consuming bread made from kodo flour. The first animal case was reported the same year, involving a dog that ate kodo bread. Research in the mid-1980s linked kodo millet to mycotoxins, particularly cyclopiazonic acid (CPA).



How Does Kodo Millet Become Poisonous?

Kodo millet is often grown in dry areas but can become infected with fungi under certain conditions. Fungal infections lead to mycotoxin production, particularly CPA, which is harmful. Rain during harvesting can increase the risk of contamination.

Impact of Toxic Grain on Animals

Kodo poisoning affects the nervous and cardiovascular systems. Symptoms include vomiting, giddiness, and unconsciousness. In elephants, these symptoms were observed in the recent cases. Toxicity can lead to severe health issues, including liver dysfunction and gastrointestinal disorders.

Solutions to Kodo Toxicity

Researchers suggest using biocontrol agents to combat fungal infections. This includes introducing non-toxic strains of fungi to fields. Good agricultural practices are essential. Farmers should ensure proper storage and sorting of grains to reduce mycotoxin levels.

Recent Cases of Kodo Poisoning

In 2022, one elephant died from kodo poisoning. There have been no reported human fatalities due to Kodo millet, as treatment can effectively reverse symptoms.

Detection of Mycotoxins in Kodo Millets

Detecting toxicity in Kodo millet is challenging. Visual inspection is often insufficient. Chemical analysis is required for accurate detection. Techniques like gas chromatography and high-performance liquid chromatography are commonly used. Rapid tests like enzyme-linked immunosorbent assays (ELISA) are gaining popularity for on-site detection.

THADOU IDENTITY

The Thadou Convention took place in Guwahati. This event was for the Thadou tribe of Manipur. It addressed the ongoing issues surrounding their identity and the violence that has affected them since May 3, 2023. The Thadou tribe has faced challenges regarding their classification within the broader Kuki group, which they reject.

Thadou Identity

The Thadou tribe asserts that they are a distinct ethnic group. They have their language, culture, and history. The recent declaration made at the convention emphasised that the Thadou should not be classified as part of the Kuki group. The tribe insists on being recognised as an independent entity.

Historical Background

The Thadou have been recorded as a separate tribe since the first census in India in 1881. According to the 2011 census, their population was 215,913. The tribe's history shows a consistent identity, distinct from others. They argue that their classification has been misrepresented over time.

KALKA SHIMLA RAILWAY

Himachal Pradesh Chief Minister Sukhvinder Singh Sukhu recently urged the Ministry of Railways to explore the possibility of running trains on the Kalka-Shimla railway, a UNESCO World Heritage site, on green hydrogen.

Background:

- Sukhu said the government aims to make Himachal Pradesh a green energy state by March 31, 2026.

Total change of altitude: From Kalka, 655 meters (2,150 ft) to Shimla of 2,076 meters (6,811 ft).



Key takeaways

- The Kalka-Shimla Railway is a narrow-gauge railway line connecting Kalka in Haryana to Shimla, the capital of Himachal Pradesh.
- It is known for its scenic route through the Shivalik range of the Himalayas.
- It was designated a UNESCO World Heritage Site in 2008 as part of the “Mountain Railways of India”, along with the Darjeeling Himalayan Railway and the Nilgiri Mountain Railway.

Historical Significance

- Opened in 1903 during British rule, the railway was constructed to provide better access to Shimla, then the summer capital of British India.
- Built by the Delhi-Umbala-Kalka Railway Company, this 96 km line is renowned for its engineering excellence and use of the hill railway technology of the period.

Engineering and Architectural Highlights

- The railway line features 103 tunnels and 864 bridges, demonstrating impressive engineering in a mountainous terrain.
- The Barog Tunnel (Tunnel No. 33) is the longest tunnel on this line, extending over 1 kilometer.
- Zig-zag patterns and sharp curves are unique aspects of its construction, with a gradient of 1:33, allowing the train to navigate steep ascents.

Cultural and Tourist Importance

- The Kalka-Shimla Railway is known for its toy trains, which attract tourists from around the world and offer panoramic views of the hills, valleys, and pine forests.
- It is often referred to as the “crown jewel” of Himachal tourism and plays a major role in promoting local tourism.

BOTSWANA GETS NEW PRESIDENT

Duma Boko, from the Umbrella for Democratic Change (UDC), has been announced as Botswana's new president. This is a big change in Botswana's politics, as he replaces the long-ruling Botswana Democratic Party (BDP). Chief Justice Terence Rannowane shared the news on national television.

About Botswana:

It is a landlocked country in Southern Africa, predominantly inhabited by the Tswana ethnic group. It borders South Africa, Namibia, and Zimbabwe, and is connected to Zambia via the Kazungula Bridge. It is one of the world's most sparsely populated countries. Botswana is known for its diamond industry, high standard of living, and impressive Human Development Index.



Its landscape is defined by the Kalahari Desert and the Okavango Delta, which becomes a lush animal habitat during the seasonal floods. The massive Central Kalahari Game Reserve, with its fossilized river valleys and undulating grasslands, is home to numerous animals including giraffes, cheetahs, hyenas and wild dogs.

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN (NBSAP)

India presented its National Biodiversity Strategy and Action Plan (NBSAP) at the UN conference on biodiversity in Cali, Colombia. This submission aligns with the Kunming-Montreal Global Biodiversity Framework (KM-GBF). The KM-GBF aims to halt biodiversity loss by 2030, with 196 countries committed to achieving a nature-positive world.

Key Themes of the KM-GBF

The KM-GBF is structured around three main themes:

1. Reducing threats to biodiversity.
2. Meeting people's needs through sustainable use.
3. Implementing tools and solutions for mainstreaming biodiversity.

India's NBSAP outlines 23 targets that reflect these themes.

India's Biodiversity Overview

India is home to about 8% of the world's known plant and animal species. It includes:

- 3,532 species of fish.
- 450 amphibian species.
- 738 reptilian species.
- 1,346 bird species.
- 436 mammal species.

This rich biodiversity underscores the importance of effective conservation strategies.

Goals of the NBSAP

The NBSAP aims to address various national challenges, including the water crisis, Food insecurity, Unsustainable livelihoods, Pollution, Human-wildlife interactions, Emerging diseases, and Disaster risks. It focuses on the sustainable use of biological resources and the equitable sharing of benefits.

Restoration of Ecosystems

One of India's primary goals is to restore at least 30% of degraded ecosystems. This includes Terrestrial, Inland water, Marine, and coastal ecosystems. Restoration enhances biodiversity and improves ecosystem functions.

Targets Addressing Biodiversity Threats

Eight of the 23 targets focus on reducing biodiversity threats. These include Land and sea use changes, Pollution management, Combating species overexploitation, Climate change mitigation, Managing invasive alien species, and Ecosystem restoration. Each target is designed to tackle specific challenges.

Invasive Alien Species Management

India plans to manage invasive alien species through:

- Elimination and reduction strategies
- Monitoring introduction pathways
- Establishing a national database on invasive species.

The action plan identifies trade and farming of exotic species as key introduction pathways.

Financial Support for Biodiversity

To achieve its targets requires substantial financial backing. The government has conducted biodiversity expenditure reviews. The average annual expenditure from 2017-18 to 2021-22 was approximately Rs 32,207.13 crore. For the 2024-25 to 2029-30 period, the projected annual average

expenditure is Rs 81,664.88 crore. A comprehensive assessment of financial needs is essential for effective implementation.

Framework for Action

The NBSAP provides a structured framework for biodiversity conservation. It promotes:

- Sustainable resource use.
- Fair benefit-sharing.
- Collaboration between national and global conservation agendas.

This framework is crucial for addressing India's unique biodiversity challenges and contributing to global efforts.

TIGER RANTHAMBORE NATIONAL PARK AND RESERVE

Ten of the 25 tigers 'allegedly missing' from Tiger Ranthambore National Park and Reserve have been traced, officials have confirmed

Background: -

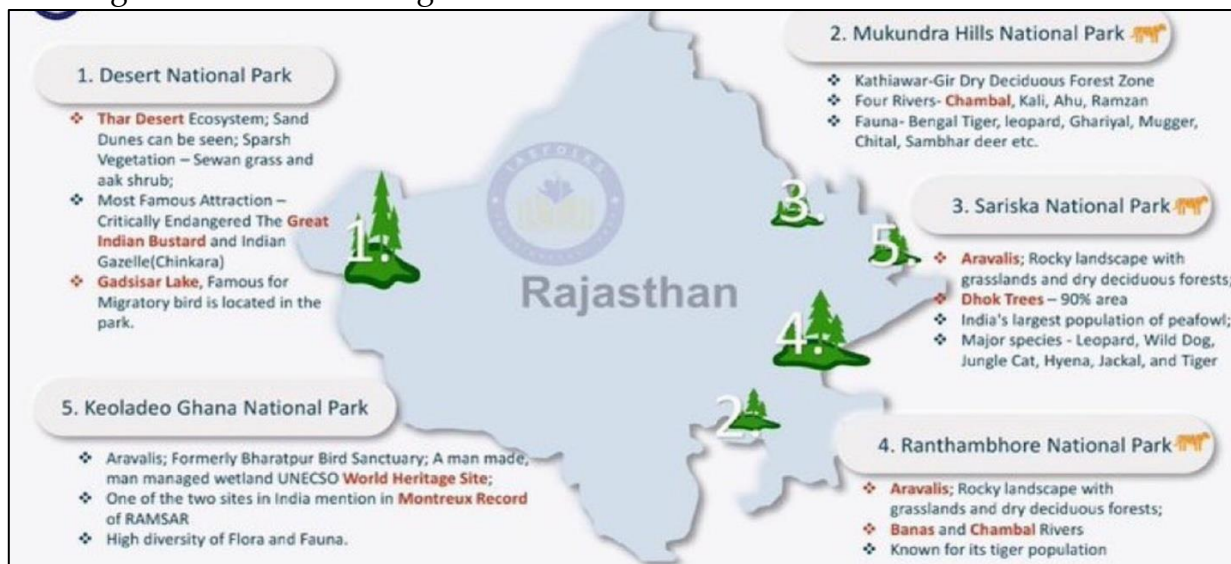
- Ranthambore Tiger Reserve (RTR) had an estimated population of 88 tigers according to the 2022 census, published in 2023.

Key takeaways

- Location: Situated in the Sawai Madhopur district of Rajasthan, Ranthambore National Park lies at the northern edge of the Vindhya Range.
- It is bounded to the north by the Banas River and to the south by the Chambal River.

History and Significance:

- Ranthambore Fort: A UNESCO World Heritage Site, the Ranthambore Fort is located within the park. It was built in the 10th century by the Chauhan dynasty.
- Ranthambore was declared a national park in 1980 and became part of Project Tiger in 1973, making it a critical site for tiger conservation in India.



Biodiversity:

- Flora: The park features tropical dry deciduous forests, including species like dhok, babul, and ber trees. It also has grasslands and riverine vegetation.

Fauna:

- Carnivores: Bengal tigers (*Panthera tigris tigris*), leopards, striped hyenas, and jackals.
- Herbivores: Sambar deer, chital (spotted deer), nilgai (blue bull), wild boar, and langurs.
- Other animals: Sloth bears, Indian gazelle (chinkara), and crocodiles.
- Avifauna: Over 270 species of birds, including painted storks, pelicans, and eagles.

NAMO DRONE DIDI SCHEME

Government releases Operational Guidelines of Namu Drone Didi scheme

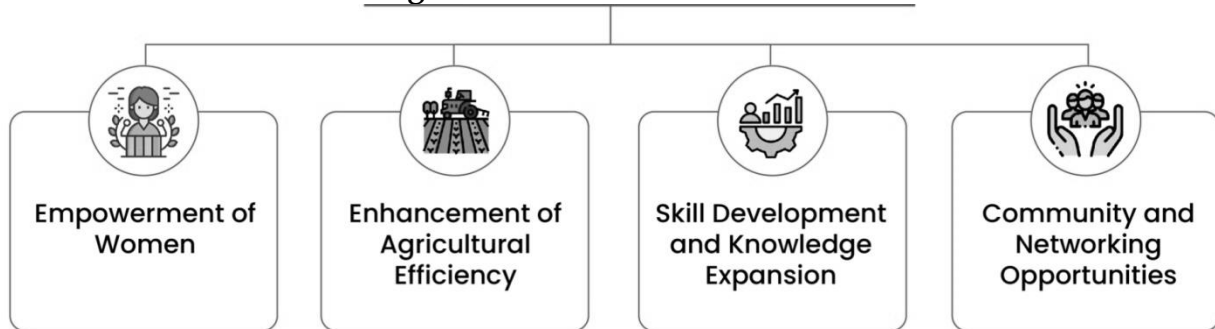
According to guidelines, scheme will be **overseen by an Empowered Committee of Secretaries** from key departments.

- Furthermore, **Drone Portal, an IT-based MIS**, will provide **real-time monitoring and drone operation tracking** to ensure scheme's smooth execution and effectiveness.

About Namu Drone Didi scheme

- **Ministry:** Ministry of Agriculture & Farmers Welfare
- **Type:** Central Sector Scheme under DeendayalAntyodaya Yojana - National Rural Livelihoods Mission
- **Objective:** Provide drones to 15000 selected Women SHGs during the period from 2024-25 to 2025-2026 for providing rental services to farmers for agriculture purpose.

Significance of Namu Didi Scheme

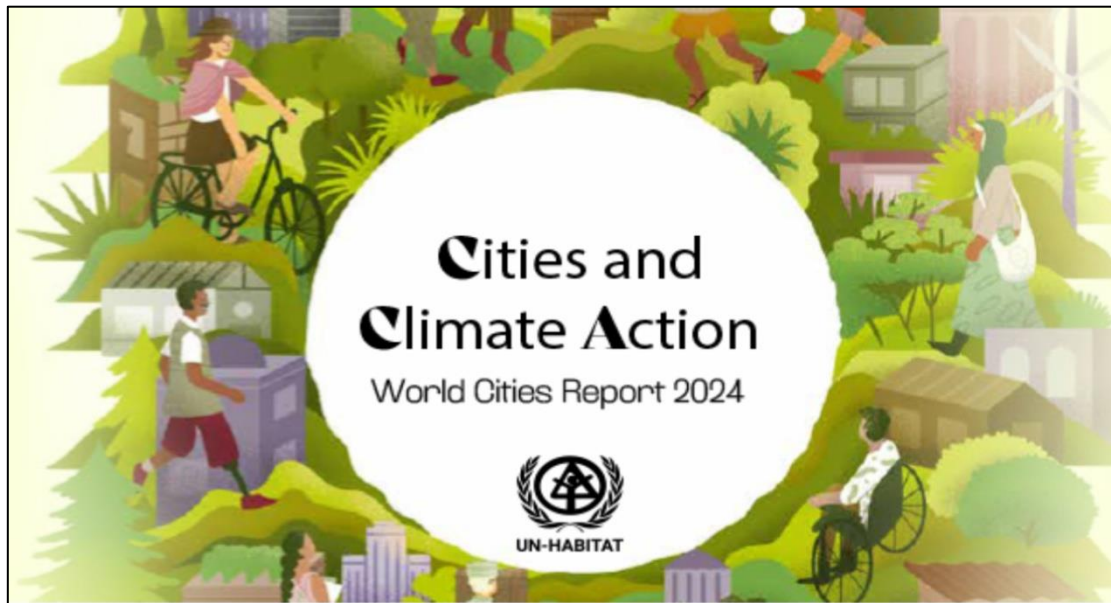


- **Key features of the scheme**

- **Cluster-Based Implementation:** Demand from farmers based on certain commitment on their part for drone services will be evaluated for selection of area/cluster.
- **Financial Support:** Women SHGs receive substantial **financial assistance, covering 80% of the drone and accessory costs, up to Rs. 8 lakhs.**
 - SHGs can secure **loans from the National Agriculture Infrastructure Financing Facility (AIF)** with a 3% interest subvention **for the remaining 20% cost.**
- **Training:** A qualified women SHG member will undergo training as drone pilot and agriculture application.
- **Infrastructure and Support from Lead Fertilizer Companies (LFCs):** LFCs will aid SHGs in procurement, repair, and maintenance of drones, and also promote nano fertilizer use.

UN -HABITAT RELEASES "WORLD CITIES REPORT 2024-CITIES AND CLIMATE ACTION"

It noted that cities are both victims of climate change and its worst offenders (Generating Green House Gases), although disproportionately exposed to impacts of climate change.



Key-findings of Report:

Exposed to climate change: More than 2 billion people currently living in cities could be exposed to an additional temperature increase of at least 0.5 °C by 2040.

Funding gap: Cities need an estimated \$4.5-5.4 trillion per year to build and maintain climate-resilient systems. Current financing stands at just \$831 billion.

Shrinking Green space: With average share in urban areas worldwide falling from 20% in 1990 to 14 % in 2020.

Impact on Vulnerable People: Some climate interventions have inadvertently worsened conditions for vulnerable communities.

E.g., "green gentrification," where initiatives like park creation displace low-income households or drive up property values.

Recommendations:

Revenue raising based on enabling conditions e.g. through debt, creating PPPs, and establishing instruments to mobilize climate finance.

Integrating climate action into urban planning and Supporting bottom-up(Locally-led) climate adaptation efforts for effectively building resilience.

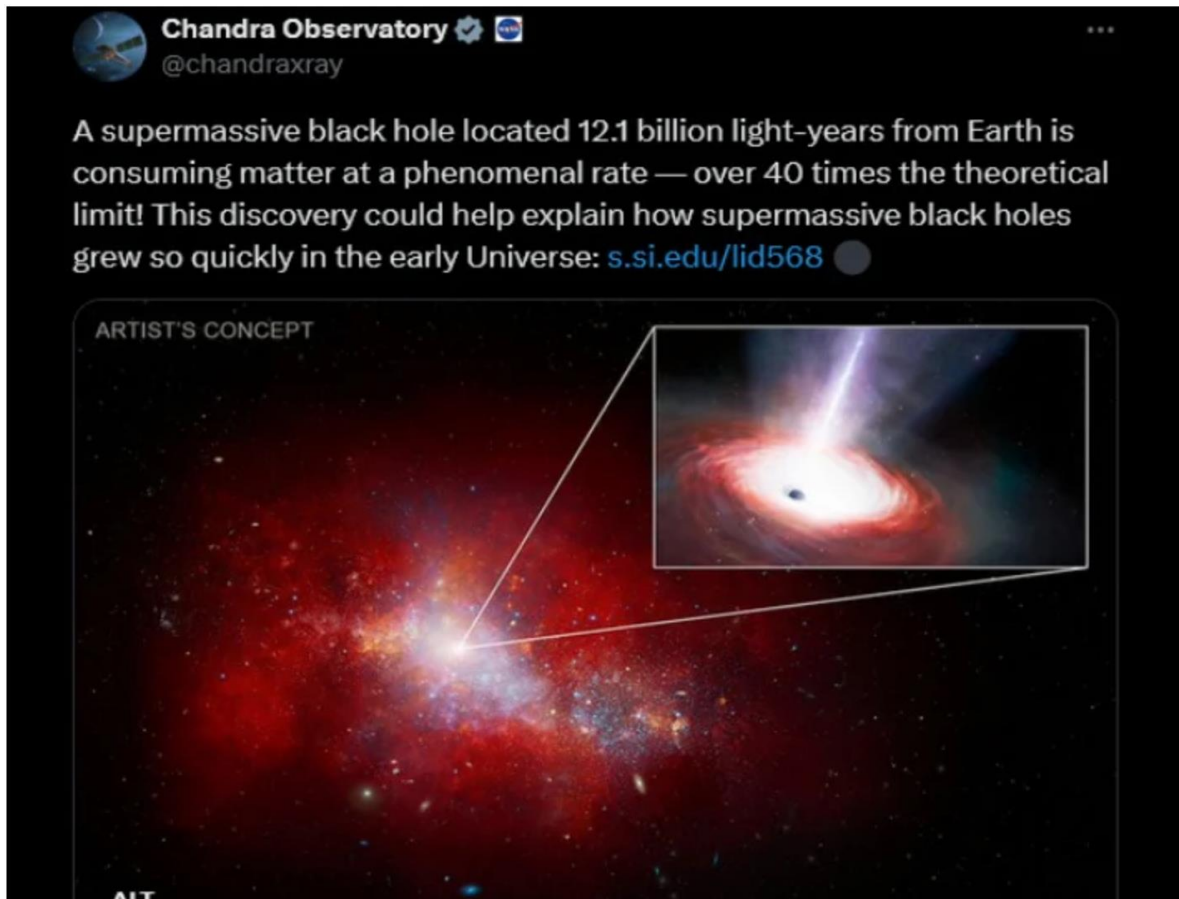
Strengthening social protection programmes, adopting nature-based solutions that address climate shocks.

LID -568

According to a study published in the journal Nature Astronomy, LID-568 is expanding at an unprecedented rate challenging the conventional understanding of black holes.

Primordial black holes are formed either from the explosion of the universe's initial stars or the collapse of large gas clouds present in the early universe.

LID-568 appeared to be consuming infalling material due to gravitational attraction known as accretion, at more than 40 times the Eddington limit.



Its rapid growth suggests that significant portion of mass growth can occur during single episode of rapid accretion; it could explain formation of supermassive black holes early in universe.

About Eddington limit

It is a theoretical limit for the maximum energy output the black hole can produce through the accretion process.

It assumes that the outward force from the radiation produced during the accretion process balances the gravity of the infalling material.

About LID-568:

It is a supermassive black hole formed about 1.5 billion years after the Big Bang event.

It has a mass about 10 million times greater than the sun, so 2.5 times that of Sagittarius A*. Sagittarius A* is a supermassive black hole located at the center of our galaxy-the Milky Way.

JAMES WEBB SPACE TELESCOPE

It is the largest, most powerful space telescope ever built.

Developed in joint collaboration of NASA, European Space Agency (ESA) and Canadian Space Agency (CSA).

It is designed to observe the universe primarily in the infrared spectrum and successor to NASA's Hubble Space Telescope. It orbits the Sun 1.5 million kilometers away from the Earth at what is called the second Lagrange point or L2.

NAWO-DHAN

The Agriculture department is initiating a pilot project under the NAWO-DHAN scheme. This project aims to enhance horticulture agribusiness. It targets land owners and cultivators who have shown interest.

Project Overview

NAWO-DHAN stands for New Agriculture Wealth Opportunities Driving Horticulture Agribusiness Networking.

The project focuses on increasing food crop production in Kerala. It aims to utilise land that is currently fallow or unused. The initiative will engage farmer groups through Service Level Agreements (SLA). This approach treats farming as a service, ensuring no transfer of land ownership.

Selection Process

The Agriculture department is currently shortlisting farmers. This selection is based on technical and financial criteria.

The goal is to identify suitable candidates from the 149 cultivators who expressed interest. Selected farmers will collaborate under the NAWO-DHAN framework.

Economic Context

Kerala's agricultural landscape presents challenges. There is an important production-demand gap for vegetables and fruits. Estimates show a gap of 13.76 lakh metric tonnes for vegetables and 14 lakh metric tonnes for fruits. This project seeks to address these gaps by promoting better land use.

Land Use Statistics

Kerala has a total cropped area of 25,23,014.31 hectares. Of this, more than 85% is dedicated to perennial crops. Only 15% is allocated to food crops. Additionally, around 1,03,334 hectares of land are currently fallow. The NAWO-DHAN initiative aims to convert some of this unused land into productive agricultural space.

Investment Opportunities

The state government is promoting this scheme to attract investments. Since agricultural income is not taxable, it is an appealing option for investors. The initiative encourages both individuals and multinational corporations to invest in high-tech value cropping. This could enhance the agricultural output of the region.

1. NAWO-DHAN: NAWO-DHAN stands for New Agriculture Wealth Opportunities Driving Horticulture Agribusiness Networking. It aims to enhance food crop production in Kerala through innovative farming practices.
2. SLA: Service Level Agreements are used in the NAWO-DHAN scheme. SLAs treat farming as a service. This approach ensures no transfer of land ownership while promoting agricultural productivity.

GREEN HYDROGEN PRODUCTION

The Government of India has introduced a ₹200-crore scheme aimed at promoting green hydrogen production. This initiative focuses on innovative methods for residential and commercial applications.

The Ministry of New and Renewable Energy outlines various pilot projects. These include floating solar-based hydrogen production, biomass utilization, and wastewater conversion. The aim is to decentralize hydrogen use for cooking, heating, and off-grid electricity generation.

Scheme Overview

The ₹200-crore scheme is designed for pilot projects. It targets innovative pathways for green hydrogen production. The initiative is aimed at diverse applications, including community and commercial uses.

A government body will oversee the implementation of this scheme. This initiative is part of a broader strategy to establish a green hydrogen ecosystem.

Various innovative methods will be explored under this scheme. Floating solar panels will be tested for hydrogen production. Biomass-based hydrogen generation will also be developed.

Additionally, wastewater treatment processes will be utilised for hydrogen extraction. These methods aim to enhance sustainability and resource efficiency.

Decentralized Applications

Decentralized applications of green hydrogen are a key focus. These include cooking and heating solutions for households. Off-grid electricity generation is another potential use. Furthermore, green hydrogen can power off-road vehicles. This decentralization aims to reduce reliance on traditional energy sources.

India's solar photovoltaic (PV) exports have surged. In the 2023-24 period, exports reached \$2 billion, a 23-fold increase. Most of these exports were directed to the US market. Major contributors include companies like Waree, Adani, and Vikram. This trend indicates a growing demand for Indian solar products.

Impact of US Trade Policies

US trade policies are shifting, affecting solar imports. Tariffs on imports from Southeast Asian countries have been reinstated. This change could benefit Indian exporters. Additionally, the US is moving away from Chinese imports. This creates opportunities for India to expand its market share in the US.

India's battery market remains heavily import-dependent. The International Energy Agency projects a shortfall in domestic production. By 2030, local production will meet only 30% of demand. This dependency is expected to continue through 2035. The country will need to rely on imports, especially from China.

Future Prospects

The establishment of a green hydrogen ecosystem is a priority. This includes developing necessary infrastructure like refuelling stations. The government aims to enhance local production capabilities. However, challenges remain in the battery sector. Continued reliance on imports could hinder growth in this area.

1. **Green Hydrogen** – Green hydrogen is produced using renewable energy sources. It is seen as a clean alternative to fossil fuels. Its applications include cooking heating and electricity generation.
2. **Biomass Utilisation** – Biomass utilisation involves converting organic materials into energy. This process can produce green hydrogen. It contributes to sustainability by reducing waste and lowering carbon emissions.
3. **Floating Solar Panels** – Floating solar panels are installed on water bodies. They generate renewable energy without occupying land. This innovative method is being explored for hydrogen production.
4. **International Energy Agency** – The International Energy Agency provides data on energy markets. It forecasts trends in production and consumption. Its reports guide policy decisions in energy sectors globally.

ARROW -3 MISSILE

Israel's Defence Ministry is enhancing military collaboration with Germany. The focus is on deploying the Arrow-3 missile interception system in Germany by 2025. This initiative follows recent geopolitical tensions in Europe, particularly due to Russia's actions in Ukraine. Increased defence spending across Europe has prompted this partnership.



Arrow Missile System Overview

The Arrow missile system is designed to intercept long-range ballistic missiles. It consists of two main components – Arrow-2 and Arrow-3 interceptors. The system was developed through a collaboration between Israel and the United States. Israel Aerospace Industries (IAI) serves as the prime contractor for this project.

ZOLGENSMA AND SPINAL MUSCULAR ATROPHY (SMA)

Spinal Muscular Atrophy (SMA) is a rare genetic disease affecting muscle function. In India, treatment options are limited, mainly due to high costs. The gene therapy drug, Zolgensma, costs around 16 crore rupees. Despite this, some families are finding ways to access treatment.

About Spinal Muscular Atrophy (SMA)
SMA is a genetic disorder that leads to the loss of motor neurons in the spinal cord. This results in muscle weakness and atrophy. Symptoms often appear in infancy. Children may struggle with basic movements like lifting their heads or crawling. Early diagnosis is crucial for effective treatment.

About Zolgensma

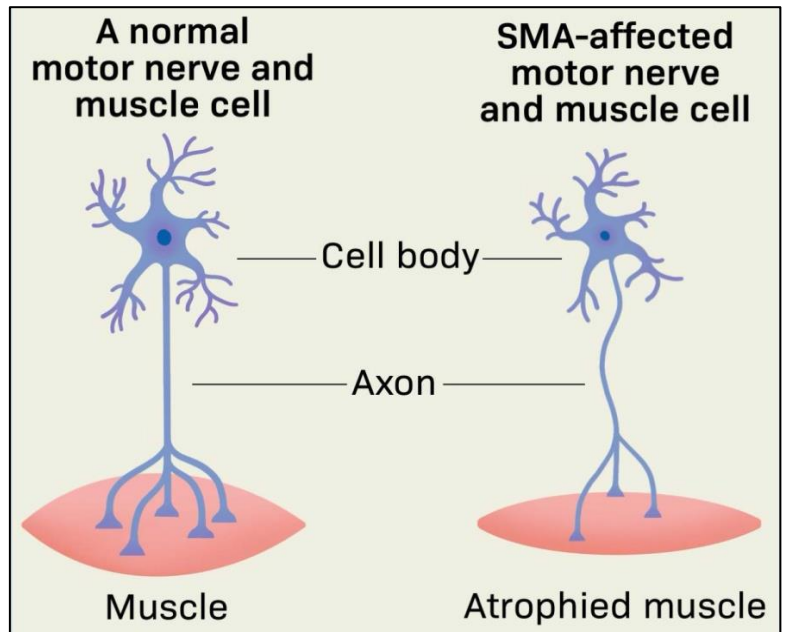
Zolgensma (onasemnogeneaparvovec-xioi) is a revolutionary gene therapy for SMA. It addresses the root cause by replacing the missing or defective SMN1 gene.

This therapy can improve motor function in affected children. Although it is costly, it represents hope for many families.

SMA is not as rare as once thought. The global prevalence is estimated at 1 in 8,000 births. Increased awareness is crucial. About SMA can lead to earlier diagnosis and treatment, improving outcomes for affected children.

Challenges in Accessing Treatment

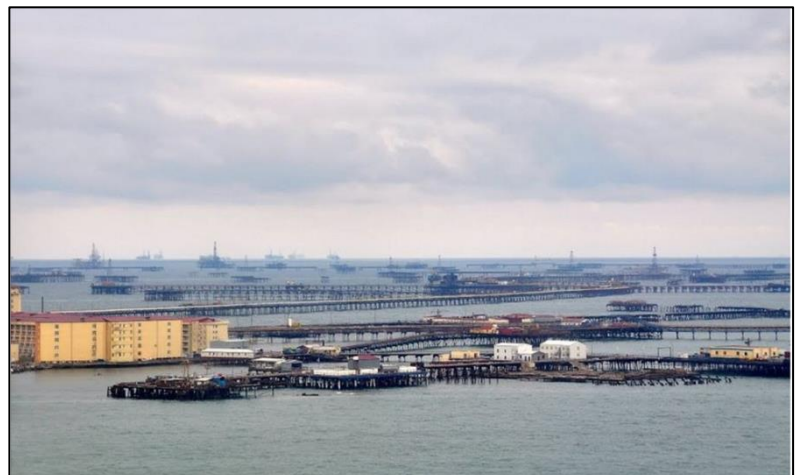
The high cost of Zolgensma poses an important barrier for many families in India. Limited access to healthcare facilities equipped to administer this treatment further complicates the situation. Crowdfunding and community support are vital for families seeking this life-saving therapy.



NEFTDASLARI

NeftDaslari, also known as Oil Rocks, is the world's oldest offshore oil platform. Located about 100 kilometers from Baku, Azerbaijan, it has been a focal point of intrigue for decades.

As the COP29 climate conference approaches, discussions around its environmental impact and future are becoming increasingly relevant.



Historical Background

Constructed in the late 1940s during the Soviet era, NeftDaslari began as a simple drilling rig. Over time, it evolved into a sprawling network of oil wells and production sites. The platform features over 100 miles of bridges connecting various structures. At its height, it housed more than 5,000 workers.

Current Workforce and Operations

Today, the workforce at NeftDaslari has dwindled to fewer than 3,000 employees. These workers operate on a 15-day rotation, managing the platform in an environment increasingly affected by the sea. Oil production has declined, now averaging under 3,000 tonnes per day.

Environmental Concerns

NeftDaslari has faced serious environmental issues. Pollution and oil spills in the Caspian Sea have raised alarms. MirvariGahramanli, head of the Oil-Workers Rights Protection Organisation, has brought into light issues such as untreated wastewater and oil discharge.

The state-run oil company, SOCAR, has promised to address these problems and take administrative action against polluters.

Impact on Azerbaijan's Oil Industry

As production declines, NeftDaslari's role in Azerbaijan's oil industry is diminishing. Once a powerhouse, it now represents a fraction of the country's oil output. The platform's significance is fading, prompting discussions about its future.

Experts suggest that NeftDaslari could transition from an oil production site to a tourist attraction or museum. This would honour its historical importance in offshore oil exploration. Filmmaker Marc Wolfensberger believes the platform holds potential beyond oil.

NeftDaslari as a Symbol

With COP29 approaching, NeftDaslari serves as a powerful symbol of the fossil fuel industry's environmental costs. Its ongoing decline raises questions about the future of offshore oil and the need for sustainable practices.

PMLA

The Supreme Court recently held that Section 197(1) of the Code of Criminal Procedure (CrPC) that mandates prior sanction from the government to take cognizance of an offence against public servants will apply to the Prevention of Money Laundering Act (PMLA) too.

Background: -

- Supreme Court said this while upholding the Telangana High Court decision, setting aside a trial court order taking cognizance of the complaint against IAS officers facing money laundering charges.

Key takeaways

- Section 197 (1) says, "When any person who is or was a judge or magistrate or a public servant not removable from his office save by or with the sanction of the government, is accused of any offence alleged to have been committed by him while acting or purporting to act in the discharge of his official duty, no court shall take cognizance of such offence except with the previous sanction".

- ED had 2 arguments in court. First one of the accused cannot be considered public servant. Secondly, ED contended that in view of Section 71 of the PMLA, its provisions have an overriding effect over the provisions of the other statutes, including the CrPC.
- The court did not agree with ED saying that first condition as required under Section 197(1), is satisfied in the case of both the respondents as they are civil servants. Also, the acts alleged against them are related to the discharge of the duties entrusted to them and thus the second condition for the applicability of Section 197(1) also stands satisfied.
- The ruling pointed out that Section 65 of PMLA makes the provisions of the CrPC applicable to all proceedings under the PMLA, provided the same are not inconsistent with the PMLA provisions.

Additional Information

- The PMLA lays down stringent standard for granting bail. Section 45 of the PMLA is a 'negative' provision – which bars courts from granting bail unless the accused can prove that there is no "prima facie" case against them, and that they will not commit any offence in the future.
- The first challenge to PMLA was against the alternate criminal law system that the PMLA creates since the ED is kept outside the purview of the Code of Criminal Procedure (CrPC). The ED is not considered 'police', and hence does not follow the provisions of CrPC for searches, seizures, arrests, and attachment of properties.

FOOD AND AGRI SYSTEM REPORT

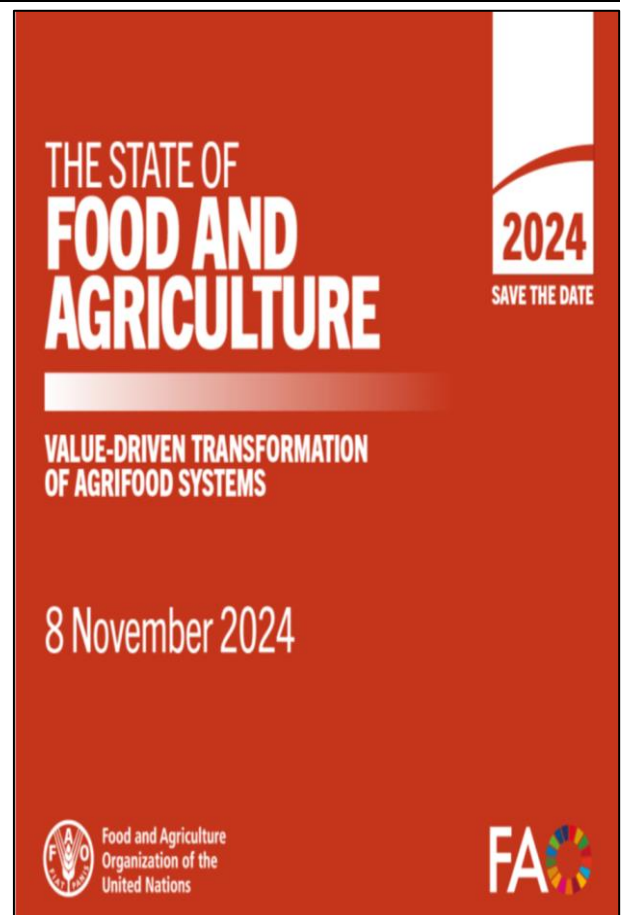
Report emphasizes on value-driven transformation of agri- food systems and builds on the estimates of the previous edi- tion on global hidden costs of agrifood systems (journey of food from farm to table). Hidden cost refers to external costs (i.e., negative externalities) or economic losses triggered by other market or policy failures.

Key findings of the report

Hidden Costs: Industrial and diversifying agrifood systems contribute maximum to global quantified hidden costs (around 5.9 trillion 2020 PPP dollars), dominated by health hidden costs linked to non-communicable diseases.

Unhealthy dietary patterns (like low intake of whole grains, high intake of sodium, etc.) account for 70% of all quantified hidden costs.

Other contributing factors include: Social costs (due to undernourishment and poverty); environmental costs (emission of greenhouse gases, etc.).



India-related findings: India's total hidden costs stands around \$1.3 trillion annually (3rd largest after China and the USA), largely driven by unhealthy dietary patterns.

Major Recommendations on transforming the Agrifood value chains :

In industrial agrifood systems (Long value-chains with high urbanization): Upgrade food-based dietary guidelines to an agrifood systems approach, mandatory nutrient labels and certifications, and information campaigns, etc.

In traditional agrifood systems (Short value-chains with low urbanization): Complement conventional productivity-enhancing interventions with environmental and dietary levers to avoid the increase in environmental footprint.

India's Initiatives to reform Agrifood Systems

Sustainable Farming Practices: Parampragat Krishi Vikas Yojana (PKVY), Per Drop More Crop (PDMC), National Bamboo Mission (NBM), etc.

Agricultural Infrastructure: Agriculture Infrastructure Fund (AIF); Agricultural Marketing Infrastructure (AMI) scheme, etc.

Boosting Farmers' Welfare: Pradhan Mantri KisanSamman Nidhi (PM-KISAN); Formation and Promotion of Farmer Producer Organizations (FPOs), etc.

RIGHT OF PERSONS WITH DISABILITIES

A 3-Judge bench of the Supreme Court in RajiveRaturi vs. UoI&Ors. case confirmed that disabled persons' right to access environments, services and opportunities is an essential human and fundamental right.

The judgement is based on a report submitted by the Centre for Disability Studies, NALSAR University of Law and upholds the social model of disability.

Social model of disability focuses on social change for inclusion and equality of PwDs by removing social barriers preventing their full participation.

Issues faced by PwDs

Accessibility barriers: Lacunae in accessibility measures in courts, prisons, schools, public transport, etc.

Intersectionality and compounded discrimination: Overlap of multiple disabilities like caste, gender etc. with disabilities faced by PwDs compounds discrimination and marginalization.

Inconsistency in legal framework: RPwD Act, 2016 requires mandatory compliance with a set of non-negotiable rules whereas, Rule 15 under RPwD Rules, 2017 prescribes only self-regulatory guidelines.

Key Highlights of the Judgment

Rule 15(1) ultra vires the scheme and legislative intent of mandatory compliance of the RPWD Act.

Court listed principles of accessibility to be considered - Universal design, Comprehensive inclusion across Disabilities, Assistive Technology Integration and Stakeholder consultation.

Two-pronged approach: Ensuring accessibility in existing institutions/activities and transforming new infrastructure and future initiatives.

Initiatives for Accessibility for PwDs

Rights-based approach: Right of Persons with Disabilities Act, 2016 giving effect to the United Nations Convention on the Rights of Persons with Disabilities.

Article 9 of the Convention on the Rights of Persons with Disabilities.

Accessible India Campaign (Sugamya Bharat Abhiyan) Important Judicial Pronouncements

State of Himachal Pradesh v. Umed Ram Sharma (1986): Inclusion of right to accessibility under Right to Life (Article 21).

Disabled Rights Group v. Union of India (2017): Directions to ensure reservation of seats in educational institutions for PwDs

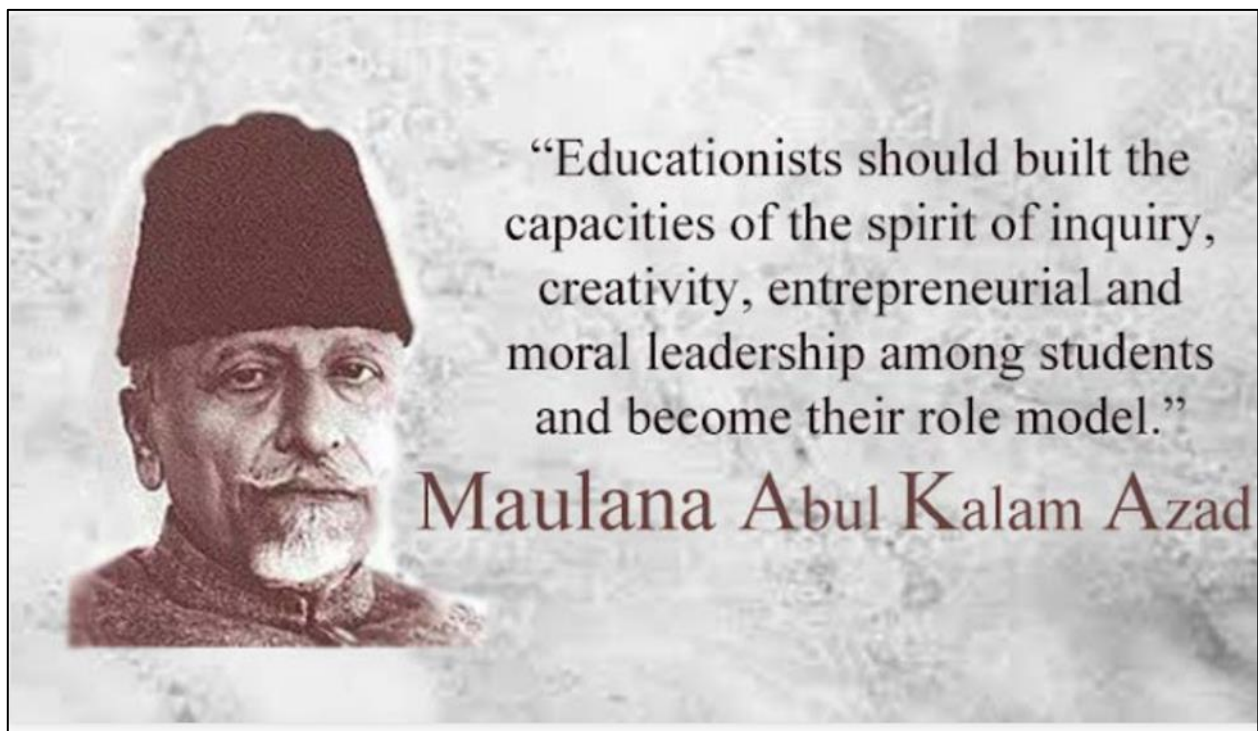
MAULANA ABUL KALAM AZAD

National Education Day honoring the birth anniversary of Maulana Abul Kalam Azad is celebrated on November 11 (since 2008).

About Maulana Abul Kalam Azad

Born in Mecca, Saudi Arabia, he was a noted educationist, polyglot.

He served as the first education minister of independent India from 1947-1958.



Key Contributions

Served as the President of the Indian National Congress in 1923 (Delhi special session) and 1940 (Ramgarh).

Served as the President of All-India Khilafat Committee during the Khilafat Movement (1920-24).

Participated in the Dandi March (1930) and the Quit India Movement (1942).

Was a member of Constituent Assembly from the United Provinces.

Played role in establishing institutions like Indian Council for Cultural Relation; University Grants Commission; etc.

Rewards and Recognition: Awarded Bharat Ratna (1992), posthumously. Values: Patriotism, Integrity, Tolerance, etc.

BULLDOZER JUSTICE

The Supreme Court recently underscored that it is unconstitutional to demolish a person's property without adhering to the due process of law, simply on the grounds of their alleged involvement in a crime.



Background: -

- The court issued a slew of guidelines to prevent illegal and retributive bulldozing of homes and private properties of accused persons by States.
- Earlier, the top court had extended its interim order halting demolitions across the country without express permission except for encroachments on public land or unauthorised structures.

Key takeaways

- Over the last few years, there has been an advent of communal and retributive bulldozing of homes and private properties of accused persons by States. Demolitions have been justified on account of action against encroachment or under the pretext of unauthorised construction.
- What began with the bulldozer demolitions in Delhi's Jahangirpuri following communal violence rapidly escalated and spread to other parts.

The violence that ensued in Nuh, Haryana, due to a clash between two religious groups in 2023, ended with the local administration demolishing homes. Similarly, communal riots in Khargone, Madhya Pradesh, led to the demolition of houses and businesses owned by Muslims, who were deemed to be “alleged rioters.”

- According to a 2024 estimate by the Housing and Land Rights Network (HLRN), authorities at the local, State, and central levels demolished 153,820 homes in 2022 and 2023, displacing over 738,438 individuals across rural and urban areas of the country.

Rule of law

- Court underscored that exercise of arbitrariness by government officials strikes at the very heart of the “rule of law” and undermines public trust.
- Court cautioned against the executive usurping the judiciary’s role by preemptively punishing the accused.
- Notably, the judges acknowledged that demolition drives not only target the alleged perpetrators of an offence but also impose a form of “collective punishment” on their families by destroying their place of dwelling.
- Justice Gavai pointed out that this offends the constitutional guarantee of the right to shelter under Article 21.

Directives issued

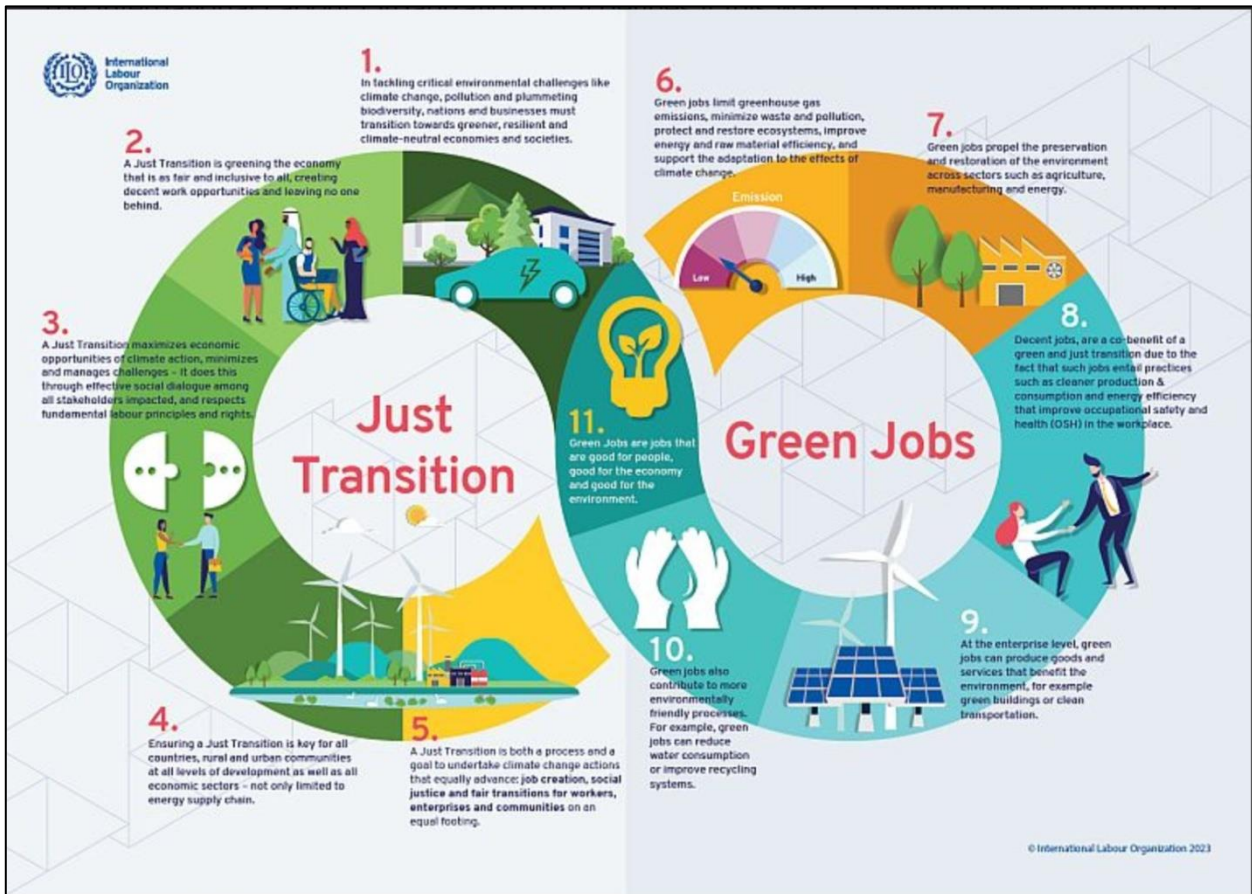
- The top court issued guidelines aimed at fostering greater institutional accountability. However, it clarified that these directives would not apply to unauthorised constructions on public lands – such as roads, water bodies, or forested areas – or to demolitions mandated by a court.
- To curb potential impunity, the judges specified that officials responsible for carrying out illegal demolitions would face disciplinary action, contempt charges, and monetary penalties.
- The court mandated that no demolition drive should proceed without a 15-day prior notice. Such notice must provide details of the nature of the unauthorised construction, details of specific violations and grounds warranting such a coercive action.
- Further, the designated authority has to extend an opportunity of hearing to the owner.
- The minutes of such a meeting are directed to be recorded with the final order detailing the contentions of the parties including whether the unauthorised construction is compoundable, or whether there is a need to undertake demolition of the entire structure.
- Additionally, the concerned authority must prepare a detailed inspection report, signed by at least two witnesses, before proceeding with the demolition drive.
- The authorities should ensure that the entire demolition process is videographed. Following this, a detailed demolition report must be prepared, specifying the names of officials and personnel involved. The report is to be placed before the Municipal Commissioner and uploaded on a digital portal to ensure public accessibility.

COP VS TRADE

Reacting strongly to suggestions that principles of ‘Just Transition’ be used to draw up climate action plans in the future, India said “prescriptive top-down approaches” were violative of provisions of the UN Framework Convention on Climate Change and the Paris Agreement.

Background: -

- Insisting that development was the “overriding priority” of countries in the Global South, India said if the developed countries indeed wanted to discuss ‘just transition’, they should be willing to discuss it in the broader sense including the inequities in the global climate discourse, and not just in the NDCs and the National Adaptation Plans (NAPs).



Key takeaways

- In the climate change context, ‘just transition’ refers to a shift to low-carbon economies in a fair, equitable and inclusive manner which does not put any segment of people at any particular disadvantage.
- India was not objecting to the principles of just transition, but the fact that countries were being asked to prepare their climate action plans in a certain way.
- Under the Paris Agreement, the climate action plans, called Nationally Determined Contributions (NDCs), are supposed to be “nationally-determined” and not forced upon by others.
- India said provision of climate finance was one of the most critical enablers for just transition, and developed countries had failed in their responsibility of putting adequate money on the table.
- Intellectual property rights on green technologies are hindering free and scalable access for developing countries, India stated.
- India raised the issue of unilateral coercive measures restricting trade flows and denying countries access to equitable development opportunities.
- Though it did not single it out, India was referring to the Carbon Border Adjustment Mechanism (CBAM) introduced by the European Union.
- CBAM seeks to impose a tax on a certain class of goods imported in the EU, if the production of those goods had an emission footprint higher than the emission standards in EU.
- Ostensibly a step to control emissions, CBAM has the effect of making the goods from developing countries like China or India non-competitive in the European markets. The developing countries complain that the costs of emissions reductions are in a way getting shifted to them.

CARBON BORDER ADJUSTMENT MECHANISM (CBAM)

BASIC countries have been complaining against the Carbon Border Adjustment Mechanism (CBAM) introduced by the EU.

Background:

- On the opening day of the COP29 meeting, China, on behalf of the BASIC countries, had moved a proposal to include a discussion on “unilateral restrictive trade measures” – without mentioning CBAM – in the formal agenda of the COP meeting.

Key takeaways

- The BASIC countries (Brazil, South Africa, India, and China) are a group of four large, newly industrialized nations that formed an agreement on November 28, 2009.
- Purpose: The BASIC countries were formed to act jointly at international climate change negotiations, particularly at the Copenhagen Summit (COP15).
- They aimed to present a united front on climate change issues and advocate for the interests of developing nations.



Key Features:

- Common Stance:** The BASIC countries share a common stance on reducing greenhouse gas emissions and raising funds to combat climate change.
- Copenhagen Accord:** The group played a crucial role in brokering the Copenhagen Accord with the United States.
- UNFCCC:** The BASIC countries represent a collective voice at the Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC).

Significance:

- Geographical and Population Coverage:** Together, the BASIC countries cover about one-third of the world’s geographical area and nearly 40% of the world’s population.
- Economic Influence:** These countries are emerging economic powerhouses and wield significant influence in international forums.
- Climate Change Advocacy:** The BASIC countries advocate for the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC), which emphasizes that developed nations should take greater responsibility for climate change mitigation due to their historical emissions.

ONE DAY ONE GENOME INITIATIVE

The Department of Biotechnology (DBT) and Biotechnology Research and Innovation Council (BRIC) have launched the 'One Day One Genome' initiative.

Background:

- The initiative is led by BRIC in collaboration with the National Institute of Biomedical Genomics (NIBMG), an institute under the DBT.



Key takeaways

- The One Day One Genome Initiative is a transformative project launched by the Department of Biotechnology (DBT) and the Biotechnology Research and Innovation Council (BRIC) to unlock India's vast microbial potential.

Objectives:

- **Microbial Exploration:** To explore and showcase India's unique microbial species and their roles in agriculture, the environment, and human health.
- **Genomic Data:** To make genomic data freely available to the public, fostering scientific collaboration and community engagement.
- **Innovation:** To stimulate discussions, inspire research, and drive innovations with real-world applications.

Key Features:

- **Genome Sequencing:** The initiative involves genome sequencing of bacterial species isolated in India, revealing their genetic blueprint and potential applications.
- **Public Accessibility:** Fully annotated bacterial genomes, along with graphical summaries, infographics, and genome assembly details, will be made publicly available.

Significance:

- **Environmental Protection:** Research in this field can lead to better protection and management of the environment.
- **Agricultural Development:** It can contribute to the development of agriculture by enhancing nutrient cycling, soil fertility, and pest control.
- **Human Health:** The initiative can improve human health outcomes by supporting digestion, immunity, and mental health.

4B MOVEMENT

In the aftermath of Donald Trump's victory, the 4B movement, which originated in South Korea, became one of the most searched topics online. Many American women took to social media to announce that they are adopting it in their lives.

Background: -

- The movement started in South Korea around 2016, when a woman was murdered in a Seoul subway station. Her killer said he had "felt ignored by women". This was also the time when multiple women in South Korea reported having been filmed by spycams.
- This movement belongs to the strain of radical feminism that believes that heterosexual relationships at their heart remain structures of oppression, and women need to break free of them to be truly independent and happy so they adopt "Four Nos" – no dating, no sex, no marriage, and no childbearing.

Key takeaways

- 4B stands for four bis, or no in the Korean language: bihon, bichulsan, biyeonae, and bisekseu, meaning the refusal of (heterosexual) marriage, childbirth, romance, and sexual relationships, respectively.
- In the Indian context, consider this – marriage often involves dowry, the burden of running the married home and raising the child is disproportionately on women, many women are penalised at their workplaces for motherhood duties, and intimate partner violence is common.
- While women are supposed to endure all this for the sake of love and duties, there are very little expectations from men.
- The proponents of the 4B movement believe that unless men work more actively for a gender-just society, women should not reward them with children, love, and emotional and other forms of labour.
- Essentially, the movement wants women to imagine more roles for themselves than just wives and mothers.
- Women not bogged down by domestic duties and not being controlled by a man can focus on their own aims, hobbies, comfort, and happiness, the movement believes. It also advocates women building strong solidarities with other women.

Why is it gaining popularity in America now?

- The US Supreme Court overturned Roe v Wade in 2022, taking away the constitutional right to abortion. As of November this year, 21 states have banned abortion or restricted the procedure earlier in pregnancy than what was granted in Roe v Wade.
- After the election, pro-Trump social media influencers trended a misogynist campaign called “Your body, My choice” which normalises rape and forced pregnancy. Undoubtedly, the slogan was an antithesis of the feminist slogan “My body, My Choice”. The 4B is a response to the happenings.

Why do some non-sexist people also oppose 4B?

- Some point out that just cutting off contact with men is not a solution – this puts the onus of staying away from men on the woman, instead of demanding change and accountability from men.
- Believing men as incapable of reform can play into the ‘boys will be boys’ school of thought, it is argued. Meaningful change can come by raising awareness and a sense of responsibility among men, and this can happen by pushing back from within relationships.
- Others point out that such totalising movements can be exclusionary of transgender rights. Another criticism is that these movements rob women of choice: one can be frustrated with inequality but still want children, or in the case of heterosexual women, sexual pleasure.

SUDAN CRISIS

Russia vetoed a UN resolution on Monday calling for an immediate ceasefire in the war between Sudan’s military and paramilitary forces and delivery of humanitarian aid to millions in desperate need.

Background: -

- Sudan plunged into conflict in April 2023, when long-simmering tensions between its military and paramilitary leaders erupted in the capital, Khartoum, and spread to other regions, including western Darfur, which was wracked by bloodshed and atrocities in 2003.

Key takeaways

- Sudan is a country located in northeastern Africa, bordered by Egypt to the north, the Red Sea to the northeast, Eritrea and Ethiopia to the east, South Sudan to the south, the Central African Republic to the southwest, Chad to the west, and Libya to the northwest.
- Capital: Khartoum
- Major Rivers: The Blue Nile and the White Nile, which converge in Khartoum.
- Colonial Era: Sudan was jointly administered by Egypt and Britain from 1899 until its independence in 1956.
- Independence: Sudan gained independence from Anglo-Egyptian rule in 1956.
- Civil Wars: Sudan experienced two prolonged civil wars, the first from 1955-1972 and the second from 1983-2005.
- South Sudan Independence: South Sudan seceded from Sudan in 2011, becoming an independent country



Economy:

- Main Industries: Agriculture, livestock, oil, and minerals.
- Challenges: Sudan faces economic challenges, including inflation, unemployment, and ongoing conflicts.

Culture:

- Languages: Arabic is the official language, but many local languages are also spoken.
- Religion: Islam is the dominant religion, with Christianity and indigenous beliefs also present.

Additional Information : Conflict in Darfur

- The War in Darfur, also nicknamed the Land Cruiser War, was a major armed conflict in the Darfur region of Sudan that began in 2003 when rebel groups began fighting against the government of Sudan, which they accused of oppressing Darfur's non-Arab population.
- The government responded to attacks by carrying out a campaign of ethnic cleansing against Darfur's non-Arabs. This resulted in the death of hundreds of thousands of civilians and the indictment of Sudan's president, Omar al-Bashir, for genocide, war crimes, and crimes against humanity by the International Criminal Court.

MITIGATION WORK PROGRAMME (MWP)

At the Mitigation Work Programme (MWP), India said that developed countries have historically contributed the most to greenhouse gas emissions.

Background:

- India said developed countries had "continuously shifted goals, delayed climate action, and consumed a highly disproportionate share of the global carbon budget."


Key takeaways

- The Mitigation Work Programme (MWP) is an initiative established by the United Nations Framework Convention on Climate Change (UNFCCC) to help countries scale up their mitigation ambition and implementation to achieve the goals of the Paris Agreement.
- The MWP was created two years ago at COP27 in Sharm el-Sheikh, Egypt.

Objectives:

- **Scale Up Mitigation:** The primary goal is to scale up mitigation efforts to limit global warming to well below 2 degrees Celsius, with an aspirational target of 1.5 degrees Celsius.
- **Support National Contributions:** Assist countries in implementing and enhancing their Nationally Determined Contributions (NDCs).
- **Foster Innovation:** Generate discussions that are facilitative, constructive, innovative, and catalytic.
- **Inclusive Participation:** Ensure diverse participation from policymakers, stakeholders, and non-Party stakeholders.

Key Features:

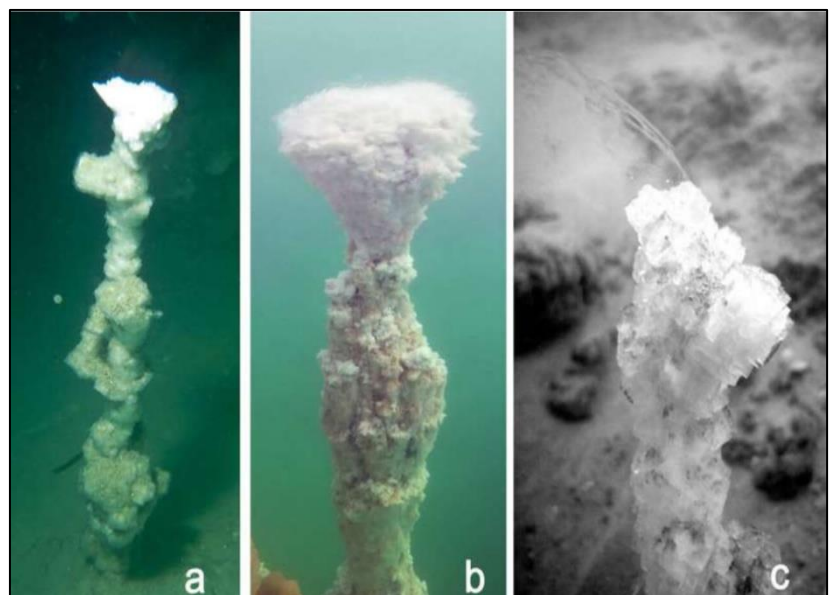
- **Global Dialogues:** Conduct annual global dialogues and investment-focused events from 2023-2026 to discuss mitigation opportunities and challenges.
- **Thematic Workshops:** Host thematic workshops to share best practices, lessons learned, and overcome barriers to scaling up mitigation action.
- **Sectoral Approaches:** Consider sectoral approaches to identify cost-effective and scalable mitigation opportunities.
- **Regional Focus:** Address regional approaches to equity, sustainable development, and synergies with adaptation.

SALT CHIMNEYS FORMED AT DEAD SEA

Researchers have discovered meter-high chimneys on the floor of the Dead Sea. These are formed by the spontaneous crystallization of minerals from groundwater with an extremely high salt content flowing up out of the lake floor, the report in journal *Science of the Total Environment*.

Background: -

- Discovered for the first time, these vents are an important early warning indicator for sinkholes. These subsidence craters form in the area surrounding the Dead Sea and pose a significant hazard to the population.



Key takeaways

- The Dead Sea is a landlocked salt lake bordered by Jordan to the east and Israel and Palestine to the west.
- It is located in the Jordan Rift Valley, part of the Great Rift System.
- **Salinity:**
 - The Dead Sea is one of the saltiest water bodies on Earth, with a salinity of about 34%.
 - The high salinity prevents most aquatic life, hence the name "Dead Sea."

- **Lowest Point:** It is the lowest point on Earth's surface on land, sitting at approximately 430 meters below sea level and still dropping.
- **Unique Properties:**
 - The lake is rich in minerals, especially magnesium, bromide, and potassium, making it a hub for therapeutic and cosmetic products.
 - The high density of water allows people to float effortlessly.
- **Formation:**
 - Formed due to tectonic activity in the Jordan Rift Valley.
 - Fed mainly by the Jordan River, but with no outlets, leading to high evaporation rates.
- **Environmental Concerns:**
 - The Dead Sea is shrinking rapidly, with water levels dropping by over 1 meter annually due to diversion of the Jordan River and mineral extraction.
 - Sinkholes are increasingly forming in the region as a result of the declining water levels.
- **Cultural and Historical Significance:**
 - Mentioned in several historical and religious texts, including the Bible.
 - Nearby are significant archaeological sites, such as the Masada Fortress and Qumran Caves (where the Dead Sea Scrolls were discovered).

LAKE KARIBA

Lake Kariba is at near-record low, causing daily power cuts and devastating two African economies.



Background: -

- A punishing drought has drained Lake Kariba, raising the prospect that the Kariba Dam, which powers the economies of Zambia and Zimbabwe, may have to shut down for the first time in its 65-year history.

Key takeaways

- Lake Kariba is the world's largest man-made lake and reservoir by volume.
- It is located on the border between Zambia and Zimbabwe in central Africa.
- Formation:
 - Kariba Dam: The lake was created by damming the Zambezi River at the Kariba Gorge between 1958 and 1963.
 - Purpose: The dam was built to provide hydroelectric power to Zambia and Zimbabwe.
- Biodiversity: The lake supports a vibrant ecosystem, including fish species like the kapenta, Nile crocodiles, and hippopotamuses.
- Tourism: The area around Lake Kariba is a popular destination for tourists, offering activities like fishing, boating, and wildlife viewing.

POORVIPRAHAR

The Indian Army is conducting exercise PoorviPrahara from the 10th to the 18th of this month in the forward areas of Arunachal Pradesh.

Background: -

- According to the Indian Army, the exercise brings together a wide spectrum of cutting-edge military platforms and systems, showcasing the country's advancements in modern warfare technology.

Key takeaways

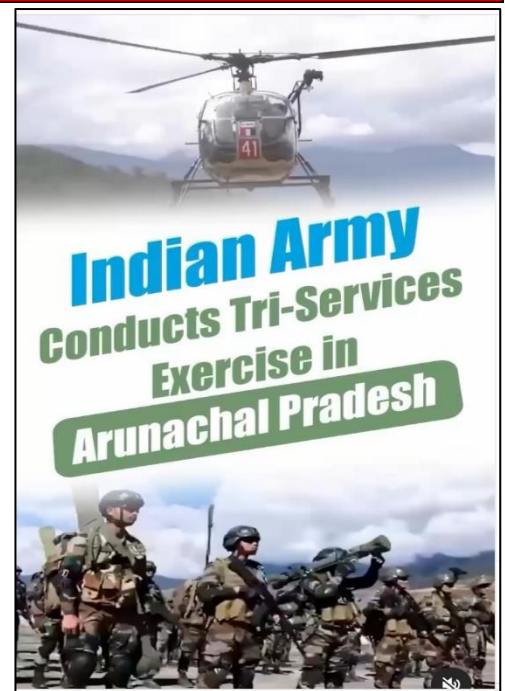
- Exercise PoorviPrahara is a high-intensity tri-service military exercise conducted by the Indian Armed Forces.
- The exercise aims to enhance the joint combat effectiveness of the Army, Navy, and Air Force in executing integrated joint operations in challenging terrains.
- Dates: November 10 to November 18, 2024.
- Participants: Army, Navy, and Air Force.

Objectives:

- Inter-Service Coordination: Improve coordination and synergy between the three services.
- Operational Readiness: Enhance the operational readiness of the forces.
- Technological Integration: Integrate advanced military technology and joint command structures.
- Common Operating Picture (COP): Develop a refined COP through joint control structures for better coordination.

Significance:

- Strategic Deterrence: Bolster India's strategic deterrence capabilities.
- Modern Warfare: Showcase India's advancements in modern warfare technology.
- Theaterisation: Pave the way for the theaterisation of command, enhancing the ability to execute seamless multi-domain operations.



SUSTAINABLE FARMING

The Indian agricultural export is valued at \$53.1 billion in 2022-2023, up from \$8.7 billion in 2004-2005, a six-fold increase in less than two decades.

But the rapid surge in exports poses multiple challenges related to sustainability. Tea and sugar, two prominent commodities, offer good examples to illustrate the problems herein.

Background: -

- For an economically developing economy like India, exports play a significant role in strengthening the economy by increasing revenue, foreign exchange, and transactional options.



Need for Sustainable Agriculture and Crop Diversification

Key takeaways

Tea

- India is the world's fourth-largest tea exporter and second largest producer and makes up 10% of global exports. The total value of Indian tea exports for 2022-2023 was \$793.78 million.
- There is growing evidence of stresses being imposed on production systems across the tea value chain. Three major challenges in the tea industry are the management of human-wildlife interactions, burgeoning chemical use, and labour concerns.
- More than half of tea plantation workers are women and they are often underpaid.
- There is a critical need for better management practices in and around tea estates in India, stricter monitoring of the maximum residue limits for pesticides, and better enforcement of existing labour regulations.

Sugar

- India is the world's second-largest sugar producer, with 34 million metric tonnes of production, about a fifth of the global production. India's sugar exports grew by 291% from \$1,177 million in FY 2013-2014 to \$4,600 million in FY 2021-22 and 64.90% in 2021-2022.
- About 50 million farmers depend on sugarcane cultivation in India. An additional half million depend on sugar and allied factories.
- Sugarcane is well-known for requiring a lot of water to cultivate. On average, 1 kg of sugar requires between 1,500 and 2,000 kg of water.
- Natural ecosystems like grasslands and savannahs in these states have also been converted to plant sugarcane. Along with the ensuing biodiversity loss, this change has increased the pressure on water resources and increased the need for alternate cropping patterns.

- The social dynamics of sugar industries narrate another story. Media reports have unearthed poor working conditions, including long working hours. Rising temperatures in peninsular India acts as a threat multiplier. Workers trapped in vicious debt cycles incur even more stress.

Millets

- Even as the sustainability challenges of these commodities persist, there are some others that promote long-term ecological and socio-economic sustainability.
- One prime example is millets, a sustainable option with which to increase domestic consumption as well as exports. Millets are resilient to harsh conditions and don't require more inputs to weather resource constraints. They preserve soil health and ensure nutritional security.
- In FY 2022-2023, the country shipped 169,049.11 metric tonnes of millets and millet-related products worth \$75.45 million. The rising demand highlights their potential as a sustainable agricultural commodity contributing to growth and environmental resilience.
- Agricultural production in India lives in a unique context: a large domestic consumption base and now a rapidly growing export base.
- These dynamics may benefit producers but they could also yield a paradox: whereby increasing dependencies between different actors in the supply chain compromise ecological and social sustainability concerns.

AFSPA

The Union Home Ministry on Thursday reimposed the Armed Forces (Special Powers) Act (AFSPA) in Manipur, declaring six police station limits in five districts “disturbed areas”, in the wake of the ethnic violence in the State.

Background: -

- The AFSPA was withdrawn from these areas in April 2022 by the Manipur government as the security situation improved; this time, Home Ministry has issued notification.

WHAT IS ARMED FORCES SPECIAL POWERS ACT?

<p>➤ Introduced in 1958, AFSPA confers on members of the armed forces special powers to rein in suspects in areas declared “disturbed” on account of insurgent activities or similar threats. It has been in force in Manipur since 1980, and the alleged excesses committed under it are the reasons why activist Irom Sharmila has been on a hunger strike since 2000.</p> <p>WHAT ARE SPECIAL POWERS? AFSPA allows any commissioned officer, warrant officer and non-commissioned officer – or any other</p>	<p>person of equivalent rank – to:</p> <ul style="list-style-type: none"> ➤ Fire upon or use force against any person acting ‘in contravention of any law for the time being in force in the disturbed area’ ➤ Arrest suspicious people without warrant ➤ Destroy any structure suspected to house an arms dump, shelter from which armed attacks are made or are likely to be made ➤ Conduct searches without warrants for evidence, to recover a wrongfully confined person or property or arms or explosives ➤ AFSPA bars prosecution or proceedings – except with Centre’s nod – against personnel for action committed while exercising powers under the Act
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Key takeaways

- The Armed Forces Special Powers Act (AFSPA) is a law that grants special powers to the Indian armed forces in regions classified as “disturbed areas.” It was enacted to maintain public order in areas experiencing insurgencies, militancy, or internal disturbances.
- First enacted: In 1958, the AFSPA was originally introduced to address insurgencies in the Northeast region, particularly in Nagaland.

- Extension to other areas: Over time, the AFSPA was extended to other parts of the country, including Jammu & Kashmir (1990) and various Northeastern states.
- Power to Declare Areas as Disturbed: The Act allows the central or state government to declare an area “disturbed” if it is experiencing insurgency or conflict.
- Special Powers to the Armed Forces:
 - Search and Arrest: Armed forces personnel can arrest without a warrant, enter and search premises to make arrests or recover weapons.
 - Shoot to Kill: Armed forces can open fire if they believe someone is acting against law and order, provided that due warning has been given.
 - Protection to persons acting under Act – No prosecution, suit or other legal proceeding shall be instituted, except with the previous sanction of the Central Government, against any person in respect of anything done or purported to be done in exercise of the powers conferred by this Act.
- Currently, AFSPA is in effect in parts of Nagaland, Assam, Manipur, and Arunachal Pradesh.
- Also, AFSPA remains in force in Jammu and Kashmir through the Armed Forces (Jammu and Kashmir) Special Powers Act, 1990.
- However, it was lifted from Tripura in 2015, Meghalaya in 2018 and Mizoram in the 1980s.

Sabarmati River

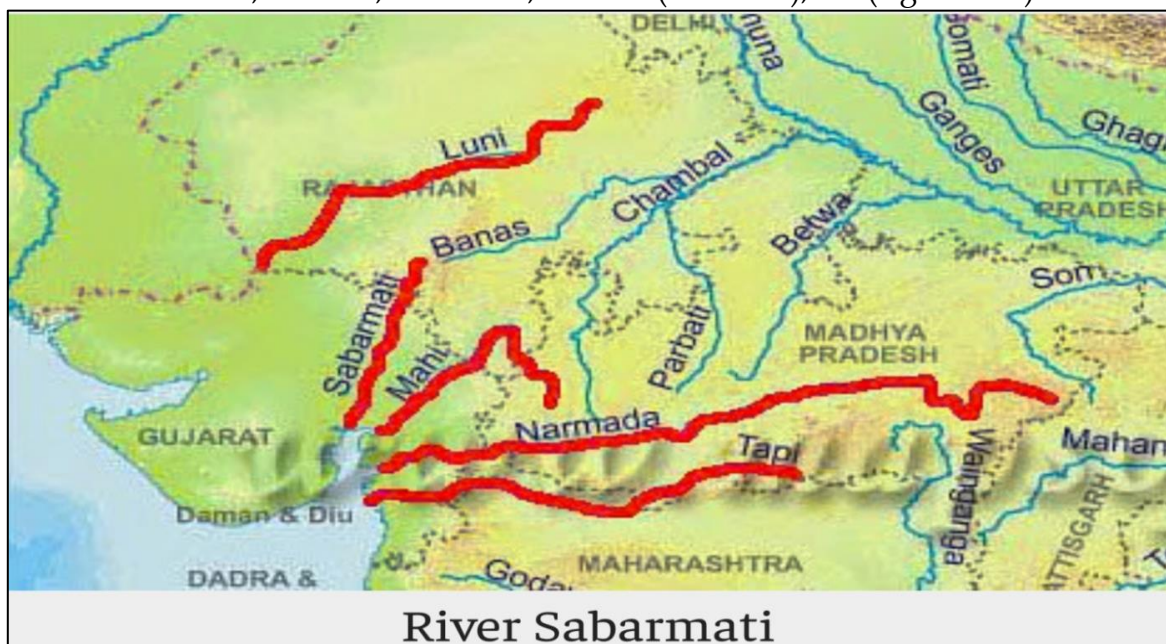
The Sabarmati Riverfront development project, which aims to transform around 38 kilometres of riverbanks from Ahmedabad to Gandhinagar across seven phases, has begun monetising its first phase, covering around 11 kilometres on either side of the river.

Background:

- The riverfront was one of the pet projects of Prime Minister Narendra Modi when he was the chief minister of Gujarat.

Key takeaways

- The Sabarmati River is one of the major west-flowing rivers in India, originating in the Aravalli Range of Rajasthan and flowing through Gujarat before emptying into the Gulf of Khambhat in the Arabian Sea.
- Tributaries: Wakal, Harnav, Hathmati, Watrak (left bank); Sei (right bank)



- Course:
 - Rajasthan: The river travels 48 kilometers (30 miles) in Rajasthan before entering Gujarat.
 - Gujarat: It flows through the states of Gujarat, passing through cities like Ahmedabad and Gandhinagar, and finally reaches the Gulf of Khambhat.
- Agriculture: The Sabarmati basin is primarily agricultural, with 74.68% of the basin area dedicated to farming.
- Monsoon-Dependent: The River is monsoon-fed, with flows dominated by the monsoon season.

INTERPOL

Bangladesh’s interim government on November 10 said it will seek Interpol’s assistance in repatriating deposed Prime Minister Sheikh Hasina from India, and other “fugitives”, to face trial for alleged crimes against humanity.

Background: -

- Interpol notices are international requests made by member countries for cooperation or alerts allowing police in member countries to share critical crime-related information.
- Interestingly, such notices can also be used by the United Nations, International Criminal Tribunals and the International Criminal Court to seek persons wanted for committing crimes within their jurisdiction.

What is Interpol?

- Full Form: International Criminal Police Organization.
- Headquarters: Lyon, France.
- Function: Facilitates international police cooperation against global crimes like terrorism, human trafficking, cybercrime, and organized crime.
- India’s Representation: Central Bureau of Investigation (CBI) acts as India’s nodal agency for Interpol.



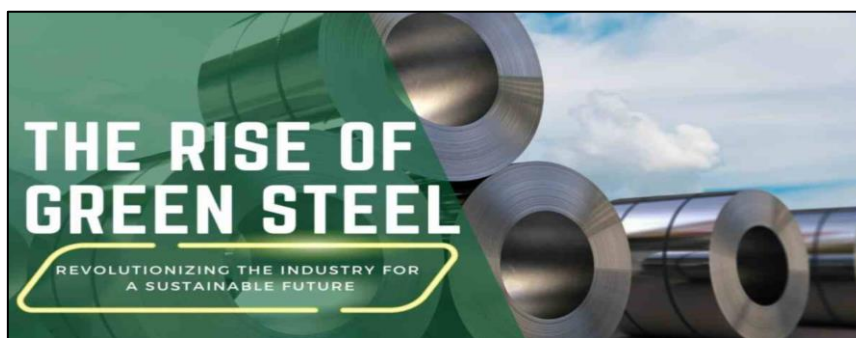
Types of Interpol Notices

- Red Notice: To seek the location and arrest of a person wanted by judicial authorities for prosecution or to serve a sentence. Example: Extradition cases.
- Blue Notice: To collect additional information about a person’s identity, location, or activities related to a crime.
- Green Notice: To warn about a person’s criminal activities, particularly if they pose a threat to public safety.

- Yellow Notice: To locate missing persons, especially minors, or to identify persons who cannot identify themselves.
- Black Notice: To seek information about unidentified bodies.
- Orange Notice : To warn about an imminent threat from objects like explosives, weapons, or criminal tactics.
- Purple Notice: To seek or provide information on modus operandi, objects, devices, and concealment methods used by criminals.
- Interpol-UNSC Special Notice: Issued for individuals and entities subject to UN Security Council sanctions, like freezing of assets, travel bans, or arms embargoes.

GREEN STEEL

India and Sweden have collaborated for over 75 years, with a focus on sustainable industrial growth. Recently, they launched the India-Sweden Industry Transition Partnership (ITP) at COP28 in Dubai, which aims to accelerate the transformation of heavy industries, particularly steel and cement.



Objectives of the ITP

The ITP seeks to reduce emissions in heavy industries, which promotes innovation and secures funding for key projects. The partnership aims to create market-based solutions for emission reductions.

Importance of Decarbonising Steel

India is the world's second-largest steel producer. Decarbonizing the steel sector is vital for environmental sustainability. It can attract global investment and position India as a leader in sustainable development.

Methods for Emission Reduction

Two main methods exist for reducing emissions in steel production. The first is transitioning from traditional blast furnaces to hydrogen-based processes. The second involves expanding electric arc furnaces (EAFs) powered by renewable energy. Increasing scrap steel recovery is also essential.

Green hydrogen is currently expensive, which is also a shortage of steel scrap for EAFs. A coordinated approach is necessary for renewable energy and metal recycling. Success hinges on aligning policy, technology, and investment.

Role of Buyers

Industries like automobiles and construction can influence emission reductions. They can choose low-emission steel and improve traceability systems. Their demand for transparency encourages smarter investments in greener steel.

Indian Initiatives for Emission Reduction

Indian steel manufacturers are improving resource efficiency and using renewable energy. They are also optimising processes to reduce emissions. Some companies have initiated pilot projects aimed at net-zero emissions.

Government Support and Roadmap

The Government of India promotes renewable energy and green hydrogen. The steel ministry's green steel roadmap includes public procurement of low-emission steel. It also offers incentives for recycling and improved financing access.

Global Coalitions and Future Prospects

LeadIT and other coalitions set standards for low-emission steel. They provide pathways for India to meet global climate goals. Investments in clean energy for the steel industry could unlock substantial economic benefits.

NEW AI DATA BANK LAUNCHED

India revealed its first Artificial Intelligence (AI) data bank, which aims to encourage innovation and enhance national security, by the Ministry of Science and Technology. The data bank will serve researchers, startups, and developers by providing essential datasets for AI solutions.



Launch Event Details

The AI data bank was launched at the 7th ASSOCHAM AI Leadership Meet 2024. Jitendra Singh, the Minister of Science and Technology, introduced the initiative. The event focused on “AI for India – Advancing India’s AI Development – Innovation, Ethics, and Governance.”

Purpose of the AI Data Bank

The data bank intends to improve national security, which enables real-time analysis of satellite, drone, and IoT data. Additionally, it supports AI applications in disaster management and cybersecurity.

AI’s Role in Various Sectors

Minister Singh brought into light AI’s transformative potential across multiple sectors. These include governance, business, healthcare, education, and space exploration. He stated AI is crucial for addressing challenges like climate change and enhancing public service delivery.

Responsible AI Use

Singh emphasised the importance of responsible AI usage. He noted that while AI is a powerful tool, it must be employed ethically. The government is committed to developing transparent AI systems that mitigate algorithmic bias and protect data privacy.

Commitment to Fairness and Access

The Minister assured that AI should empower individuals. Equal access to AI benefits is a priority, which aims to prevent divisions caused by unequal technology access.

SAMYUKT VIMOCHAN

The Indian Army conducted the annual Humanitarian Assistance and Disaster Relief (HADR) exercise, SanyuktVimochan 2024, in Gujarat on November 18-19, 2024. This exercise demonstrated India’s preparedness for disaster response. General Upendra Dwivedi, the Chief of the Army Staff, brought to light its significance.



Tabletop Exercise in Ahmedabad

The exercise commenced on November 18 in Ahmedabad and featured a tabletop exercise focused on cyclone management. Various agencies participated, including the National Disaster Management Authority (NDMA) and the Gujarat State Disaster Management Authority (GSDMA). The aim was to enhance planning and coordination for disaster relief efforts.

On the second day, a multi-agency demonstration took place at Chowpatty Beach in Porbandar. Multiple organizations, such as the Indian Army, Navy, Air Force, and Coast Guard, collaborated in a simulated cyclone scenario.

Activities included reconnaissance, rescue operations, and casualty evacuation. The exercise also covered rehabilitation strategies for affected individuals.

Focus on Indigenous Solutions

Aligned with the Atmanirbhar Bharat initiative, an industrial display showcased Indian-made disaster response technologies. This brought into light advancements in self-reliant disaster management solutions. The initiative reflects India's commitment to developing homegrown capabilities.

International Participation and Collaboration

The exercise welcomed representatives from nine countries, including those from the Gulf Cooperation Council and the Indian Ocean Region. Their involvement facilitated the exchange of expertise and best practices. This collaboration aimed to strengthen global disaster management strategies.

Recognition of Efforts

General Dwivedi praised the professionalism of all participants. He acknowledged the critical role of the Indian Armed Forces in disaster relief, including search and rescue and humanitarian aid. He expressed gratitude to the Gujarat government and industrial partners for their support.

SanyuktVimochan 2024 reinforced India's disaster response capabilities. It emphasised the philosophy of VasudhaivaKutumbakam – viewing the world as one family. The exercise contributed to international discussions on enhancing disaster relief efforts.

GLOBAL ALLIANCE AGAINST HUNGER AND POVERTY

The Global Alliance Against Hunger and Poverty was launched recently and emerged during the G20 Summit in Brazil, which aims to eliminate hunger and poverty by 2030. The FAO's Director-General, Qu Dongyu, emphasised the need for collective action, which seeks to reduce inequalities and achieve Sustainable Development Goals 1, 2, and 10.



Key Participants

The FAO is a founding member of the alliance including UN agencies, governments, financial institutions, charities, and research organisations. The FAO will lead the alliance’s support system from its headquarters in Rome.

Focus Areas

The alliance has identified six key focus areas for immediate action. These include school meal programmes, cash transfer schemes, support for smallholder farming, social and economic inclusion initiatives, maternal care programmes, and improved water access solutions.

Strategies for Success

The alliance promotes collective action and coordinated financing. It will use proven strategies to achieve measurable progress. The FAO will provide technical assistance and share expertise in food security and rural development.

Supporting Small Farmers

The alliance aims to expand support for small farmers globally. Successful policies like cash transfers and job guarantees will be included. The FAO has already contributed to 50 effective policies.

Current Challenges

The fight against hunger and poverty has faced setbacks. These include the uneven recovery from COVID-19, ongoing conflicts, and climate change. Currently, 733 million people experience chronic hunger. Additionally, 2.8 billion people cannot afford a healthy diet.

Global Collaboration

The FAO collaborates with global groups like the G7 and COP summits. These partnerships support the objectives of the Global Alliance. The initiative aims to unite global efforts to create important change.

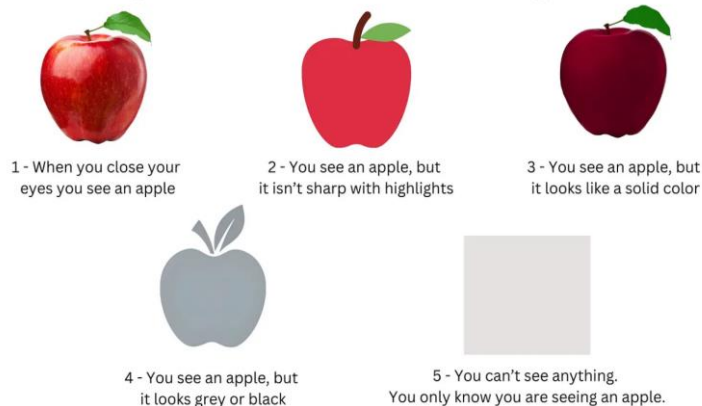
APHANTASIA

Aphantasia is a fascinating condition that affects visual imagination, first noted in the 1880s by Francis Galton. The term itself was introduced in 2015 by neurologist Adam Zeman and recent studies have shed light on how this condition works.

Definition of Aphantasia

Aphantasia is the inability to create mental visual images. Individuals with this condition cannot visualize pictures in their minds. This is not classified as a disability, but rather a unique way of experiencing the world.

Aphantasia - Five Degrees



The concept of aphantasia emerged in the late 19th century. Galton's observations laid the groundwork for future research. However, it wasn't until 2015 that the term gained prominence.

Study Findings

A recent study by Roberto S. Luciani at the University of Glasgow explored the link between hearing and sight. Participants listened to various soundscapes while blindfolded. Those without aphantasia showed strong visual cortex activity. In contrast, those with aphantasia exhibited weaker responses.

Spectrum of Visualization

The study suggests visualization abilities exist on a spectrum. Some individuals visualize vividly, while others, like those with aphantasia, do not. This indicates a range of experiences in mental imagery.

Prevalence of Aphantasia

Research estimates that about 2% of the population may have aphantasia. Despite its prevalence, scientific understanding remains limited. Further research is essential to uncover the underlying mechanisms.

DHUDMARAS

Dhudmaras, a village in Chhattisgarh's Bastar district, is gaining international acclaim and has been named one of the best tourism villages by the UNWTO. This recognition marks its commitment to sustainable tourism. The village is located within the stunning Kanger Valley National Park.

UNWTO Recognition

Dhudmaras was selected from 60 countries and is one of 20 villages honored for its tourism efforts. This accolade enhances its global visibility. It signifies the village's dedication to preserving cultural heritage.

Support and Development

The UNWTO will assist Dhudmaras, which support includes improving tourism facilities. It also aims to enhance local living standards. The recognition is expected to boost international visitor numbers.



Local Awards

On September 27, Dhudmaras won the Best Tourism Village Award from India's Tourism Ministry. This award further solidifies its status as a tourist destination. Chitrakot village also received this honour.

Eco-Tourism Appeal

The village is surrounded by lush forests and the Kanger River. This natural beauty makes it ideal for ecotourism. Visitors can enjoy the serene environment and diverse wildlife.

Community Involvement

The Bastar community is known for its warm hospitality. Villagers offer homestay options to tourists. Local youth serve as guides, enhancing the visitor experience. They provide vital information about the area's culture and nature.

Government Initiatives

The Chhattisgarh government is improving connectivity to Dhudmaras. It aims to promote local crafts on a global scale. Efforts by the forest and tourism departments are very important. They are transforming Dhudmaras into an eco-tourism hub.

Atmanirbhar Bharat Initiative

New activities are being introduced to support self-reliance. The Atmanirbhar Bharat initiative encourages local entrepreneurship. This encourages economic growth within the community.

SAGAR MANTHAN

India's coastline spans 7,500 kilometers and hosts 12 major ports and over 200 smaller ones. This extensive network positions India along busy global shipping routes, which plays a role in international trade. In 2023, India contributed 16% to global economic growth and is projected to become the world's third-largest economy by 2026.



Importance of Maritime Sector

The maritime sector is crucial for India's trade and handles 95% of goods by volume and 70% by value. The ports support the growing economy. India ranks as the 16th-largest maritime nation. Its strategic location facilitates global shipping.

Sagarmanthan - The Great Oceans Dialogue

The first edition of 'Sagarmanthan - The Great Oceans Dialogue' occurred on November 18-19 in New Delhi. This event is South Asia's largest maritime forum. Organized by the Ministry of Ports, Shipping, and Waterways, it partners with the Observer Research Foundation. The dialogue will gather global leaders, policymakers, and experts.

Focus Areas of the Dialogue

The dialogue will address key topics, which include the blue economy and global supply chains. Maritime logistics will also be focus. Sustainable growth in the maritime sector is crucial. Discussions will aim to build a robust maritime system for the future.

Blue Economy and Governance

The discussions will centre on four main themes. These themes will tackle challenges and opportunities for ocean governance. Sustainable practices will be emphasised. Collaboration among stakeholders is essential for progress.

Strategic Importance of Indian Waters

Most cargo ships between East Asia and regions like America, Europe, and Africa pass through Indian waters. This marks India's strategic maritime significance. The nation's growing role in global maritime matters requires innovative strategies and sustainable practices.

NATIONAL DOLPHIN RESEARCH CENTRE (NDRC)

Dolphin conservation efforts in India face important hurdles as the National Dolphin Research Centre (NDRC) in Bihar remains inactive. Opened in March 2024, it is the first facility dedicated to the endangered Gangetic river dolphin. However, a lack of equipment and skilled personnel has hindered its operations.



NDRC Background

The NDRC is located near the Ganga River in Patna and was inaugurated by Bihar's Chief Minister, Nitish Kumar. The centre aims to protect the Gangetic river dolphin, India's national aquatic animal. It spans 4,400 square metres, strategically positioned for research.

Current Status

Despite its opening, the NDRC has not commenced work. Visitors encounter locked doors and stray dogs. Only security guards are present on-site. This inactivity has raised concerns among experts about the future of dolphin research.

Government Response

Bihar's Chief Wildlife Warden, PK Gupta, acknowledged the setbacks. He assured that the NDRC would begin operations within the current financial year. The centre aims to support research and train local fishermen on dolphin protection.

Threats to Dolphins

The Gangetic river dolphin is classified as endangered by Indian law and the IUCN. India hosts approximately 3,000 of these dolphins, with half residing in Bihar.

Their habitat is shrinking due to environmental changes and human activity. Recent reports from the National Green Tribunal brought into light risks posed by infrastructure issues, such as a collapsed bridge in Bhagalpur.

Importance of the NDRC

The NDRC is essential for studying dolphin behaviour and habitat. It will facilitate crucial research on the threats these dolphins face. Delays in its operation impede efforts to ensure the survival of this unique species.

BHARAT NCX 2024

The Bharat National Cyber Security Exercise (Bharat NCX 2024) commenced and was organized by the National Security Council Secretariat and Rashtriya Raksha University, it lasts for 12 days. The primary goal is to enhance India's cyber defense capabilities, which aims to train professionals in managing cyber threats and crisis situations.



Cyber Defense Training

Participants will receive practical training in cyber defense. They will learn incident response techniques. The focus is on building hands-on skills essential for real-world applications.

Simulated Cyberattacks

The exercise includes simulations of real-life cyberattacks. These scenarios will evaluate the resilience of IT and operational systems. Participants will experience high-pressure situations to prepare for actual threats.

Strategic Decision-Making Exercise

Senior leaders will engage in decision-making drills during cyber crises. This practice aims to enhance their ability to respond effectively. Participants will learn to make informed decisions under stress.

Bharat Cybersecurity Startup Exhibition

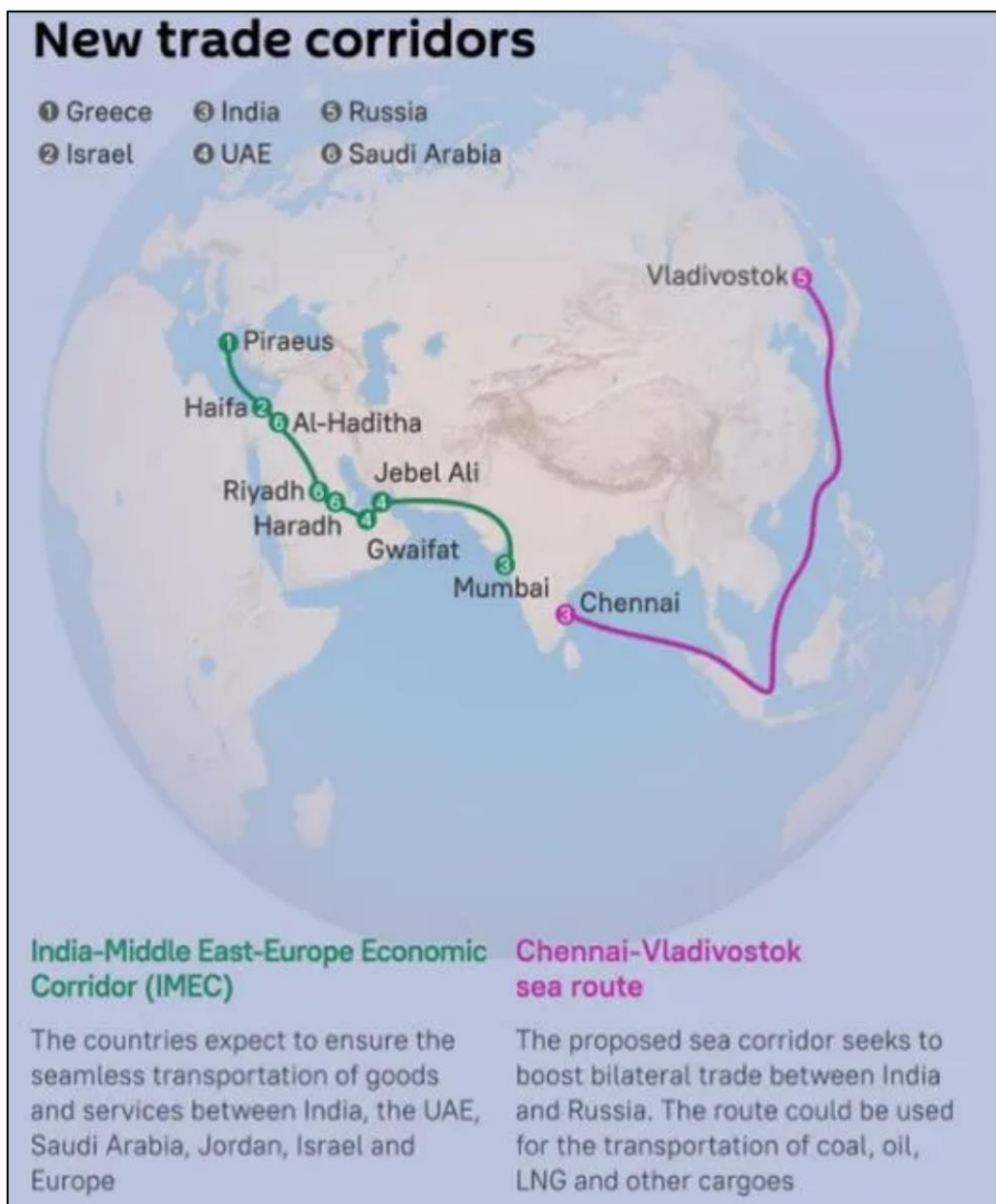
Indian startups will present innovative cybersecurity solutions. This exhibition aims to highlight advancements in the field. It encourages collaboration between startups and established entities.

Event Duration and Objectives

The exercise runs from November 18 to November 29, 2024, which aims to unite government, industry, and cybersecurity experts. The goal is to tackle shared challenges and enhance national cybersecurity readiness.

CHENNAI-VLADIVOSTOK EASTERN MARITIME CORRIDOR

The Chennai-Vladivostok Eastern Maritime Corridor has commenced operations, which facilitates the transport of oil, food, and machinery. Sarbananda Sonowal, Minister for Ports, Shipping, and Waterways, announced its significance.



Corridor Efficiency

The corridor reduces transport time between India and Far East Russia has decreased from 40 days to 24 days. Additionally, the distance covered has been reduced by 40%.

Collaboration with Greece

India and Greece are collaborating on the India-Middle East-Europe Economic Corridor (IMEEC). This initiative was introduced last year. It aims to enhance connectivity between India and Europe through various countries.

IMEEC Route Details

The IMEEC spans approximately 4,800 km, which connects India to Europe via the UAE, Saudi Arabia, Jordan, Israel, and three European nations – Italy, France, and Greece. The corridor includes both rail and sea links, improving trade routes.

Key Ports Involved

Ports like Paradip and Vizag in the Bay of Bengal play important role in the Chennai-Vladivostok corridor. These ports ensure smooth operations and effective logistics for the corridor's functioning.

India aims to become the world's leading maritime nation by 2047. This vision encompasses various sectors, including port operations, cargo handling, shipbuilding, repair, recycling, technology, and maritime laws.

Recent Maritime Dialogue

Mr. Sonowal discussed these developments at Sagarmanthan – The Great Oceans Dialogue. This two-day event attracted over 1,700 participants, including 215 delegates from 60 countries. It served as a platform for maritime discussions and collaborations.

EURASIAN WRYNECK

The Eurasian Wryneck has made its first appearance at Nanjarayan Tank in Tiruppur district, which was recently designated a Ramsar Site. The bird breeds in Europe and migrates to Africa and Southeast Asia for winter. Its presence in Tiruppur was previously noted two years ago near Uppar Dam.



Habitat and Distribution

The Eurasian Wryneck typically inhabits marshlands in northern and central India. It is not commonly found in the southern regions. The current sighting expands its known range in India.

Bird Count at Nanjarayan Tank

With the Eurasian Wryneck's sighting, the bird count at Nanjarayan Tank has increased to 189 species. This includes various migratory birds. The previous addition was the Eurasian Wigeon, spotted in January 2024.

The Pacific Golden Plover was seen in January 2021, marking another notable sighting. Over 20,000 birds gather at the marshland during peak migration season. This makes it important habitat for avian species.

Conservation Status

Two years ago, the Tamil Nadu Government designated Nanjarayan Tank as the 17th bird sanctuary in the state. The Central Government included it in a list of 85 Ramsar Sites. This recognition marks ongoing efforts to promote wetland conservation in India.

NATIONAL MISSION ON NATURAL FARMING (NMNF)

Centre recently announced a National Mission on Natural Farming (NMNF) to promote natural farming.

Background: -

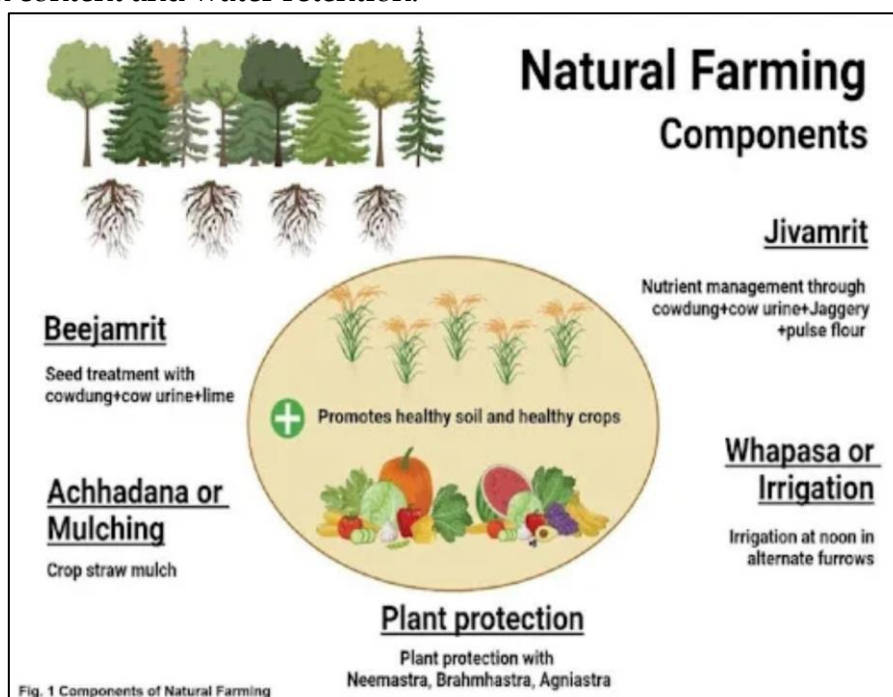
- The mission, with a budget outlay of Rs 2,481 crore, will cover 1 crore farmers across the country.

About National Mission on Natural Farming (NMNF)

- NMNF will be a standalone Centrally Sponsored Scheme under the Ministry of Agriculture & Farmers' Welfare.

Objectives:

- Promote Chemical-Free Farming: Encourage farmers to adopt natural farming methods that eliminate the use of synthetic fertilizers and pesticides.
- Enhance Soil Health: Improve soil health and fertility through organic practices like the use of cow dung, cow urine, and other natural inputs.
- Support Biodiversity: Foster biodiversity by promoting diversified cropping systems and integrated farming practices.
- Climate Resilience: Build resilience to climate risks such as droughts and floods by enhancing soil carbon content and water retention.



Key Components of NMNF

- **Diversified Multi-Cropping Systems:** Natural Farming encourages the adoption of multiple crops grown simultaneously to improve soil biodiversity and reduce pest outbreaks.
- **Desi Cow-Based Inputs:** Inputs derived from indigenous cows, such as cow dung and urine, form the backbone of Natural Farming. These are used to prepare nutrient-rich formulations like Jeevamrit and Beejamrit for soil and plant health.
- **Bio-Input Resource Centres (BRCs):** To ensure farmers have access to Natural Farming inputs, the government plans to establish 10,000 BRCs, providing ready-to-use formulations and resources.
- **Capacity Building and Demonstration Farms:** Around 2,000 model demonstration farms will be established across India, supported by Krishi Vigyan Kendras (KVKs), agricultural universities, and trained Farmer Master Trainers. These will serve as hubs for hands-on training.

'COMPENDIUM OF REGENERATIVE AGRICULTURE'

The Government of Odisha, in partnership with ICRISAT, launched a 'Compendium of Regenerative Agriculture' to promote regenerative agriculture.

Background: -

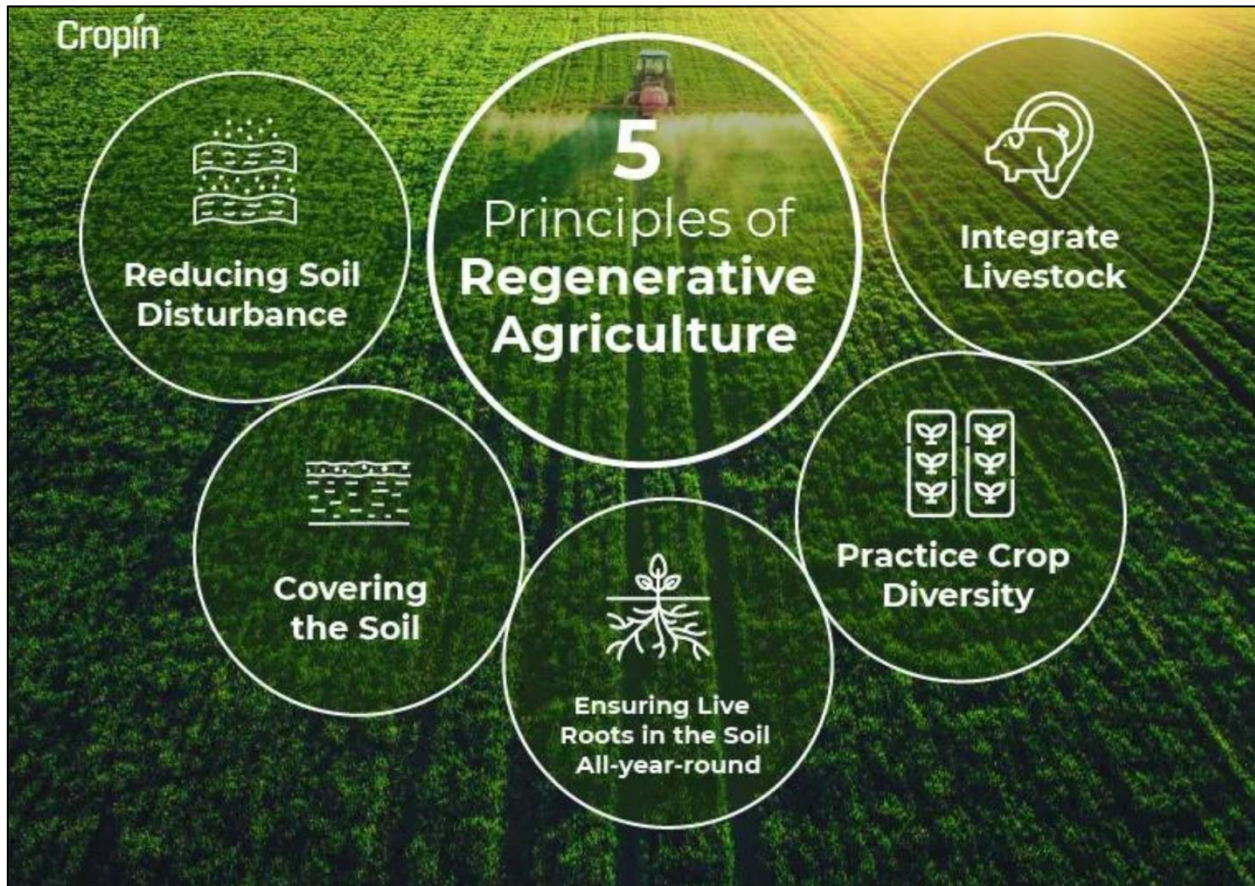
- The compendium outlines five key principles for sustainable farming: minimising soil disturbance, maximising crop diversity, maintaining soil cover, keeping living roots year-round, and integrating livestock.

Key takeaways

- Regenerative agriculture is a holistic approach to farming that focuses on restoring and enhancing the health of ecosystems.

Core Principles:

- **Soil Health:** The primary focus is on improving soil health through practices like minimal soil disturbance (no-till farming), cover cropping, and crop rotation.
- **Biodiversity:** Enhancing biodiversity by integrating a variety of crops livestock, which helps in pest control and nutrient cycling.
- **Water Management:** Improving water retention and reducing runoff through practices like mulching and agroforestry.
- **Carbon Sequestration:** Increasing carbon sequestration in the soil to mitigate climate change by capturing atmospheric CO₂.



Practices:

- **Cover Cropping:** Planting cover crops to protect and enrich the soil during times when main crops are not growing.
- **Composting:** Adding organic matter to the soil through composting to improve soil structure and fertility.
- **Agroforestry:** Integrating trees and shrubs into agricultural systems to enhance biodiversity and provide additional income sources.
- **Holistic Management:** Managing farms as integrated ecosystems, considering the interrelationships between soil, plants, animals, and humans.

Benefits:

- **Improved Soil Health:** Healthy soil supports better crop yields, reduces the need for chemical inputs, and enhances resilience to extreme weather.
- **Enhanced Biodiversity:** Diverse ecosystems are more resilient and productive, providing habitat for beneficial insects and wildlife.
- **Climate Mitigation:** By sequestering carbon, regenerative agriculture helps reduce greenhouse gas emissions and combat climate change.
- **Economic Viability:** Farmers can reduce input costs and improve profitability through sustainable practices.

AEPS

The Aadhaar Enabled Payment System (AEPS) is transforming banking access in rural and semi-urban regions. It utilizes Aadhaar numbers and biometric authentication for seamless transactions. This system promotes financial inclusion for underserved populations.

What is AEPS?

AEPS stands for Aadhaar Enabled Payment System, which allows users to perform banking tasks using their Aadhaar number and biometric data. Transactions include cash withdrawals, deposits, balance checks, and money transfers.

How Does AEPS Work?

AEPS connects directly to the National Payments Corporation of India (NPCI) network. Users authenticate transactions with their biometric information, such as fingerprints or iris scans. This eliminates the need for traditional banking infrastructure like ATMs or branches.



Benefits for Rural Users

Visiting bank branches can be difficult for people in rural areas. AEPS enables access to banking services at local merchants or agents. This convenience reduces travel costs and time, allowing users to complete transactions near their homes.

AEPS targets underbanked populations with limited access to banking. It brings services directly to local communities, ensuring everyone can access financial services. Secure Aadhaar-to-Aadhaar transfers enhance money transfer efficiency.

Time and Cost Savings

Before AEPS, users faced long journeys to distant bank branches for simple transactions. AEPS allows them to conduct banking activities locally, saving both time and money. Users can withdraw cash, deposit money, or check balances without travelling far.

Empowering Local Merchants

Local merchants and agents play an important role in AEPS. They can provide banking services without expensive infrastructure. This creates a network of accessible banking points in communities, enhancing service availability.

AEPS (Aadhaar Enabled Payment System) and **UPI (Unified Payments Interface)** are digital payment systems in India, but they differ in functionality, infrastructure, and use cases.

Key Differences

Aspect	AEPS	UPI
Definition	A bank-led system enabling basic banking transactions using Aadhaar.	A mobile-based platform for instant money transfers via UPI ID.
Authentication	Requires Aadhaar number and biometric verification.	Uses mobile number, UPI PIN, and sometimes device authentication.
Key Requirements	Aadhaar-linked bank account, biometric device, and Aadhaar number.	Bank account, UPI-enabled app, mobile number, and UPI PIN.
Use Cases	Cash withdrawals, deposits, and balance checks in rural or low-access areas.	Instant peer-to-peer or merchant payments, bill payments, etc.
Technology Base	Operates via Aadhaar-linked Micro ATMs.	Operates via mobile apps like Google Pay, PhonePe, BHIM, etc.
Access Point	Banking correspondents, micro-ATMs, or retail outlets.	Smartphones with internet access.
Target Audience	Rural or underserved populations with limited smartphone access.	Urban and tech-savvy users with smartphones.
Transaction Limit	Lower limits, often used for small-value transactions.	Higher limits (up to ₹1 lakh per day).

ACTION AGAINST GENDER BASED VIOLENCE

Shri Shivraj Singh Chouhan recently launched the third edition of *Nayi Chetna-PahalBadlaav Ki* in New Delhi. This campaign addresses gender-based violence in India, which aims to empower women and enhance their dignity. The initiative marks the government's commitment to women's economic and social development.

New Gender Resource Centres Established

A total of 227 Gender Resource Centres (GRCs) have been inaugurated across 13 states. These centers provide safe spaces for survivors of gender-based violence.

They offer information, reporting assistance, and legal support. The GRCs are designed to empower survivors and encourage them to share their experiences.

Introduction of Abkoibahananahi Campaign

Smt. Annapurna Devi introduced the Abkoibahananahi campaign, which calls for collective action against gender-based violence. It marks the role of 10 crore Self-Help Group (SHG) women.

The campaign promotes 49 government schemes aimed at achieving gender equality, which include 24/7 helplines and One-Stop Centres.

Campaign Message and Duration

The campaign's slogan is EkSaathEkAwaazHinsaKeKhilaf, which encourages collective efforts to create safe, inclusive spaces. The month-long campaign will run until December 23, 2024. It aims to raise awareness and support survivors effectively.

Inter-Ministerial Advisory and Coordination

An inter-ministerial advisory has been signed by eight government departments. This includes ministries like Women and Child Development and Home Affairs. The advisory aims to coordinate efforts across various sectors.

Inspiring Stories of Gender Champions

Gender champions from Jharkhand, Puducherry, and Madhya Pradesh shared their transformative journeys. These individuals transitioned from victims to leaders. Their stories inspire others to take action against gender-based violence.

The launch event gathered government officials, SHG women, and civil society representatives. This collective presence puts stress on a shared commitment to ending gender-based violence.



On November 25, a campaign titled “Ab Koi BahanaNahi” will be launched, which aims to combat gender-based violence across India. It is a collaborative effort by the Ministries of Women and Child Development and Rural Development, with support from UN Women. The launch took place at Rang Bhawan, All India Radio, in New Delhi.

Campaign Objectives

The campaign's primary objective is to mobilize public action against gender-based violence, which encourages individuals, government bodies, and organizations to take concrete steps toward this goal. The initiative seeks to raise awareness and promote accountability among citizens.

16 Days of Activism

From November 25 to December 10, the world will observe 16 days of activism against gender-based violence. This period begins on the International Day for the Elimination of Violence against Women, which culminates on Human Rights Day. The campaign aligns with the United Nations' "No Excuse" initiative, which addresses the growing issue of violence against women.

ONE NATION ONE SUBSCRIPTION

The Union Cabinet approved a budgetary allocation of Rs 6,000 crore for an initiative called 'One Nation One Subscription' (ONOS).

Background: -

- Aiming to centralise journal subscriptions for nearly 6,300 government-run institutions, ONOS seeks to provide equitable access to 13,000 scholarly journals under a single platform.

Current system


- Higher education institutions (HEIs) can access journals through 10 different library consortia.
- A library consortium is a group of two or more libraries that have agreed to cooperate to fulfil certain similar needs, usually resource sharing.
- For instance, INFLIBNET Centre (Information and Library Network Centre) in Gandhinagar is an Inter-University Centre of the University Grants Commission which oversees the UGC-Infonet Digital Library Consortium, providing access to selected scholarly electronic journals and databases in different disciplines.
- Apart from this, HEIs also subscribe to several journals individually.

education.gov.in

शिक्षा मंत्रालय
 MINISTRY OF
 EDUCATION

ONE NATION ONE SUBSCRIPTION

- **Cabinet Approval:** Central Sector Scheme to provide nationwide access to scholarly research and journals
- **Budget:** ₹6,000 crore allocated for 2025, 2026, and 2027
- **Digital Access:** Fully digital process managed via a unified "One Nation One Subscription" portal
- **Target Beneficiaries:** Nearly 1.8 crore students, faculty, and researchers in 6,300 institutions, including HEIs and central R&D institutions
- **Coordination:** Managed by INFLIBNET, an autonomous UGC centre



What does the ONOS scheme offer?

- Through the ONOS scheme, the Centre aims to consolidate the disaggregated approach to journal access. ONOS will enable state and central government HEIs to access thousands of journals on one platform, which will be active from January 1, 2025.
- This common platform will host 13,000 journals published by 30 international publishers. All institutions will only need to register on the platform to access these journals.
- INFLIBNET has been designated as the implementing agency for this initiative. The central government negotiated one subscription price for each of the 30 different publishers and approved Rs 6,000 crore for three calendar years – 2025, 2026 and 2027.

What is the need for ONOS?

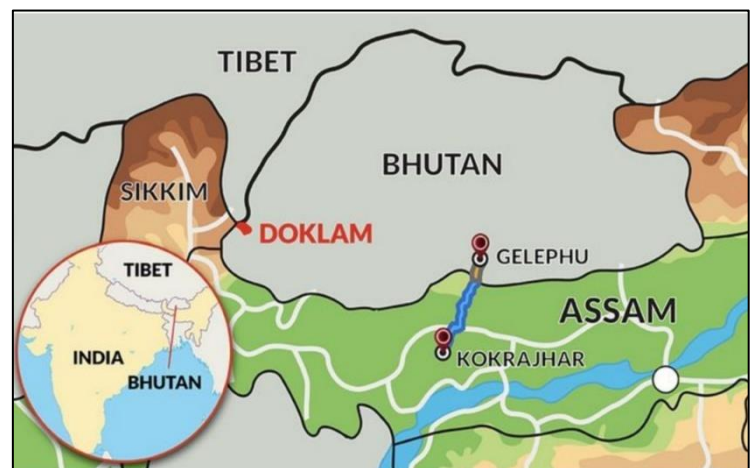
- First, it would expand access to the best scholarly journals for 55 lakh to nearly 1.8 crore students, faculty, and researchers across roughly 6,300 government universities, colleges, research bodies, and Institutions of National Importance (INIs), including those in Tier 2 and Tier 3 cities.
- Second, it would avoid duplication of journal subscriptions across different library consortia and individual higher education institutions and hence reduce excess expenditure.
- Third, a single subscription for all central and state government HEIs would provide better bargaining power when negotiating with publishers.
- Fourth, the Centre will gain insights into the extent to which journals are being accessed and downloaded by higher education ecosystem.
- This will not only help in long-term planning but also allow to encourage inactive institutions to fully utilise the platform and promote its benefits among their teachers, students, and researchers.

MINDFULNESS CITY

Bhutan, the Himalayan kingdom that brought the world the concept of gross national happiness, is set to build a “mindfulness city” and began raising funds to help start the ambitious project.

Background: -

- The “Gelephu Mindfulness City” (GMC) will lie in a special administrative region with separate rules and laws that will aim to be an economic corridor linking South Asia to Southeast Asia.



Key takeaways

- Gelephu Mindfulness City (GMC) is an innovative urban development project in Bhutan, envisioned by His Majesty King Jigme Khesar Namgyel Wangchuck.
- Location: Gelephu, located in the south-central part of Bhutan.
- Area: Covers over 2,500 square kilometers, making it one of the largest urban development projects in Bhutan.
- Special Administrative Region (SAR): GMC is Bhutan’s first SAR, with executive autonomy and legal independence.

Key Features:

- **Mindfulness and Sustainability:** The city integrates economic growth with mindfulness, holistic living, and sustainability.
- **Economic Hub:** Positioned at the crossroads of South Asia, Southeast Asia, and China, GMC aims to become a regional connectivity and economic exchange hub.
- **Zero Carbon City:** The city is designed to be a “Zero Carbon” city, aligning with Bhutan’s commitment to sustainable development.
- **Infrastructure:** Includes advanced infrastructure, inhabitable bridges, an international airport, and healthcare facilities for both western and traditional medicine.
- **Protected Areas:** Includes a national park and a wildlife sanctuary.
- Gelephu is also called the 'Gateway to the Royal Manas Natinoal Park

Vision and Values:

- **Gross National Happiness (GNH):** The city is anchored on the vision and values of GNH, promoting conscious and sustainable businesses.
- **Buddhist Heritage:** Inspired by Bhutan’s rich spiritual heritage, GMC aims to create a mindful living environment.
- **Business Environment:** Businesses in GMC will be screened and invited based on their respect for the Bhutanese way of life, sustainable development, and sovereignty.

GREEN DIGITAL ACTION (GDA)

GDA was launched in CoP28 (Dubai, 2023) by International Telecommunication Union (ITU) along with other governmental and civil society organizations.

It aims to unite global digital community in developing practical solutions, boosting industry-wide climate support, and strengthening frameworks for monitoring and reporting.



Key Highlights of the Declaration

Leveraging Digital Technologies: To support climate action and building resilient digital infrastructure.

Mitigating the impact of Digitization on climate: Including establishing metrics and indicators to measure the impact of digitization on climate.

Fostering Sustainable Innovation: By facilitating investments; protecting intellectual property and adopting open access to technologies, etc.

Others: Promoting Digital inclusion, literacy, data driven decision making, etc. Significance of Digital Technologies in Sustainable Development.

Informed decision making: Using technologies like data analytics, cloud computing, energy consumption can be optimised to support sustainable manufacturing processes.

Sustainable Design approaches: Stress on circular economy model rather than take-make-dispose to achieve climate goals. Promoting Open data sources: Easily accessible information sources and driving innovation towards newer and cleaner technologies.

Ex., Digital Public Infrastructure, etc.

Role in Disaster Management: Enhancing climate monitoring and forecasting including Early Warning Systems, early communication, and search and rescue, etc.

HLC NATIONAL LANDSLIDE RISK MITIGATION (NLRM) PROJECT IN 15 STATES

National Landslide Risk Mitigation (NLRM) Project : The HLC approved Rs. 1000 crore for mitigating **landslide risks across 15 states**, enhancing safety in vulnerable regions. This initiative is part of the **National Disaster Mitigation Fund (NDMF)** and addresses a critical need to reduce landslide-induced damages in vulnerable regions.

Training and Capacity Building for Civil Defence: The HLC approved a funding of Rs. 115.67 crore under the **National Disaster Response Fund (NDRF)**.

Objective: Training Civil Defense volunteers across all States and Union Territories to improve disaster preparedness and response.

Need for NLRM Project

- **India's Landslide Risk:** India ranks among the **top four countries with the highest landslide risk**, according to the ISRO Landslide Atlas of India.
- **Prevention and Prediction:** Unlike earthquakes and tsunamis, landslides **can be both prevented and predicted**, enabling proactive disaster management.
- **Scientific Culture:** The NLRM project aims to promote a culture of scientific investigation, analysis, and management of landslides, enhancing preparedness and mitigation.

About the National Disaster Mitigation Fund

- **Establishment:** The National Disaster Mitigation Fund was established by the Central Government in **2021** under the Disaster Management Act, 2005, based on the recommendation of the **15th Finance Commission**.
- **Administered By:** National Disaster Management Authority (NDMA).
- **Purpose:** The fund is exclusively for financing mitigation projects related to various disasters.

GLOBAL PLASTIC TREATY

More than 170 countries are converging in Busan, Republic of Korea, to negotiate a new legally binding global treaty to end plastic pollution, including marine pollution.

Background: -

- This is the fifth (and final) round of talks since 2022, when the UN Environmental Assembly (UNEA) agreed to develop such a by the end of 2024.

Why is a global plastic treaty required?

- The annual global production of plastic doubled from 234 million tonnes (mt) in 2000 to 460 mt in 2019. Nearly half of this was produced in Asia, followed by North America (19%) and Europe (15%).
- Plastic production is expected to touch 700 mt by 2040, according to a report by the Organisation for Economic Co-operation and Development (OECD).
- Plastic takes anywhere from 20 to 500 years to decompose, and less than 10% has been recycled till now, according to a 2023 study published by The Lancet.
- Much of the plastic waste leaks into the environment, where it breaks down into smaller particles (microplastic or nanoplastic).
- Studies have found that exposure to chemicals in plastic can cause endocrine disruption and a range of diseases including cancer, diabetes, reproductive disorders, and neurodevelopmental impairment. Plastic also harms species inhabiting marine, freshwater, and land ecosystems.
- Plastic contributes to climate change also. In 2020, it generated 3.6% of global greenhouse gas (GHG) emissions, with 90% of those emissions coming from plastic production, which uses fossil fuels as raw material.
- The remaining 10% of emissions were released during plastic waste management and treatment.
- India accounts for 20% of the world's global plastic pollution with release of 9.3 mt, which is significantly more than the countries next in the list – Nigeria (3.5 mt), Indonesia (3.4 mt) and China (2.8 mt), the study said.

What is on the negotiating table?

- Negotiations pertain to formulating a global set of rules that will address plastic pollution through its life cycle, from fossil-fuel based production, and the challenges of managing plastic disposal and waste.
- The final rules may also ban particular types of plastic, products and chemical additives used in plastics, and set legally binding targets for recycling and recycled content used in consumer goods.
- There will be talks on 'just transition' for workers and communities whose livelihoods would be affected by the elimination of certain items and a move away from plastic production.
- However, countries have been unable to converge on agenda items. Saudi Arabia, Iran, Russia, Kazakhstan, Egypt, Kuwait, Malaysia, and India have resistance to stricter mandates and have instead proposed downstream measures such as innovative waste management and sustainable plastic use. Countries have also not been able to agree on the subject of finance.

What is India's position?

- India has made it clear that it does not support any restrictions on the production of polymers. Any restrictions are beyond the mandate of the UNEA's resolution adopted at Nairobi in 2022, according to India.
- The country has also sought the inclusion of financial and technical assistance, and technology transfer in the substantive provisions of any final treaty.
- On the exclusion of harmful chemicals used for plastic production, India has said that any decision should be based on scientific studies, and the regulation of such chemicals should be regulated domestically.
- India banned the use of single-use plastics covering 19 categories in 2022. However, the country has said that a decision on the issue of including certain plastic items for phase-out in the final treaty should be pragmatic and regulation should be nationally driven taking into account national circumstances.



Key points of contention included capping plastic production, managing plastic products and hazardous chemicals, and financing to support the implementation of the treaty in developing countries.

Panama proposed a plan for a global reduction target for plastic production, which garnered support from over 100 countries but ultimately did not progress.

Major oil-producing nations like Russia and Saudi Arabia were accused of standing in the way and using procedural tactics to delay negotiations.

KANAGANAHALLI AND SANNATI

Recently, researchers highlighted the untapped tourism potential of the ancient Buddhist sites of Kanaganahalli and Sannati, located in Kalaburgi, Karnataka along the banks of Bhima river.



2000-year-old Ashokan edict.

AdholokaMaha Chaitya (the Great Stupa of the Netherworlds)

Built: From 3rd Century B.C. to 3rd Century A.D. Features: Elaborate ornamentation, Ayaka platforms, circumambulatory path, etc.



Sculptures: Of Buddha, Yakshas, Jataka stories, Ashoka, Satavahana monarchs etc.

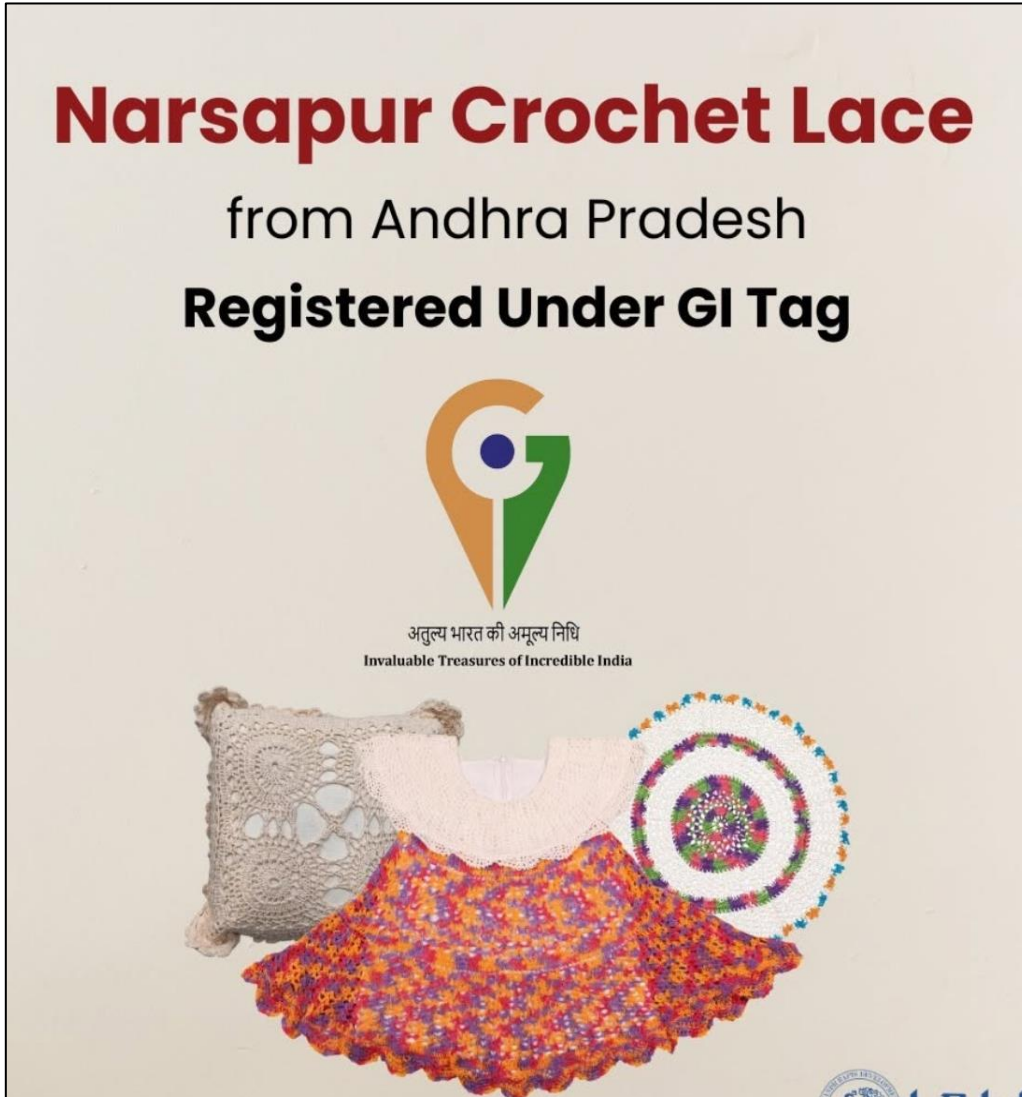
Sculpture of Asoka etched with 'Raya Asoka' in Brahmi script, the only surviving image of the Mauryan emperor.

Resembles Amaravati School of Art.

NARASAPUR CROCHET LACE

Narasapur Crochet Lace from West Godavari District, Andhra Pradesh awarded the Geographical Indication (GI) tag.

About Narasapur crochet lace : Crochets crafted with cotton thread in different colors. Lace work is done using thin threads woven with thin crochet needles of varying sizes.



About GI Tag

Name or a sign given to certain products that relate to a specific geographical location valid for 10 years.

Administered under the Geographical Indications of Goods (Registration and Protection) Act of 1999.

Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry is the Nodal ministry.

GLOBAL MATCHMAKING PLATFORM (GMP)

United Nations Industrial Development Organization (UNIDO) and the Climate Club launched the Global Matchmaking Platform (GMP).

Background: -

- The initiative focused on accelerating decarbonisation in heavy-emitting industries was launched in the presence of partner countries, key donor and partner organisations.

Key takeaways

- The Global Matchmaking Platform (GMP) is an initiative designed to accelerate the decarbonization of heavy-emitting industries in emerging and developing economies.

Purpose and Objectives:

- **Decarbonization:** The primary goal of the GMP is to fast-track the decarbonization of industries that are major contributors to greenhouse gas emissions.
- **Technical and Financial Solutions:** The platform connects countries with technical and financial solutions to reduce emissions in energy and emissions-intensive industrial sectors.



How It Works:

- **Single-Point Gateway:** The GMP acts as a single-point gateway for governments in emerging and developing economies to raise customized requests and identify globally leading technical and financial solutions.
- **Matchmaking Process:** The platform facilitates a matchmaking process where countries' specific needs are matched with appropriate technical and financial support from partner organizations.
- **Pilot Projects:** Pilot project discussions are already underway in countries such as Argentina, Colombia, Chile, Egypt, Indonesia, Kenya, Morocco, and Cambodia.

United Nations Industrial Development Organization (UNIDO)

Year of Formation: November, 1966

Headquarters - Vienna, Austria

Sector- Economy

UNIDO in India : International Centre for Inclusive and Sustainable Industrial Development (ICISID), Delhi.

The UNIDO Regional Office in New Delhi covers seven countries including Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka.

Support and Partnerships:

- **Climate Club:** The GMP is a support mechanism of the Climate Club, with the secretariat hosted by the United Nations Industrial Development Organization (UNIDO).
- **Delivery Partners:** Key delivery partners include Climate Investment Funds, the German Development Cooperation (GIZ), UNIDO, and the World Bank.
- **Initial Funding:** The platform received initial funding from the German Federal Ministry of Economic Cooperation and Climate Action (BMWK).

BAL VIVAHMUKT BHARAT CAMPAIGN

India will witness the launch of the “Bal VivahMukt Bharat” campaign, which aims to eliminate child marriage in the country, will take place at Vigyan Bhawan in New Delhi.



Background of the Campaign

The campaign draws inspiration from the “BetiBachaoBetiPadhao” scheme. Launched on January 22, 2015, this initiative transformed societal attitudes towards girls. The new campaign seeks to further this progress by focusing on child marriage.

Importance of Ending Child Marriage

Child marriage remains an issue in India. Nearly one in five girls marry before the age of 18. This practice disrupts their education and forces them into early caregiving roles. It often leads to a cycle of poverty and lost opportunities for young women.

Goals of the Campaign

The “Bal VivahMukt Bharat” campaign aligns with the Prime Minister’s vision for a “Viksit Bharat” by 2047.

It emphasises the need for equal opportunities for women and girls. The campaign aims to empower young girls and promote their education, skills, and entrepreneurship.

Pledge and Participation

During the launch, a pledge against child marriage will be taken. The campaign aims to involve up to 25 crore citizens. This collective effort is crucial in addressing child marriage and supporting girls' rights.

Online Awareness Platform

The event will introduce the "Child Marriage Free Bharat" portal. This online platform will raise awareness about child marriage and provide resources for reporting cases. It aims to engage the public in prevention efforts.

The launch event will include participation from various stakeholders. Child Marriage Prohibition Officers, civil society groups, and government officials will be present. The event will be live-streamed on webcast and YouTube for wider reach.

A recent study published in 'The Lancet Global Health' journal sheds light on the **prevailing scenario of child marriage in India**, revealing both progress and setbacks in the fight against this deeply rooted practice.

What are the Major Trends Highlighted by the Study?

- **Status in India:**
 - Girl child marriages declined from **49% in 1993 to 22% in 2021**. Boy child marriages reduced from **7% in 2006 to 2% in 2021**, indicating an overall national decline.
 - However, between **2016 and 2021**, the progress plateaued, with certain states experiencing a troubling rise in child marriages.
 - Notably, six states witnessed an **increase in girl child marriages**, including **Manipur, Punjab, Tripura, and West Bengal**.
 - Eight states observed a rise in boy child marriages, encompassing **Chhattisgarh, Goa, Manipur, and Punjab**.
- **Global Trends:** Globally, progress against child marriage has been notable, but the **Covid-19 pandemic** threatens this advancement, putting approximately **10 million more girls at risk of child marriage** over a decade.

What are the Major Factors Associated with Child Marriage?

- **Economic Factors:** Families living in poverty might see **marriage as a means to reduce the economic burden** by transferring responsibility for the girl to her husband's family.
 - In some regions, the tradition of providing dowry can influence families to **marry off daughters at a young age to avoid higher dowry costs later**.
 - Also, in areas prone to **natural disasters or agrarian crises**, families facing economic hardships might resort to early marriage as a coping mechanism or to secure stability.
- **Social Norms and Traditional Practices:** Long-held customs and traditions often prioritize **early marriage as a social norm**, perpetuating the practice across generations.
 - **Pressure from the community or family** to conform to prevalent customs and traditions lead to early marriages, particularly for girls.
- **Gender Inequality and Discrimination:** Unequal power dynamics and **limited agency for girls compared to boys** contribute significantly to early marriage.
 - **Lack of access to education and opportunities for girls often pushes families to opt for early marriages**, viewing it as a way to secure their daughters' futures.

What are the Legislative Framework and Initiatives Related to Child Marriage in India?

- **Legislative Framework:** India enacted the **Prohibition of Child Marriage Act in 2006**, establishing the legal age for marriage at 21 for men and 18 for women.
- Section 16 of the Prohibition of Child Marriage Act allows State Governments to appoint '**Child Marriage Prohibition Officers (CMPO)**' for specific areas.
- CMPOs are responsible for preventing child marriages, collecting evidence for prosecutions, counseling against promoting or aiding such marriages, raising awareness about their harmful effects, and sensitizing communities.
- Government has introduced a bill namely '**the Prohibition of Child Marriage (Amendment) Bill, 2021 for raising the age of marriage of women to 21 years** to make it at par with the men.
- **Related Initiatives:**
 - **Dhanalakshmi Scheme:** It is a conditional cash transfer scheme for a girl child with insurance coverage.
 - It also aims to **eliminate child marriage by offering parents insurance coverage** of medical expenses and encouraging the education of the girl child.
 - Schemes like **BetiBachaoBetiPadhao (BBBP)**, also aims to empower girls through education, health and protection, and discourage child marriage.

DUNLIN

The recent Kochi edition of the Kerala Bird Race showcased 192 bird species and among them was the Dunlin, a small shorebird now classified as “Near Threatened”. This change reflects an increase in risk from “Least Concern” in 2023, which is often found in large flocks on mudflats and beaches. Birdwatchers spotted it at Puthuvype beach.



Bird Count Statistics

This year, the total bird count dropped. Only 4,885 individual birds were counted, nearly half of last year’s 8,639. About 100 birdwatchers participated in the event. Experts caution that this decline may not indicate a long-term trend. Consistent monitoring is necessary for accurate assessments.

Event Coordination and Participation

The event was coordinated by the Cochin Natural History Society, Kerala Agricultural University, and the State Forest and Wildlife Department. It spanned around 100 locations in Kochi and central Kerala. Approximately 25 teams took part in the bird race.

Notable Species Observed

Several remarkable species were recorded during the race. These included the Red Avadavat, Blue-faced Malkoha, and Banded Bay Cuckoo. Other notable sightings were the Broad-billed Sandpiper, Little Stint, and Eurasian Sparrowhawk.

The Spot-bellied Eagle-Owl and Mongolian Short-toed Lark were also spotted. Additionally, the Rosy Starling, Tickell's Blue Flycatcher, Richard's Pipit, Tree Pipit, and Brown Fish Owl were recorded.

The bird race also aimed to promote birdwatching among youth. Organisers brought into light the importance of engaging children in nature conservation efforts. This outreach initiative encourages future generations to appreciate birdlife.

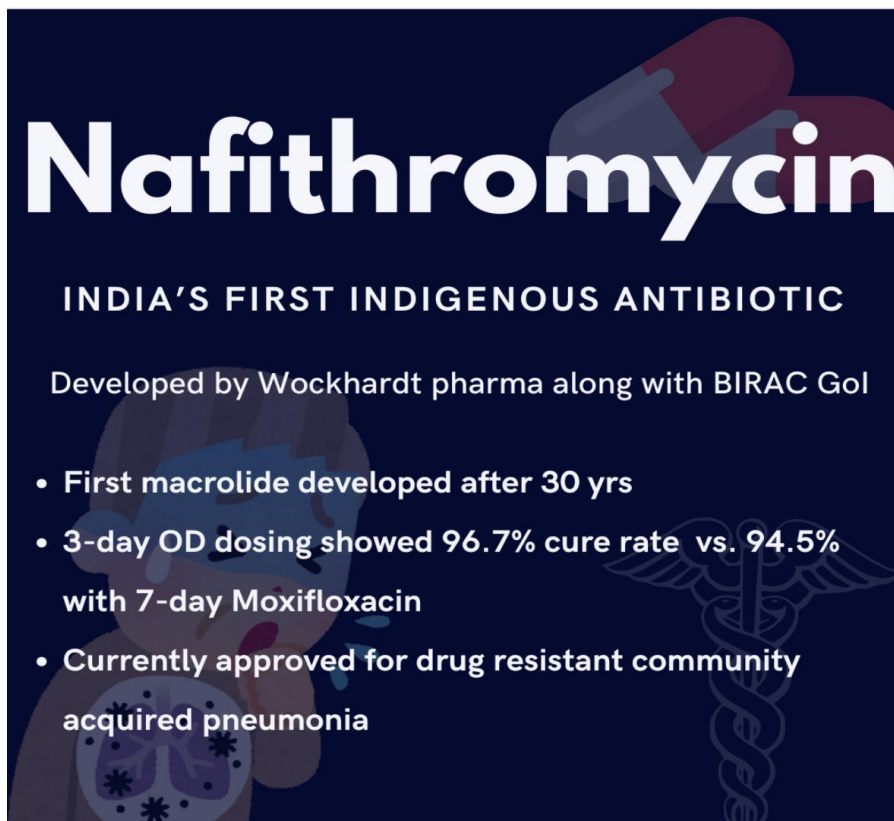
NEW ANTIBIOTIC -NAFITHROMYCIN

Wockhardt Ltd has developed Nafithromycin, the first domestically produced antibiotic targeting multi-drug-resistant bacteria. This antibiotic is aimed at treating community-acquired bacterial pneumonia (CABP) in adults, the launch was held on November 20, 2024, in New Delhi.

Global Health Impact

Pneumonia caused by drug-resistant bacteria poses a serious global health threat, which accounts for over two million deaths annually. India has 23% of the world's pneumonia cases.

The country faces increasing resistance to existing antibiotics, such as azithromycin. Nafithromycin emerges as a new solution to combat this issue.



Nafithromycin

INDIA'S FIRST INDIGENOUS ANTIBIOTIC

Developed by Wockhardt pharma along with BIRAC GoI

- First macrolide developed after 30 yrs
- 3-day OD dosing showed 96.7% cure rate vs. 94.5% with 7-day Moxifloxacin
- Currently approved for drug resistant community acquired pneumonia

Development Support

BIRAC provided Rs 8 crore in support for the project. The total cost for clinical trials was Rs 500 crore. Trials were conducted in the United States, Europe, and India. This backing was crucial for the successful development of Nafithromycin.

Drug Efficacy

Nafithromycin is a groundbreaking antibiotic for respiratory infections, which is the first new antibiotic in 30 years. The drug is taken as a single tablet daily for three days.

It is ten times more potent than azithromycin and has eight times better lung absorption. The clinical cure rate stands at 96.7%, and it is safe for patients.

Research Timeline

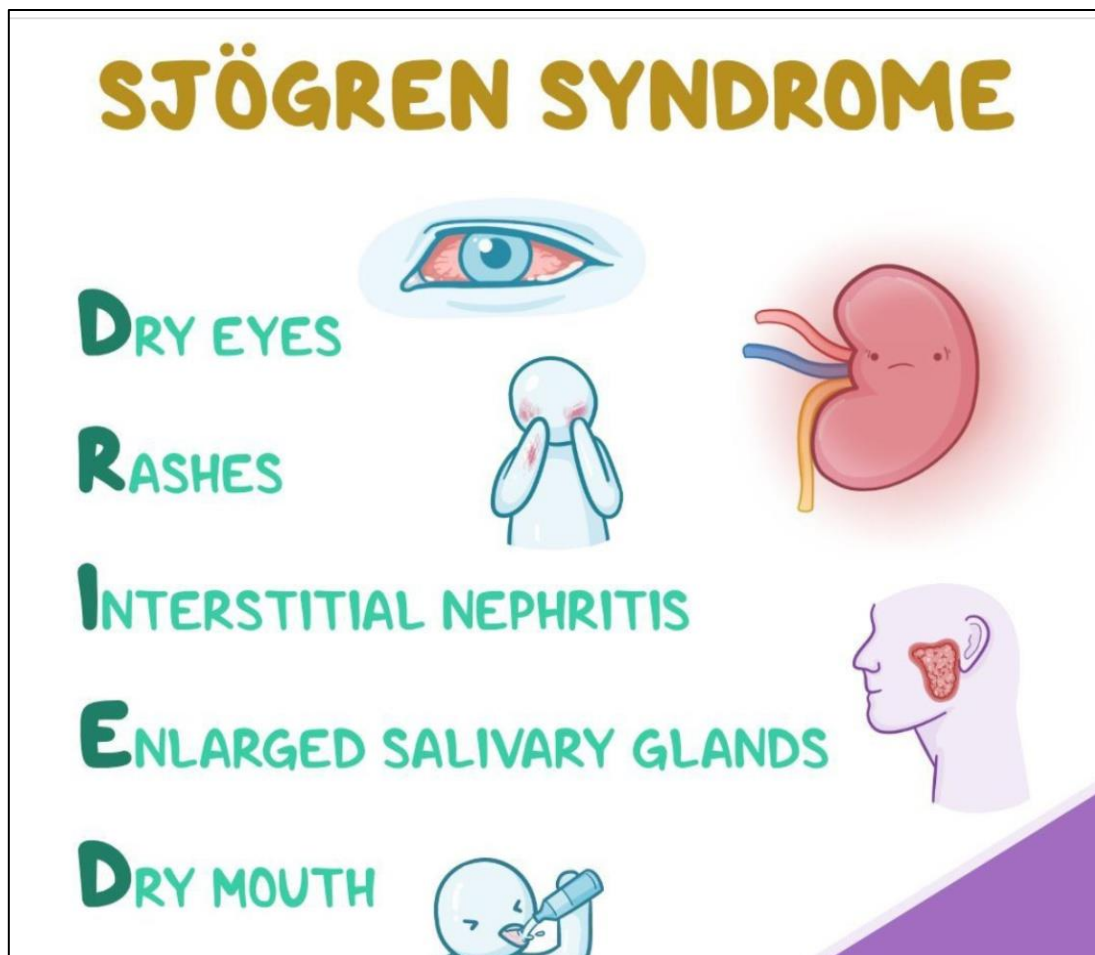
The development of Nafithromycin took 14 years of extensive research. Dr. Jitendra Singh brought into light its importance in fighting antimicrobial resistance (AMR). AMR occurs when bac

SJOGRENS DISEASE

Sjögren’s disease is an autoimmune condition, which primarily attacks moisture-producing glands. This leads to symptoms like dry eyes and mouth; many patients suffer for years before diagnosis.

Symptoms of Sjögren’s Disease

Common symptoms include dry eyes and mouth. Patients may experience joint pain and fatigue. Other issues can involve salivary gland swelling. Some may face lung, kidney, or nervous system complications. Skin dryness and stomach problems are also reported.



Prevalence and Demographics

Globally, Sjögren's affects 1 in 1,000 people. Accurate data is lacking in India. The disease is ten times more common in women. It often appears in individuals in their 30s or 40s, but it can occur at any age.

Diagnosis can be complex and delayed. Patients often consult multiple specialists. Symptoms are frequently treated in isolation. This can lead to frustration and prolonged suffering.

Treatment Options

Treatment focuses on symptom management. Salivary stimulants and lubricating drops are common. Immunosuppressive drugs may be prescribed for systemic issues. Hormone therapy is not effective for this disease.

Dryness can severely affect daily activities. It can impact speaking, swallowing, and dental health. Emotional and social challenges are important. Fatigue and lifestyle adjustments can take a toll.

Advocacy and Support

Organisations like Sjögren's India provide vital support. They educate patients and healthcare providers. Advocacy groups work to improve awareness and access to care. Partnerships between patients and doctors are crucial for better outcomes.

Certain lifestyle changes can alleviate symptoms. Avoiding air conditioning and reducing screen time helps. Using gel-based eye drops can provide relief. These adjustments can improve daily comfort.

DONGFENG- 100

Recent developments in missile technology have heightened global security concerns. China has enhanced its supersonic cruise missile, the Dongfeng-100 (DF-100), which poses threat due to its potential upgrades and capabilities.



DF-100 Specifications

The DF-100 is currently a supersonic missile, which can reach speeds of 4,700 km/h. The missile is 9 metres long and can carry a warhead weighing up to 500 kg. It utilises a ramjet engine for propulsion, which allows it to achieve hypersonic speeds.

Range and Launch Platforms

The missile's operational range has expanded to 4,000 km. Previously, it had a range of 2,000–3,000 km. The DF-100 can be launched from China's H-6K bomber or a 10×10 transporter erector launcher. This versatility enhances its deployment options.

Guidance Systems

The DF-100 employs advanced guidance systems, which include inertial navigation, terrain matching, scene matching, and satellite positioning. Such technology ensures high accuracy, with the ability to strike within one metre of its target.

Flight Characteristics

The missile ascends to a height of 30 km, which helps it evade radar detection. It can alter its direction and flight path even at high speeds. This agility allows it to bypass air defence systems effectively.

The DF-100 can threaten US military bases in Guam. It also poses risks to bases in Japan and South Korea. Its capability to strike both fixed and moving targets makes it a formidable weapon in the Western Pacific region.

CHEMICAL WEAPON CONVENTION (CWC)

The Organisation for the Prohibition of Chemical Weapons (OPCW) Hague award acknowledges ICC contributions to chemical safety, compliance with Chemical Weapon Convention (CWC).

This is the first time that the Award recognises the efforts of a chemical industry body. Hague Award was established in 2014 to honor OPCW's contributions to Chemical Weapons Conventions (CWC) goals.

About Chemical Weapon Convention (CWC) :

Genesis: It came into force in 1997, and presently has 193 States Parties. India is an original signatory to the Convention.



Aim: To eliminate an entire category of weapons of mass destruction by prohibiting the development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons by States Parties.

Implementation: OPCW is the implementing body, with a mission to achieve a world free of chemical weapons.

OPCW was awarded the Nobel Peace Prize in 2013.

Chemical Weapon is a chemical used to cause intentional death or harm through its toxic properties.

◆ Munitions, devices and other equipment specifically designed to weaponise toxic chemicals also fall under the definition of chemical weapons.

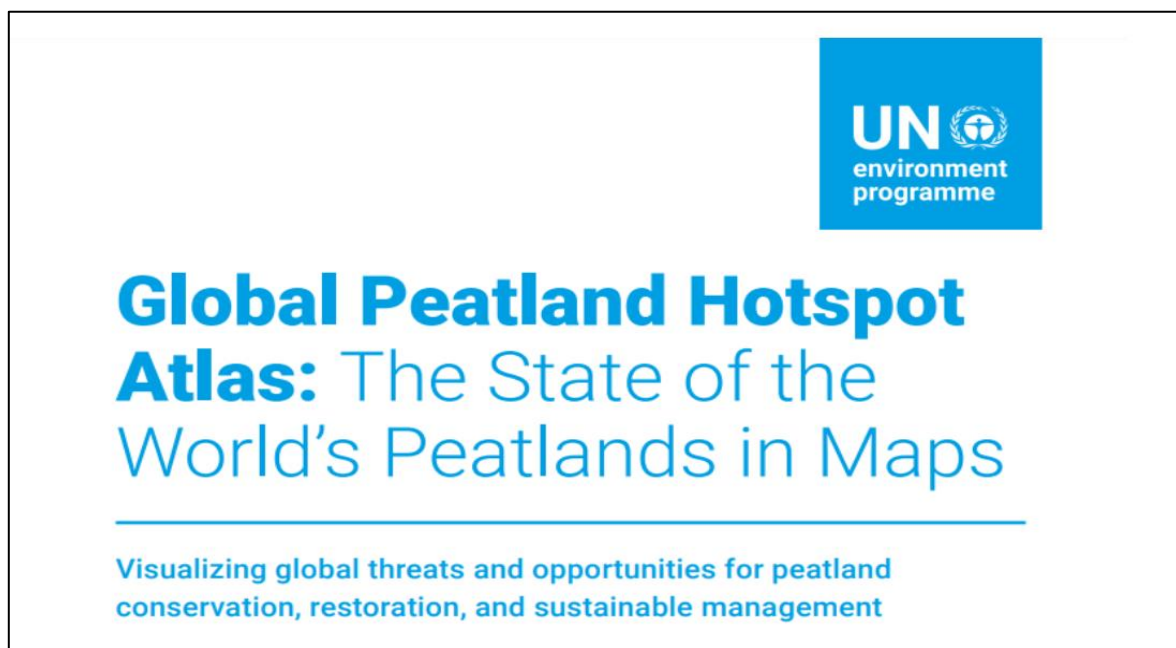
Implementation in India: National Authority Chemical Weapons Convention (NACWC) is the national responsible for implementing the Convention in India.

NACWC was established under the Chemical Weapons Convention Act, 2000.

GLOBAL PEATLAND ATLAS

The Atlas builds on the Global Peatlands Assessment (2022) and accompanying Global Peatland Map 2.0, both flagship products of the UNEP Global Peatlands Initiative.

UNEP Global Peatlands Initiative: It was formed at the United Nations Framework Convention on Climate Change (UNFCCC) COP in Marrakech, Morocco in 2016.



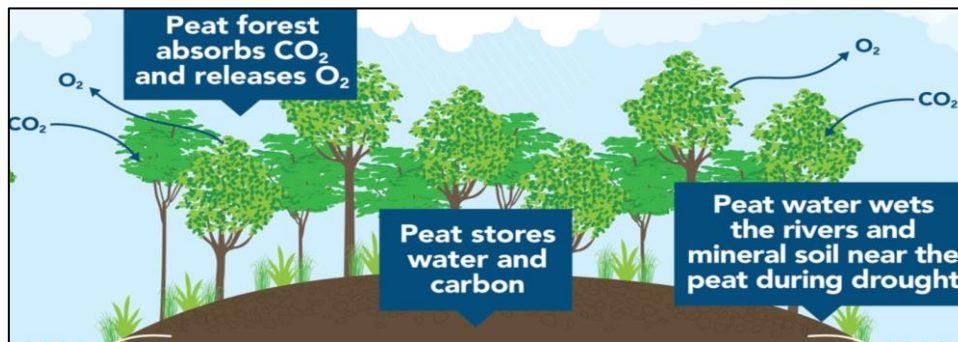
About Peatlands

Peatlands: Terrestrial wetland ecosystems in which waterlogged conditions prevent plant material from fully decomposing.

Consequently, the production of organic matter exceeds its decomposition, resulting in a net accumulation of peat. Peat is dead and partially decomposed plant remains that have accumulated in situ under waterlogged conditions.

Global Peatlands distribution: Peatlands cover 3.8% of the world's land area.

Its expanse: Naturally forested peatlands in Europe and tropical peat swamps in South East Asia, permafrost area of Russia and Canada, and high mountain peatlands in the Andes and Himalayas.



The world's largest tropical peatlands are located in the Congo Basin.

Peatland Degradation: Nearly 12% of global peatlands are degraded, with more than 60% of peatlands in India being degraded.

Threats: Agriculture, peat extraction, industrial activities and infrastructure development. Represents currently 4% of global anthropogenic emissions.

Initiatives: Guidelines for Global Action on Peatlands (2002), The UN Environment Assembly (UNEA-4) resolution on the Conservation and Sustainable Management of Peatlands (2019), etc.

Significance of peatland:

Carbon storage: Peatlands are the world's largest terrestrial carbon stock – storing at least 550 Gigatonnes of carbon globally – more than twice the carbon stored in all the world's forests.

Biodiversity conservation: Peatlands are vital habitats for rare and threatened species.

Ecosystem services: Regulating and purifying water for human consumption, agriculture & have a net cooling effect on climate.

GLOBAL STOCKTAKE

A day before the scheduled close of talks, the COP29 meeting in Azerbaijan stared at a major crisis with almost every country and bloc rejecting the latest draft negotiating text.

Background:

- Several countries, including India and Saudi Arabia, objected to references being made to one particular paragraph in Global Stock Take (GST) which had asked all countries to transition away from fossil fuels, triple renewable energy by 2030, reduce emissions of non-CO₂ gases including methane, and phase-down coal, among other things.

Key takeaways

- The Global Stocktake (GST) is a key mechanism under the Paris Agreement (2015) to assess the world's collective progress toward achieving the Agreement's goals, particularly limiting global warming to well below 2°C, preferably 1.5°C, above pre-industrial levels.
- Key Objectives:
 - Review Climate Actions: Assess the implementation of countries' climate action plans, known as Nationally Determined Contributions (NDCs).
 - Evaluate Support: Examine the support provided to developing countries, including finance, technology transfer, and capacity-building.
 - Promote Transparency: Enhance transparency and accountability in reporting climate actions and support.
- Process and Timeline
 - Periodicity: The GST is conducted every five years, with the first stocktake completed in 2023 and the next one scheduled for 2028.

Report emphasizes health as the argument for climate action across people, place and planet

Impact of climate change on health

Direct impact: Noncommunicable diseases (NCD): Climate change and air pollution causes 85% of NCD deaths.

Heat stress: People faced 50 more days of health threatening heat in 2023, due to climate change.

Maternal & reproductive health: Preterm birth, low birth weight, maternal death, decreased fertility etc.

Indirect impact: Increased poverty and marginalization; threat to food & water security; rise in conflicts and migration etc.

In 2023, 20.3 million people were internally displaced due to weather-related disasters.

Key Recommendations

Apply a One Health approach to address the links between human, animal, and ecosystem health. Transition from extractive economic systems towards circular economy.

Ensure New Collective Quantified Goal (NCQG) on climate finance and Loss and Damage Fund arrangements are substantially funded.

Integrate health into national climate action. E.g., Nationally Determined Contributions (NDCs), National Action Plans (NAPs) etc.

Initiatives taken: National Programme on Climate Change and Human Health (Ministry of Health & Family Welfare), The Network on Climate Change & Health (a program of the Department of Science & Technology), etc.

INDIA-CARICOM SUMMIT AND ANTIGUA AND BARBUDA

The Prime Minister met with the Prime Minister of Antigua and Barbuda on the sidelines of the 2nd India-CARICOM Summit in Georgetown, Guyana.

Political features

Antigua and Barbuda is a Caribbean Island situated in the lesser Antilles in the eastern Caribbean Sea.

Maritime boundary: Anguilla (United Kingdom) & Saint Barthélemy (France) to northwest, the Federation of Saint Kitts and Nevis to west, Montserrat (United Kingdom) southwest, and Guadeloupe (France) to the southeast.



Geographical features :

Antigua's coastline is intricate, with bays and headlands fringed with reefs and shoals.

Highest Peak: Mount Obama.

About Caribbean islands (also known as the West Indies)

Located in the Atlantic Ocean, south-east of Florida, east of Central America, and north of South America.

The Caribbean contains the islands of the Greater Antilles in the north-west as well as the Lesser Antilles islands in the south-east.



കേരള സ്റ്റേറ്റ് സിവിൽ സർവീസ് അക്കാദമി



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